

BUDGET DEFICITS, PUBLIC SECTOR SOLVENCY AND POLITICAL BIASES IN FISCAL POLICY: A CASE STUDY OF FINLAND*

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The Finnish fiscal balances severely deteriorated during the deep recession of the early 1990s with large fiscal deficits and significant increases in the public debt to GDP ratio. On the external side, current account deficits led to a large accumulation of external debt. While part of the fiscal imbalance can be attributed to the cyclical conditions of the Finnish economy, this paper considers whether the size of the deficit can be explained exclusively by stabilization and/or tax-smoothing policies. The paper then highlights political and institutional factors which have increased public debt beyond what would be desirable from the vantage point of traditional economic theory. The argument for fiscal rules against discretion is re-assessed within a simple model of political bias towards deficit spending, allowing for tax-smoothing considerations as well as for international trade in goods and assets. The analysis of the Finnish data shows that political and institutional biases contribute to explain the significant internal and external deficits during the 1990s depression. A substantial fiscal retrenchment will soon be required in order to avoid the insolvency of the public sector: (JEL E6, H62)

1. Introduction

The years between 1990 and 1994 were characterized by a serious deterioration of the public finances in Finland. In the 1980s, Finland was an example of fiscal probity: the govern-

ment fiscal balances were in surplus and the gross public debt to GDP was low and stable in the 10–15% range. By 1990, the central government debt stood at 11.1% of GDP and the central government fiscal balance (measured by its net financing requirement) showed a surplus equal to 0.1% of GDP (see table 1). The severe depression of the early 1990's significantly worsened the Finnish fiscal conditions. We observe very large and growing fiscal deficits of

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Table 1. Finland: Central Government Accounts and Macroeconomic Data 1989–1994.

	1989	1990	1991	1992	1993	1994
	(in percent of GDP)					
Revenues	26.6	27.1	27.4	26.6	27.4	25.8
Expenditures	24.3	26.0	32.2	35.3	37.7	37.9
Revenue Balance	2.3	1.1	-4.8	-8.7	-10.3	-12.2
Net financial investment	0.7	1.0	1.8	6.4	2.6	1.9
Of which: Bank support				(4.7)	(1.4)	(1.2)
Net financing requirement	1.6	0.1	-6.6	-15.1	-12.9	-14.0
Primary balance	2.6	1.0	-5.4	-13.4	-9.5	-9.8
Gross public debt	12.1	11.1	18.8	36.8	56.3	67.6
(General government financial balance)	2.8	5.4	-1.5	-4.9	-8.0	NA
Current account balance of BP	-5.0	-5.1	-5.4	-4.6	-1.2	2.0
Net external debt	21.8	27.5	36.6	50.9	58.7	NA
GDP growth (%)	5.4	0.0	-7.1	-3.8	-2.5	2.6

Source: International Monetary Fund data.

the public sector in the 1991–1994 period: the central government fiscal balance (measured by its revenue balance) went from a surplus of 1.1% of GDP in 1990 to a deficit of 10.3% in 1993; including financial transactions (mostly associated with the support of the banking system), the 1993 financing requirement was actually equal to 12.9% of GDP. In 1994, the fiscal deficit increased up to 12.1% of GDP (14.0% including the support of the banks); and the primary deficit in 1994 reached 9.8% of GDP. As a consequence of this fiscal deterioration, the public debt to GDP ratio rose to from 11.1% of GDP in 1990 to 67.0% of GDP in 1994.

While the deterioration of the Finnish fiscal balance is partly explained by the severe economic depression in the 1990s that led to a fall in tax revenues and an increase in public spending associated with the surge in the unemployment rate, it is interesting to ask the following question: was this public debt accumulation an optimal policy response to the severe recession or was the size of the fiscal deficit and public debt growth «excessive» and exacerbated by political and institutional biases in fiscal policy?

The previous question has a broader significance, beyond the specific case of Finland: the concern that fiscal deficits might be often «excessive» is suggested by the experience of other countries as well. In particular, the emergence and persistence of large public sector

budget deficits in many industrial and developing countries has generated a widespread concern that policy makers may be too keen on resorting to «excessive» deficit financing without good economic reasons. The concern is grounded in many historical examples when large fiscal deficits have occurred in the absence of transitory cyclical downturns (such as moderate recessions) or transitory spending shocks (such as wars or natural disasters), examples which are difficult to reconcile with traditional theories of optimal fiscal borrowing. Moreover, a growing theoretical and empirical literature suggests that there are political biases in fiscal policy that are at the root of the tendency of governments to run «excessive» fiscal deficits. We will argue in this paper that the fiscal deficits of Finland in the 1990s were «excessive» and can be partly explained by these political and institutional biases.

The concern about excessive deficits has led to the normative suggestion that governments should be constrained in their ability to run deficits. The current U.S. debate about a balanced budget amendment and the Maastricht Treaty fiscal criteria are examples of the recent popularity of fiscal policy rules. Moreover, the experience of many U.S. States with balanced budget laws (mostly dating back to the last century) suggests that such rules might be effective ways to discipline the fiscal bias of governments (see Poterba, 1992).

Another dimension of the concern about ex-

cessive government borrowing regards its external balance implications. In Finland, the fiscal deficits of the 1990–94 period were associated with a deterioration of the current account of the balance of payments and accumulation of foreign debt. While the current account deficit averaged 2.4% of GDP in the 1985–1989 period (see table 1), it doubled to 5.1% of GDP in the 1990–92 period. In 1993, the current account deficit improved to 1.2% of GDP and showed a surplus in 1994. As a consequence of this large string of current account deficits, the net external debt of Finland, that stood at 21.8% of GDP in 1989, rose significantly in the 1990s and reached the level of 58.7% of GDP in 1993.

Similarly to the Finnish case, in the United States, large fiscal deficits in the 1980s were financed through foreign borrowing. Budget deficits have been associated with current account deficits that turned the U.S.A. into a debtor country. In Europe, the concern that the growing liberalization of international capital markets might increase the governments' incentive to borrow led the Delors Committee to recommend limits to the ability of governments to finance fiscal deficits through foreign borrowing.

As discretion in policy making may lead to »excessive» public debt and deficits, should policy makers be subject to rules constraining their ability to borrow? The question has relevance for the United States and Europe in general and Finland in particular. Do rigid fiscal rules such as a balanced budget amendment recently debated in the U.S. or those imposed by the Maastricht Treaty make economic sense¹? Regarding Finland, the questions can be re-framed as follows. First, was the path of fiscal policy in the early 1990s sustainable? Second, was the debt accumulation during the 1990s

depression »excessive» and driven partly by political and institutional factors? Third, would the country benefit from rules limiting the government's ability to borrow?

This paper addresses these questions both in theoretical and empirical terms. The scheme of the paper is the following. In section 2, we reconsider theoretically the case for fixed versus flexible fiscal rules. The theoretical framework is a model of political bias in fiscal deficit and debt appropriately developed to allow for a tax-smoothing motivation for deficits; we consider both a closed economy and, in Section 3, an economy open to external trade in goods and financial assets and derive some numerical results on these political biases.

Given this theoretical analysis and results, we move to the empirical analysis. In section 4 we first show that economic models of deficits and public debt are unable to explain the public debt accumulation observed by Finland and many other countries. Second, we show that the path of fiscal policy in Finland in the early 1990s was not sustainable in the long run on the basis of »solvency tests» and measures of »primary gaps». Third, we provide evidence of political and institutional biases in fiscal policy for a panel of industrial countries and show that these biases are important to explain the Finnish fiscal policies during the depression of the 1990s. Finally, in section 5 we derive some policy implications and scenarios about the future process of fiscal consolidation faced by the Finnish policymakers.

2. Fiscal Deficits by a Policy-Maker with Uncertain Prospect of Re-Election and a Variable Endowment

In this section we reassess, in a theoretical framework, the case for rules versus discretion in fiscal policy making in the presence of political distortions and a tax-smoothing motivation for fiscal deficits; in section 3, we extend the analysis to the case of an open economy. The model that we present will focus on a tax-

¹ *In Europe, the framers of the Maastricht Treaty on monetary union were so concerned with the possibility of »excessive deficits» that they introduced strict rules limiting the size of national debt and deficits, to be satisfied as precondition for the admission of a country to the monetary union. The so called »fiscal convergence» criteria limit the budget deficit to be below 3% of GDP and the gross public debt to be below 60% of GDP. Considering that public investment expenditures average 3% of GDP in the EC, the deficit criterion amounts to an implicit current balanced budget rule, i.e. the current revenues should equal non-interest current expenditure.*

smoothing motive for deficit financing, developing the analytical framework by Alesina and Tabellini (1990) so as to include a non-smooth endowment and an open economy. In the original formulation of their model, these authors study the behavior of a partisan government with uncertain prospect of re-election in a closed deterministic economy with a constant opportunity set. In such an economy, the fiscal policy followed by a benevolent non-partisan government leads to fiscal balance and constant spending on the whole spectrum of public goods in every period. Conversely, the political equilibrium in the presence of partisan governments with uncertain prospects of re-election is characterized by a larger initial fiscal deficit.

Our model considers an economy where the opportunity set varies deterministically over time, thus providing an important motive for the optimal use of fiscal deficits and surpluses to smooth tax-related distortions. Will the bias towards excessive borrowing of a partisan policy-maker be exacerbated by its ability to borrow for tax smoothing purposes?

In this section, we begin by looking at the simplest possible amendment to the two-period, closed-economy model by Alesina and Tabellini (1990), hereafter AT, in the form of an initial government endowment, not necessarily positive, known by economic agents.² For the sake of simplicity, we consider deterministic variations of the economy-wide endowment, instead of shocks to productivity or tastes; the basic insight will be the same as in a stochastic model.

The economy is populated by a large number of atomistic individuals, all born at the beginning of the period zero and all sharing the same time-horizon. They are endowed with one unit of labor-time per period, which can be transformed in one unit of non-storable output. Util-

ity is derived by consuming a private good C , leisure X and two kinds of public goods, g and f . Agents differ uniquely in their preferences regarding the optimal composition of public goods. As their utility is time separable, the i -th agent's maximization problem can be written as maximizing its lifetime utility subject to its intertemporal budget constraint:

$$(2.1) \quad \begin{aligned} \text{Max}_{C_0, X_0, X_1} & [U(C_0) + V(X_0) + \alpha^i h(g_0) \\ & + (1 - \alpha^i) h(f_0)] + \delta [U(C_1) + V(X_1) + \alpha^i h(g_1) \\ & + (1 - \alpha^i) h(f_1)] \end{aligned}$$

subject to

$$(2.1') \quad \begin{aligned} C_0 + q C_1 &= (1 - \tau_0)(1 - X_0) \\ &+ q(1 - \tau_1)(1 - X_1) \end{aligned}$$

where the subscripts 0 and 1 refer to the first and the second period, respectively; $q = 1/(1 + r)$ is the discount factor, with the real interest r endogenous in equilibrium; and τ_0 and τ_1 are tax rates on labor income. Equation (2.1') represents the intertemporal budget constraint: the present discounted value of lifetime consumption (left hand side of the equation) must be equal to the present discounted value of after-tax labor income.

The government is constrained to use a flat-rate tax on labor income, identical for all agents but not across periods. It decides the level and composition of public spending in terms of g and f . Deficits are financed by issuing a one-period discount bond, at the price q , paying b_1 unit of output at the beginning of the following period. These bonds are not risky, i.e. the government will always honor its liabilities. We also assume that the initial stock of debt is zero, i.e. $b_0 = 0$.

In this section, and differently from AT, we assume the existence of some initial public endowment, in the form of government resources exogenously given only at time 0 ($\epsilon_0 = \epsilon$). As in period 1 the exogenous endowment is zero (i.e. $\epsilon_1 = 0$), we have the simplest framework to generate a tax-smoothing motive for the government. As shown below, such an initial endowment will imply that a social planner would find optimal to run a budget surplus in the first

² The two-period assumption is not overly restrictive. In Corsetti and Roubini (1994) we provide a n -period generalization of the model (along the lines of Alesina and Tabellini, 1990) that gives similar results. However, a fully dynamic analysis with a repeated game would allow to consider reputational equilibria where different parties moderate their spending and deficit biases because of the repeated nature of the strategic interactions. We do not consider in this paper such equilibria.

period, i.e. a balanced budget in each period would not be optimal.

Two parties compete for power. They are both concerned with private agents' utility stemming from consumption of the private good and leisure. However, they hold different views regarding the desirability of each particular public good. One party, hereafter R, is concerned only with spending on f ; the other party, D, is concerned with spending on g . The party in office in the first period, say the party D, faces a probability of re-election equal to P , exogenously given. Thus the probability that the other party, R, come to power in the second period is $(1-P)$.

Under the assumption that the objective function of the party in office is time-separable, we can separate out the maximization problem into two steps: the first step (intra-temporal problem) solves the problem of choosing tax-rates and the level and composition of spending for a given deficit; the second step (intertemporal problem) looks at the problem of choosing an optimal borrowing pattern. Since we are more concerned with the intertemporal pattern of borrowing, we will only sketch the intratemporal problem and focus on the optimal borrowing decision. Regarding the first problem, it should be clear that, since both parties hold extreme views about public spending, party D will spend uniquely on the good g , party R only on good f . Thus, for a given deficit, both parties will choose the same tax rate and the same level of spending, although on different public goods. In particular, the party in office will maximize its single period utility subject to a market allocation constraint, the resource constraint and its own flow budget constraint.

In order to consider the intertemporal borrowing problem, we first define the one-period indirect utility for the party in office as $R^c(b_t, b_{t+1}, \epsilon)$ and the one-period indirect utility for the party not in office as $R^n(b_t, b_{t+1}, \epsilon)$. These indirect utilities will be a function of both the initial and the end-of-period stock of debt (b_t and b_{t+1}), as well as the government endowment ϵ . They give the maximum level of utility that a government can achieve, for a given pattern of deficit and endowment. The indirect utility $R^c(\cdot)$ is increasing in the level of end-of-period

debt b_{t+1} , decreasing in the initial debt b_t . Intuitively, running a higher deficits allows the party in office to achieve a higher level of utility by increasing spending on its own preferred public good without generating tax-related distortions. Conversely, for any given level of end-of-period debt, a larger initial debt b_t will reduce the utility of the party in office, since the need to service the debt will force the government to spend less and/or tax more.

Then, by making use of the one-period indirect utility function, the policy problem faced by the incumbent party can be written as the problem of choosing the optimal end-of-period debt level so as to maximize its own expected utility over the relevant time horizon. In a two period model where $b_0 = 0$ (by assumption) and $b_2 = 0$ (by public sector solvency the economy cannot end with positive public debt), we have:

$$(2.2) \quad V^c(b_1) = \underset{b_1}{\text{Max}} \{R^c(0, b_1, \epsilon) + \delta [P R^c(b_1, 0, 0) + (1-P)R^n(b_1, 0, 0)]\}$$

Intuitively, in deciding how much debt b_1 to leave to the next government, the incumbent party will consider the likelihood of still being in power in the future – an event that happens with probability P . This probability is important in assessing the disutility stemming from a current deficit, in terms of future higher distortionary taxation and/or reduced spending on g_1 . The optimal b_1 is chosen so that the incumbent government is indifferent, at the margin, about leaving or not an extra dollar of debt. The first order conditions of this problem can be conveniently rewritten as follows:

$$(2.3) \quad (\lambda_0 - \lambda_1)U'(C_1) + \lambda_0 U''(C_1) \frac{dC_1^*}{db_1} b_1 = (1-P)h'(g_1^*) \frac{dg_1^*}{db_1}$$

where λ_0 and λ_1 are the Lagrange multipliers associated with the government budget constraint at time 0 and 1, respectively – which are the shadow prices of resources in public hands in the two periods. Consider first the case of a party which will be reappointed with probability one ($P = 1$). The optimal debt condition (2.3) becomes

Table 2. Fiscal deficits and the re-election probability (P).

prob P	e = 0		e = 0.1		Change in Fiscal Deficit (e) = (a) – (c)	Change in Deficit % of GDP (f) = (b) – (d)
	Fiscal Deficit	Fiscal Deficit % of GDP	Fiscal Deficit	Fiscal Deficit % of GDP		
	(a)	(b)	(c)	(d)		
1.0	0	0	-0.028	-3.8%	0.028	3.8
0.9	0.018	2.7%	-0.009	-1.2%	0.028	3.9
0.8	0.039	5.7%	0.011	1.4%	0.028	4.3
0.7	0.062	8.8%	0.035	4.4%	0.027	4.4
0.6	0.087	12.2%	0.061	7.6%	0.026	4.6
0.5	0.116	15.8%	0.092	11.0%	0.024	4.8

$$(2.4) \quad (\lambda_0 - \lambda_1)U'(C_1) + \lambda_0 U''(C_1) \frac{dC_1^*}{db_1} b_1 = 0$$

In a smooth environment, i.e. $\varepsilon = 0$, this condition would be satisfied with $\lambda_0 = \lambda_1$ and $b_1 = 0$. The government would keep tax and spending rate constant across periods. With a non smooth endowment (i.e. $\varepsilon \neq 0$) the solution just described does not apply. With a balanced budget, the Lagrange multipliers associated with the government budget in the two periods will differ. For example, if $\varepsilon < 0$, the Lagrange multiplier will be larger in the first period ($\lambda_0 > \lambda_1$). It follows that condition (3.4) cannot be satisfied by $b_1 = 0$. Instead, in the presence of a negative endowment shock, it will be optimal to run a budget deficit ($b_1 > 0$) of the appropriate size. This argument makes it clear that, even without uncertainty about re-appointment, a negative initial public endowment will lead the party in office to run a deficit, while a positive initial public endowment will induce a budget surplus.

In the presence of electoral uncertainty, we know from AT that parties representing extreme constituencies, i.e. interested only in good g or f , tend to use debt strategically when facing uncertain re-appointment: the size of the deficit at the end of the first period is decreasing in the probability of re-appointment. The presence of a non-smooth endowment poses two additional questions. First, will all governments, regardless of their reelection probability, smooth tax rates when facing a variable endowment? Second, there is the question of how the propensity to tax-smoothing changes for parties with different probability of re-election. Would a

government with a lower re-election probability have a smaller incentive to smooth tax rates and spending in the presence of output disturbances?

The first question implies considering the effect on the end-of-period debt of a change in the government endowment, regardless of the probability of re-appointment (i.e. $\frac{db_1}{d\varepsilon}$). The second question implies considering how the derivative $\frac{db_1}{d\varepsilon}$ changes as the probability of reelection P changes. An unambiguous analytical answer to these questions would involve very strong restrictions on the parameters of our problem. In assessing the sensitivity of the derivative $\frac{db_1}{d\varepsilon}$ with respect to changes in P , we

resort to a numerical simulation, where the single period utility is assumed to be quadratic and additive in public and private consumption and leisure.

The simulation results, show in Table 2, compare the fiscal deficit (in level and as a share of GDP) that would be chosen by partisan governments facing different probabilities of re-election, under two circumstances: one where the initial public endowment is equal to zero and the other when the initial endowment ε is positive and equal to 0.1. There are three main sets of results. First, consider the political bias towards excessive borrowing. Regardless of ε , columns (a) through (d) show that, as the probability of reelection P is falling, the government

will choose to increase its first period fiscal deficit (or reduce its fiscal surplus) both in absolute terms and as a share of GDP. For example when $\varepsilon = 0$, (column (a)), the fiscal balance goes from zero to a deficit of 0.116 (15.8 % of GDP) as the reelection probability falls from 1 to 0.5.

Second, the table shows that when the initial public endowment ε is positive, the government runs larger initial budget surplus (or lower deficits) compared to the case where ε is zero. This can be seen by reading the table along its rows. The result implies that an increase in the initial endowment of the party of office will lead to an increased surplus (or reduced deficit), regardless of the probability of reappointment. This result is intuitive because, while a government with reelection probability lower than one might have an overall deficit bias, it will still smooth taxes in the presence of output disturbances.

Third, in columns (e) and (f), we show the response to a fall in the probability P of the difference between the fiscal balance for a zero and a positive ε . This difference can be read as a measure of the extent of tax smoothing as P is falling. The absolute difference between the two fiscal balances (column (e)) is relatively insensitive to changes in P : as P falls from 1 to 0.5, the difference in absolute deficits decreases marginally from 0.028 to 0.024. Conversely, column (f) shows that the difference in fiscal balances as a share of GDP is actually increasing as the probability of reelection is reduced: it goes from 3.8% of GDP for $P = 1$ to 4.8% for $P = 0.5$. The different results in columns (e) and (f) are due to the movement of GDP *vis a vis* a change in the endowment and government policies. Columns (e)–(f) suggest that, in our example, the deficit differential is quite flat and insensitive to the value of the re-election probability. In other words, two governments with very different reelection probability will respond to changes in endowment ε in a similar way: they will both improve (worsen) their fiscal balance by a similar amount if they observe a positive (negative) endowment shock. Allowing governments that have a political bias to use deficits to smooth taxes is not going to exacerbate such a political bias: government with dif-

ferent P will respond similarly to an endowment shock.

How general are these results, i.e. is it likely

that the derivative $\frac{db_1}{d\varepsilon}$ insensitive to changes

in P in more general functional specifications? The extent to which the deficit will fluctuate around the positive politically-rooted average will depend on the intertemporal elasticity of substitution characterizing the utility function. As this elasticity decreases, the tax-smoothing component of the deficit (surplus) becomes less sensitive to the probability of re-election.

3. *Small Open Economy*

In a closed economy, any attempt by the government to finance current public consumption by borrowing must necessarily change the intertemporal price of private consumption, modifying the interest rate and tilting its intertemporal profile in favor of the future. An interesting question is then what would be the implications of a flatter supply curve in the capital market, as the economy opens up to trade in financial assets. Would the deficit bias be greater? As a convenient benchmark case is that of a country which is small in the world economy (infinite supply elasticity), the interest rate can be taken as exogenously given at some level r equal to the private sector discount rate $(1/\delta - 1)$.³

How would the access to international capital markets affect the deficit bias relative to the case of a closed economy? In a small open economy, the supply of capital in the financial markets is flat at the prevailing interest rate. Additional borrowing by the government affects the level of private consumption by increasing the magnitude of tax-related distortions implied by the service of the debt, but has no second order effects on the intertemporal profile of the competitive allocation.

³ We should also observe that we are considering a one-good world where the PPP holds: our open economy is small also in the goods markets, i.e. it produces a good whose price is given in the international market.

Table 3. Comparison between closed and open economy simulations.

	Closed economy				(5)	Open Economy		
	(1)	(2)	(3)	(4)		(6)	(7)	(8)
prob. shock	1 0	0.9 0	1 0.1	0.9 0.1	1 0	0.9 0	1 0.1	0.9 0.1
g0	0.34	0.35	0.40	0.41	0.34	0.37	0.38	0.43
g1	0.34	0.31	0.36	0.33	0.34	0.30	0.38	0.29
x0	0.33	0.32	0.34	0.33	0.33	0.33	0.33	0.32
x1	0.33	0.34	0.31	0.32	0.33	0.33	0.33	0.32
c0	0.32	0.32	0.35	0.35	0.32	0.33	0.33	0.36
c1	0.32	0.34	0.32	0.34	0.32	0.33	0.33	0.36
t0	0.51	0.49	0.50	0.48	0.51	0.50	0.49	0.46
t1	0.51	0.51	0.48	0.47	0.51	0.50	0.49	0.46
q	0.95	0.92	0.99	0.96	0.95	0.95	0.95	0.95
y0	0.67	0.68	0.76	0.77	0.67	0.67	0.77	0.78
y1	0.67	0.66	0.69	0.68	0.67	0.67	0.67	0.68
b1	0	0.018	-0.028	-0.009	0	0.034	-0.048	0.02
b1/Y	0%	2.7%	-3.8%	-1.2%	0%	5.1%	-6.3%	2.6%
d1	-	-	-	-	0	0.03	-0.06	0.01
d1/y0	-	-	-	-	0%	4.4%	-7.7%	1.2%

	Closed economy				(5)	Open Economy		
	(1)	(2)	(3)	(4)		(6)	(7)	(8)
prob. shock	0.7 0	0.5 0	0.7 0.1	0.5 0.1	0.7 0	0.5 0	0.7 0.1	0.5 0.1
g0	0.38	0.41	0.44	0.46	0.43	0.51	0.46	0.54
g1	0.24	0.15	0.26	0.16	0.19	0.03	0.23	0.08
x0	0.29	0.26	0.30	0.27	0.32	0.31	0.32	0.31
x1	0.36	0.39	0.34	0.37	0.32	0.31	0.32	0.31
c:0	0.32	0.33	0.35	0.36	0.36	0.40	0.37	0.42
c1	0.39	0.46	0.39	0.46	0.36	0.40	0.37	0.42
t0	0.45	0.40	0.43	0.37	0.46	0.40	0.44	0.38
t1	0.50	0.49	0.46	0.44	0.46	0.40	0.44	0.38
q	0.85	0.76	0.89	0.80	0.95	0.95	0.95	0.95
y0	0.71	0.84	0.80	0.83	0.68	0.69	0.78	0.79
y1	0.66	0.61	0.66	0.63	0.68	0.69	0.68	0.69
b1	0.062	0.11	0.035	0.091	0.11	0.236	0.062	0.175
b1/Y	8.8%	15.7%	4.4%	11%	17.5%	34.4%	8.0%	22.2%
d1	-	-	-	-	0.11	0.22	0.05	0.17
d1/y0	-	-	-	-	17.5%	31.8%	6.4%	21.5%

The results of our simulations are presented in Table 3, where the exercise in Table 2 has been extended to a comparison between a closed and an open economy⁴. Consider first the first two columns of the table. Abstracting from the composition of spending, the first column illustrates the benchmark case of a *closed* econ-

omy where the government is not uncertain about its re-election ($P = 1$). With a constant opportunity set ($\varepsilon = 0$), both public consumption and tax rates are smooth over time and the deficit is zero. However, when the probability of re-election shrinks from 1 to .9, as shown in the second column, the intertemporal profile of public consumption tilts in favor of the first period while tax rates just do the reverse. The government now runs a deficit equal to 2.7% of GDP.

⁴ For a detailed discussion of the underlying model, see Corsetti and Roubini (1994).

Correspondingly, the interest rate increases from 5% in the first column to 8% in the second column. As P falls, the deficit increases and reaches a value of 15.7% of GDP for $P = 0.5$.

When the probability of re-election falls from 1 to .9, the tilt in public consumption is much more pronounced in the case of an open economy, as shown in the fifth and the sixth columns of the table. The budget deficit now becomes as high as 5.1% of GDP, which is two times the corresponding number in column 2 (2.7%). It should also be noticed that the public deficit (5.1% of GDP) almost completely translates into the current account deficit (4.4% of GDP). The twin fiscal and current account deficits become significantly larger when P falls well below one, but they remain highly correlated. The positive implication of the exercise is therefore that the access to international capital markets, by reducing the financial constraint of the government, increases the size of the deficit.

Another interesting question refers to the effects of limiting international borrowing by the government. Is the political bias towards excessive deficits lowered by such a rule? If both private agents and the public sector have access to international market at the same conditions, it is irrelevant whether the public sector borrow directly or through the private sector. This is the case implicitly considered in Table 3; in particular, we could restrict the government behavior by allowing it to borrow only domestically. As long the private sector is allowed to borrow abroad, restricting the public sector ability to borrow externally does not affect at all the deficit bias of the government: the government would just borrow domestically the same amount and let the private sector borrow internationally whatever is needed.⁵

To sum up, we have argued that the size of the deficit due to a political bias towards current spending increases in an open economy with respect to a closed one. When the private

sector can have access to international capitals under the same conditions of the public sector, limiting the ability of the government to borrow abroad has no effects on the political equilibrium allocation.

We move next to an empirical analysis of the economic and political determinants of fiscal deficits in Finland; the relevance of the theoretical results of our model for the Finnish case will be discussed in connection with this empirical analysis.

4. Empirical evidence on the economic and political determinants of fiscal deficits in Finland

4.1 Do economic theories explain the Finnish fiscal deficits of the 1990's?

In this section we will analyze the determinants of fiscal policy in Finland. We will address a number of questions. Was the path of fiscal policy in Finland in the early 1990s consistent with the long-term solvency of the public sector? Was the behavior of the Finnish fiscal authorities during the depression justified by the intensity and depth of the recession or were there any institutional and political biases in fiscal policy making?

First of all, the fact that Finland experienced some fiscal deficits during the recession of the 1990's is not surprising. Most economic theories suggest that recessions are going to be associated with fiscal deficits. Keynesian theories of output stabilization advocate the use of deficit financing as an instrument of demand management, thus predicting a strongly countercyclical behavior of the deficit. Neoclassical theories of public sector deficits, such as the tax-smoothing model of Barro (1979), see government borrowing as the outcome of optimizing decisions by benevolent policy-makers trying to minimize the efficiency cost of distortionary taxation over time. According to this approach, tax rates should be smooth over time and public deficits run in case of temporary output recession and spending disturbances. Therefore,

⁵ *The above observation is correct under the assumption that private and public agents borrow in international markets at the same rate. If this is not the case, a positive interest differential on private borrowing can effectively discourage the issue of public debt if the government is concerned with private sector utility, since it amounts to an implicit tax on private agents.*

economic theories suggest that some degree of fiscal imbalance and debt is justified during recessions.

Can an optimal tax-smoothing model explain the Finnish fiscal deficits of the 1990s? On one side, the severe recession in Finland was bound to lead to large deficits: the collapse in economic activity caused a significant reduction in tax revenues while the surge in unemployment led to a large increase in expenditures related to unemployment insurance and other countercyclical expenditures. Moreover, the Finnish fiscal system was characterized by strong »automatic stabilizers» and additional discretionary increases in spending that led to large countercyclical deficits.

While this pattern fits a tax-smoothing interpretation of the fiscal imbalance, the size of the imbalance does not appear to be consistent with an a model of optimal debt accumulation. In fact, the tax-smoothing model suggests that deficits are an appropriate response to an output slump when the output shock is transitory; whenever the shock is permanent, the optimal response is to adjust permanently tax rates (and/or spending) and avoid any fiscal deficits. While the Finnish depression had some cyclical/transitory components, a fraction of the disturbances that hit the economy was permanent: the collapse of the trade with former Soviet Union, the deterioration of the terms of trade and the need for a real depreciation of the currency were equivalent to a permanent negative productivity shock.

It is true that there was a certain degree of uncertainty about whether the initial shock was transitory or permanent but it was clear by the end of 1992 that the recession was not another standard cyclical downturn but that a component of the shock that hit the economy was structural and permanent in nature.⁶ The question is therefore whether the Finnish fiscal policy during the recession can be explained purely by an optimal tax-smoothing response to a transitory output shock; insofar the shock was

partly permanent, a tax smoothing model would have suggested smaller fiscal deficits, less public debt accumulation and a much more rapid fiscal adjustment and consolidation.

Given the rapid increase in fiscal deficits and the stock of debt observed in the 1990s, in the next section we address formally the question of whether the fiscal path in Finland in the early 1990s was sustainable in the long run.

4.2 Solvency, Sustainability and Primary Gaps in Finland

The traditional approach to the empirical testing of the public sector solvency is the one followed by Hamilton and Flavin (1986) (see also Corsetti and Roubini, 1991, 1993). This class of tests stems from the following idea. The intertemporal budget constraint of the public sector is satisfied if, in the limit, the value of future government debt discounted to some fixed initial date goes to zero. The validity of the present-value budget constraint can therefore be tested by estimating the data generating process for the discounted debt and checking whether its long run value vanishes in expectation. While these tests of solvency are quite popular, it should be observed that they might fail to capture insolvency when there is a structural break in the fiscal policy regime.⁷

This relative weakness of the solvency test is evident in table 4; there, we present the results of the solvency tests for the discounted public debt of Finland. We use the Phillips-Peron tests and check the existence of unit root and deterministic trends in the discounted debt process⁸. The results in the first row of the ta-

⁷ In fact, this class of solvency tests is carried out under the maintained hypothesis that the data generating process describing the evolution of discounted debt and/or deficit is stable (in the sense of parameter constancy) over time. Thus, the test might fail to capture the unsustainability of the current Finnish debt path since the debt-GDP ratio was stable from 1960 to 1990 and the regime change occurred only the last part of the sample.

⁸ Note three important caveats. First, the Phillips-Peron tests are asymptotic, while sample information is limited to yearly observations starting from 1970. Second, the power of the tests is very low against an alternative hypothesis of stationarity with a root close to one. Third, these tests requires that the Data Generating Process is stable over the sample period.

⁶ Even after the strong 1994–95 recovery, the real GDP of Finland had not yet reached its pre-depression level confirming that the 1990s shock had a large structural component that led to a reduction of the permanent level of GDP.

Table 4. Solvency test for the discounted debt of Finland.

Regression model (1)		Regression model (2)			Regression model (3)			
Z(α_1)	Z(t_{α_1})	Z(α_2)	Z(t_{α_2})	Z(Φ_1)	Z(α_3)	Z(t_{α_3})	Z(Φ_2)	Z(Φ_3)
1970–1994 sample:								
<90	<90	<90	<90	<90	<90	<90	<90	<90
1970–1995 sample:								
<90	<90	<90	<90	<90	<90	<90	<95	<90
Regression Models:								
(1)	$y_t = \alpha_1 y_{t-1} + u_t^1$							
(2)	$y_t = \mu_2 + \alpha_2 y_{t-1} + u_t^2$							
(3)	$y_t = \mu_3 + \beta \left(t - \frac{T}{2}\right) + \alpha_3 y_{t-1} + u_t^3$							
Null hypotheses:								
Model 1	$H_0: \alpha = 1$							
Model 2	$H_0: \alpha = 1$ for Z(α) and Z(t_{α}) $H_0: \alpha = 1$ and $\mu = 0$ for Z(Φ_1)							
Model 3	$H_0: \alpha = 1$ for Z(α) and Z(t_{α}) $H_0: \alpha = 1$ and $\beta = 0$ ($\mu = ?$) for Z(Φ_3) $H_0: \alpha = 1$ and $\beta = 0$ and $\mu = 0$ for Z(Φ_2)							

ble suggest that, if we consider the 1970–1994 sample, the process for the discounted debt was characterized by a unit root without a deterministic trend. Since a unit root in the discounted debt is consistent both with insolvency and supersolvency, the test results are ambiguous: we cannot be certain that the non-stationary debt process implies insolvency. However, if we add to the sample an extra observation for the 1995 debt, the Phillips-Perron tests captures a significant positive deterministic trend that implies long-run insolvency for Finland. The results highlight the weakness of the standard solvency tests. Since the debt-GDP ratio and the discounted debt in Finland were quite stable until 1990 and started to grow very fast since 1991, the solvency tests are only able to capture the unit root in the process but not the deterministic trend that is required to show insolvency.

Given the relative weakness of the solvency tests described above, several authors have suggested an alternative approach to solvency, based on the analysis of »primary gaps». The idea of the »primary gaps» (see Blanchard, 1990, and Buitier, Corsetti and Roubini, 1993) is to consider the difference between the con-

stant primary balance (as a share of GDP) that would stabilize the debt to GDP ratio over some time horizon and the actual primary balance. This concept is interesting in the Finnish context because it suggest the minimum necessary amount of fiscal adjustment required to stabilize and start reducing the debt to GDP ratio. In this sense, the primary gaps represents a good »practical» measure of the sustainability of fiscal policy.

Our calculations of the one-period primary gap GAP¹ for Finland are given in Table 5 for 1993 and 1994. The primary gap for, say, 1994 provides a measure of the fiscal adjustment that would have prevented the debt-GDP to rise above its 1993 level during the year.⁹

The results for the one-period primary gaps in table 5 are striking. In 1993, the primary deficit was equal to 9.5% of GDP and the (r-g) dif-

⁹ For 1994, we used the IMF forecasts (available at the time of writing of the paper) for real GDP growth, the implicit real interest rate and the primary surplus for 1994, as well as the 1993 debt-GDP ratio. The actual 1994 realization of these macro data turned out to be on line with the IMF forecasts.

Table 5. One-period primary gaps.

Year	Real Growth Rate (%)	Real Interest Rate (%)	Public debt in t-1 (% of GDP)	s_1^* (% of GDP)	Primary Balance (% of GDP)	GAP ¹ (% GDP)
1993	-2.5	7.0	36.8	3.50	-9.3	13.0
1994	2.6	7.18	56.8	2.60	-9.8	12.4

Note: s_1^* is the primary surplus-GDP ratio that stabilizes the one-period ahead debt-GDP ratio; GAP¹ denotes the corresponding primary gap.

differential was very large (given the negative growth in the year) and equal to 9.5%. As a consequence, the one-period primary gap (i.e. the primary adjustment that would have been required to stabilize the debt-GDP ratio to the 1992 level) was huge: 13.0% of GDP. In 1994, the growth rate of the economy was positive, the (r-g) differential was lower (4.6%) but the primary deficit was even larger than in 1993 (9.8% of GDP); therefore the one-period primary gap falls only marginally to 12.4% of GDP. In other terms, a primary fiscal adjustment equal to over 12% of GDP would have been required in 1994 to stabilize the debt-GDP ratio at the 1993 level.

The results based on the one-period primary gaps should be interpreted with caution for two reasons. First, the high real interest rates of the 1990-94 years together with the low growth rates have implied very large (r-g) differentials that significantly increase the public debt burden; the long run (r-g) differential might be much smaller. Second, some positive fraction of the 1994 primary deficit was still due to cyclical factors that would diminish in importance

with the pickup in the growth rate of the economy; in other terms, not all of the current primary deficit of 1994 was structural.

To deal with the first point, we consider the permanent primary gaps presented in table 6 where the long run real interest rate – growth differential is assumed to be in a more reasonable range compared to the high values of the last few years: we consider scenarios where the differential ranges between 1 and 3%. Table 6 shows that even in the best scenario where the differential is as low as 1%, the primary gap is very large. A permanent primary surplus of 0.66% is required to stabilize the debt to GDP ratio permanently; compared to a current primary deficit of 9.8% for 1994, this implies a permanent primary gap equal to 10.46% of GDP. Of course, if the long-run (r-g) differential would turn out to be greater, the primary gap would be larger, as high as 11.76% of GDP in the case of a 3% differential.

In order to deal with the transitory components of the fiscal imbalance, we compare the permanent primary surplus required to stabilize the debt to GDP ratio with some measure of the

Table 6. Myopic permanent primary gaps.

Real Growth Rate (%)	Real Interest Rate (%)	Public debt in 1994 (% of GDP)	s_∞^* (% of GDP)	Primary Balance (% of GDP)	MGAP [∞] (% GDP)
3.0	4.0	67.6	0.66	-9.8	10.46
3.0	4.5	67.6	0.99	-9.8	10.79
3.0	5.0	67.6	1.32	-9.8	11.12
3.0	5.5	67.6	1.64	-9.8	11.44
3.0	6.0	67.6	1.96	-9.8	11.76

Note: s_∞^* is the constant primary surplus-GDP ratio required for long-run solvency; MGAP[∞] denotes the corresponding primary gap.

Table 7. Permanent primary gaps under alternative assumptions about the cyclical component of the 1994 primary deficit.

Cyclical Component of the Primary	Real Growth Rate (%)	Real Interest Rate (%)	Public debt in 1994 (% of GDP)	s_{∞}^* (% of GDP)	GAP ^m (% GDP)
0%	3.0	5.0	67.6	1.32	11.12
10%	3.0	5.0	67.6	1.32	10.14
20%	3.0	5.0	67.6	1.32	9.16
30%	3.0	5.0	67.6	1.32	8.18
40%	3.0	5.0	67.6	1.32	7.20
50%	3.0	5.0	67.6	1.32	6.22

Note: s_{∞}^* is the constant primary surplus-GDP ratio required for long-run solvency; GAP^m denotes the corresponding primary gap.

»expected» primary deficit (rather than the current one). Given the wide range of opinions on the cyclical versus structural components of the 1994 primary deficit, we provide a number of alternative scenarios. In table 7, we present estimates of the primary gaps under the alternative assumptions that the cyclical component of the 1994 primary deficit ranges between 0% and 50% of the actual 1994 figure and that the (r-g) differential will be permanently equal to 2%. Even in the best scenario, that half of the 1994 primary deficit was cyclical, the primary gaps would be equal to 6.22% of GDP. As the estimate of the cyclical component falls to zero, the estimated primary gap increases towards its myopic level of 11.12% of GDP.

While the analysis in this section is based on conditions at the end of 1994, the developments in 1995 only marginally change the analysis. Based on recent estimates, in 1995 there was a strong economic recovery with real growth estimated around 5% while real interest rates fell relative to their highs in the 1991–1994 period. This 1995 recovery reduced the cyclical component of the 1994 primary deficit while a much lower real interest rate-growth differential contributed to slow down the increase in the debt to GDP ratio during the year. However, as our discussion of the need to consider permanent primary gaps suggests, one-period myopic primary gaps are not very useful. For example, the growth rate of the economy is expected (by the OECD) to fall back from 5% in 1995 to 3% in 1996 (a figure closer to a long run trend) so that, even under the most optimistic

scenarios of Table 7 (a 50% cyclical component of the 1994 primary deficit), a significant primary adjustment will be required in the next few years to stabilize the debt to GDP ratio.

In summary, the evidence presented in this section suggests that the fiscal policy in Finland at the end of 1994 was not consistent with long run solvency of the public sector and that simple economic models of optimal debt accumulation could not explain the Finnish fiscal experience during the 1990s depression. A significant primary adjustment will be required in the next few years to stabilize the debt to GDP ratio, an objective that represents the minimum amount of fiscal adjustment necessary to insure the long-run solvency of the Finnish public sector.

4.3 Political Determinants of Fiscal Deficits: a Case Study for Finland

The above analysis has suggested that optimizing models of fiscal policy are unable to explain the build-up of fiscal deficits and public debt experienced by Finland. Similar evidence has been found for a number of other OECD countries (see Corsetti and Roubini, 1992, 1993, and Buitier, Corsetti and Roubini, 1993).

Faced with the growing evidence that deficits in Finland and other countries are often too large with respect to their optimal level and that the current path of fiscal policies is not sustainable in the long run, many authors have recently started to explore the role of political distur-

tions in explaining actual fiscal policy making. A recent yet growing literature elaborated the idea that political distortions may lead governments to follow systematic policies of excessive borrowing. The theoretical literature suggests at least five classes of political models of fiscal deficits: 1. the public choice approach (Buchanan); 2. models of government weakness and decentralized government; 3. distributional conflicts models; 4. models of strategic public debt choice; 5. political business cycle models.¹⁰ The findings of the empirical literature testing the above models are very encouraging and suggest the empirical relevance of a number of political and institutional factors.

We believe that a number of these political/institutional explanations of fiscal deficits are very relevant in understanding the actual fiscal policies of Finland during the 1990s depression. We will therefore first summarize the available empirical evidence on these factors; then, we present evidence on their relevance for the Finnish fiscal policies in recent years.

The first factor considered by the literature concerns the role of government weakness. Roubini and Sachs (1989a, b) found that, after controlling for economic determinants of fiscal policy (growth slowdown, unemployment shocks, real interest rate shocks and past deficits to capture the persistence of fiscal deficits), real inflation-adjusted budget deficits (as a share of GDP) are higher in multi-party coalition (and minority) governments compared to single party majority or presidential systems.

The second point stressed by the literature is the role of »divided government». When the legislature and the executive are controlled by different parties and/or when the controls of different branches of the legislature is split between opposing parties, fiscal stalemate, reciprocal vetoes and inability to agree on tough fis-

cal measures are likely to occur. For example, the large U.S. deficits of the last 12 years have been partly imputed to the effects of »divided government» (see McCubbins, 1990, Fiorina, 1990, and Poterba, 1993).

The third point relates to the effects of elections of the fiscal behavior of governments stressed by the »political business cycle» model of Nordhaus (1975): government are opportunistic and try to maximize their probability of re-election by trying to stimulate the economy during election years. Evidence that fiscal policy is looser in election years has been found by Alesina, Cohen and Roubini (1992, 1993), Tufte (1978) and Ames (1987).

Fourth, legislative budget rules also affect the bias towards fiscal deficits. Von Hagen (1992) has studied the legislative budget rules in several European countries and found that there is an important role of these fiscal rules in contributing to fiscal policy biases in several EU countries.

Finally, the model of strategic debt under democracy by Alesina and Tabellini (1990) suggest that political instability in the form of a strong partisan polarization of the political system and frequent alternance to power of ideologically opposed governments will cause higher than optimal fiscal deficits. The results in Roubini and Sachs (1989a, b), and Alesina, Cohen and Roubini (1992, 1993) can be interpreted as supporting the Alesina-Tabellini view of fiscal deficits under a democracy and the role of partisan factors.

In summary, the available empirical evidence stress the importance of political and institutional factors in explaining the size of the deficits for many industrial and developing countries. We will now argue that these models useful to understand the recent experience of Finland with large fiscal deficits.

First of all, consider the role of electoral effects. There is strong evidence that fiscal policy in Finland during election years has been relatively looser than in non-election years. Figure 1 shows the legislative election years in Finland (marked with a E) and the data on the change in the cyclically adjusted financial balance of the general government as a share of GDP since 1970. Evidence of a worsening of

¹⁰ See Buchanan, Rowley and Tollison, 1986, Roubini and Sachs, 1989a, 1989b, Alesina and Drazen 1991, Alesina and Tabellini, 1990, Tabellini and Alesina, 1990, Nordhaus, 1975, Rogoff, 1990, and Rogoff and Sibert, 1989. Open economy formulations of these models include Alesina and Tabellini, 1989. For a more systematic survey of this literature see Corsetti and Roubini, 1993, and Alesina and Perotti, 1994.

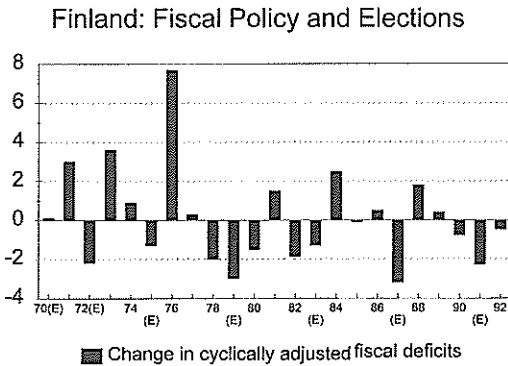


Figure 1.

the structural fiscal balance in election years is clear for the 1972, 1975, 1979, 1983, 1987 and 1991 elections. The only exception in the sample is the 1970 election.

As an additional test of political business cycle effects on the Finnish budget, we run a simple regression of the change in the cyclically adjusted financial balance of the general government as a share of GDP (ADJBAL) on an election dummy (ELE). We consider the cyclically adjusted budget so as to capture the changes in the fiscal balance that are not due to business cycle effects (i.e. boom and recessions). The estimation sample is 1970–1992. The results are (t-statistics in parenthesis) as follows:

$$ADJBAL = 0.96 - 2.84 \text{ ELE} \quad R^2 = 0.28$$

(1.78) (-2.90)

The coefficient on the election dummy has the expected sign (the fiscal balance worsens in election years) and is statistically significant ($t=2.90$). The coefficient estimate on the election dummy implies that, during election years, there is a worsening of the non-cyclical financial balance of the general government equivalent on average to 2.8% of GDP.

Regarding the role of government weakness and divided government, the experience of Finland is mixed. The empirical evidence (Roubini and Sachs, 1989a) suggests that proportional representation in countries like Italy has been associated with weak governments, short government duration and a bias towards deficits

compared to presidential systems such as the U.S. or France where periods of unified government have been characterized by low budget deficits. However, it is hard to characterize the Finnish political system. On one side, Finland has an electoral system of proportional representation that has led to a fragmented political system, multi-party coalition governments with very short duration (about a year on average during the last 60 years). On the other side, a very strong formal and informal presidency has led to a very stable and centralized political system dominated by the president figure. The stability of this system was quite remarkable during long presidency of Kekkonen (1956–1981) and persisted also in the 1980's. Overall, the presidential component of the power balance dominated the political system and compensated the instability effects deriving from the existence of multi-party coalition governments. Moreover, throughout most of the Kekkonen presidency, there was no divided government as the Social Democrats and the Center Party formed the core of most coalition governments.

This substantial stability of the system and strength of the presidency together with the absence of major economic shocks contributes to explain the fiscal performance of Finland up to the 1980's: fiscal balances were mostly positive and showing transitory deficits during temporary economic downturns; as a consequence, the gross debt to GDP was quite stable over time.

This relative strength and stability of the Finnish political system underwent changes in the 1980's. First, in 1982 the stable presidential anchor of the previous 25 years changed with the presidency of Koivisto. Second, the Social Democratic party (SSDP) experienced increasing electoral losses (as in 1987) that eventually led to its demise from power after the 1991 elections. As this weakening of the SSDP occurred through the 1980's, a series of increasingly weaker and ideologically more fragmented governments were forced over time and, finally, a conservative coalition gained power in 1991. Third, divided government, in the form of a left-wing president and a right-wing government coalition has been the rule

since 1991 and reinforced by the 1994 presidential election¹¹.

This increasing fragmentation of the political system, relative weakening of the presidency and onset of divided government in 1991 suggest that the ability of the fiscal policy making system to react more strongly to the structural 1991 shock was reduced. While large fiscal deficits were to be expected given the depth of the shock, the amount of fiscal deficits and debt accumulation has been 'excessive' compared to the one that could have been obtained in a more stable and strong political system. First, the shock hit the economy while the non-cyclical deficit in 1990 and 1991 had been already increased by the 1990–91 electoral fiscal cycle; second, the rise to power of a conservative coalition implied the emergence of divided government leading to the conflicts and fiscal stalemates that are typical of split government regimes; third, the conservative four-party coalition ruling until 1995 showed significant disagreement over fiscal policy as different coalition members pushed for different speeds of fiscal consolidation. As a consequence, while the official government programs were repeatedly presenting ambitious plans of spending reduction, the actual fiscal policies turned out to be different. Spending cuts were repeatedly been less than planned, slippage of the fiscal targets became quite systematic and the fiscal balances until 1994 worsened rather than improve: the net financing requirement of the central government went from 6.6% of GDP in 1991 to 14.0% in 1994.¹²

Another important institutional issue has to be considered to understand the fiscal deficit of the 1990's and their persistence. Von Hagen (1992) has shown the importance of budget rules favoring spending increases and restraints to fiscal cuts in explaining the fiscal biases of

several European countries. The case of Finland is quite interesting because, until the constitutional amendment of 1992, the budget rules required that spending cuts should be approved with a qualified majority of 2/3 of the legislature. While this rule was not of importance in periods of economic growth, it became a serious obstacle to fiscal retrenchment after the 1991 economic shock that required significant reduction in spending. Such a rule required a political coalition of 2/3 rather than a simple majority to pass any spending cuts.

Since the new law implementing the dictates of the constitutional amendment was passed only in late 1992, its potential to allow the ruling coalition to pass spending cuts with a simple majority became relevant only with the 1993 budget. The 1991 and 1992 budget were passed under the qualified majority rules that prevented effective fiscal adjustment for those years. While the new rules eliminated the veto power that the opposition had over spending cuts (with the exception of basic social security benefits), their introduction only marginally increased the effective ability and willingness of the coalition governing until 1995 to pass spending cuts. Persistent inter-coalition disagreements over the optimal speed of fiscal consolidation; the election in early 1994 of the opposition candidate to the presidency and the expected electoral loss by the ruling coalition during the 1995 elections dampened the drive towards fiscal consolidation in 1994.

As a consequence, in spite of the fact that there has been a cyclical upturn in the economy since the middle of 1993, the primary and overall fiscal deficits worsened rather than improved in 1994 reaching the levels, respectively, of 9.8% and 14.0% of GDP.

In conclusion, the evidence in this section suggests that several of the political and institutional biases in fiscal policy stressed by the political economy literature contribute to explain the Finnish deficits in the 1990s.

4.4 Scenarios for fiscal consolidation in Finland

The political economy constraints discussed in the previous section will affect the speed of

¹¹ In a sense, the onset of divided government could be dated back to 1987 when, for the first time in 20 years, a Kokoomus leader, Harri Holkeri, became prime minister and leader of a coalition that reduced the relative government power of the SSDP.

¹² It should also be observed that the long stability of the Finnish presidency until the early 1980s, followed by a less centralized government and rising fiscal problems, fits also the analysis of von Hagen (1992) of the role of the budget process.

Table 8. Finland. Alternative fiscal adjustment scenarios.

	Slow primary adjustment		Medium speed primary adjustment		Rapid primary adjustment	
	Primary balance	Debt/GDP ratio	Primary balance	Debt/GDP ratio	Primary balance	Debt/GDP ratio
1994	-9.8	67.6	-9.8	67.6	-9.8	67.6
1995	-7.3	77.0	-5.5	75.1	-3.6	73.2
1996	-5.6	84.1	-2.8	79.5	-0.8	75.6
1997	-4.0	89.9	-1.0	82.0	0.6	76.5
1998	-2.6	94.4	0.3	83.4	1.3	76.7
1998	-1.4	97.6	1.2	83.9	1.6	76.6
2000	-0.2	99.9	1.8	83.7	1.8	76.3
2001	0.7	101.1	2.3	83.1	1.9	75.9
2002	1.7	101.4	2.6	82.1	2.0	75.5
2003	2.5	100.9	2.8	81.1	2.0	75.0
2004	3.3	99.7	3.0	79.6	2.0	74.4

Note: the above scenarios were performed under the assumption that the long-run real interest rate – growth differential will be equal to 2%.

fiscal consolidation in the next few years. With this caveat in mind, it is useful to consider alternative scenarios for fiscal consolidation in Finland in the medium term. In table 8 we present three such scenarios corresponding to a rapid, a medium paced and a slow fiscal retrenchment effort. In these simulations, we assume that the long-run real interest – growth differential will be equal to 2%. The 'rapid' adjustment scenario is close to the original plan of the Finnish fiscal authorities aimed at stabilizing the debt-GDP to a level close to 70% by 1997. It would imply to eliminate the 1994 primary deficit of 9.8% by 1997 and run thereafter increasing primary surpluses equal to 2.0% of GDP. The debt to GDP ratio would then peak at 76.6% in 1998 and then slowly fall asymptotically to the 1994 level.

The alternative »slow» adjustment scenario would imply a more gradual reduction of the primary deficit that would be eliminated only in the year 2001. While this scenario might be more likely given the political and economic constraints faced by the Finnish fiscal authorities in the future, the consequences of a slow and delayed stabilization are quite serious. The debt to GDP ratio would peak at 100% by the year 2003 and a permanent primary surplus close to 3% of GDP would then be required forever just to maintain the debt-GDP stable at the

100% level. A further attempt to reduce the debt ratio from such a high level after 2003 would then require permanent primary surpluses in excess of 3% of GDP. While this scenario is more likely given the political economy constraints faced by the country, it would leave Finland with a very large debt ratio, a significant debt burden and the need for large primary surpluses just to stabilize the debt ratio.

It should be observed that, under all the scenarios, eventually primary surpluses are going to be necessary to reach sustainability, i.e. to stabilize the debt to GDP ratio. The size of the permanent primary surplus required to stabilize the debt ratio will depend on the speed of fiscal retrenchment and the actual real interest rate – growth differential. A slower (faster) initial primary adjustment will require later on larger (smaller) permanent primary surpluses since the debt-GDP will end up being higher (smaller).

5. Conclusions

The theoretical model presented in the paper suggested that there are both benefits and costs to fiscal discretion. Rigid balanced budget fiscal rules might eliminate fiscal biases deriving from political distortions but can be seriously damaging when large negative output shocks hit

the economy. The model also implies that allowing fiscal discretion in the presence of political distortions will not exacerbate the fiscal bias.

The open economy implications of the model are also consistent with the data: the fiscal deficits of the 1990s were associated with large current account deficits and accumulation of foreign debt both by the private and public sector. While in 1989 the net external debt of the economy was equal to 21.8% of GDP, by the end of 1993 it was around 59% of GDP. As implied by the model in the paper, the actual increase in foreign debt between 1989 and 1993 (36.9% of GDP) matched very closely the increase of the public sector debt in the same period (44.3% of GDP): the fiscal deficits of the 1990s were mostly financed through foreign borrowing. In addition to the large public sector debt, the large foreign debt of the economy hangs as an additional long-run burden for the economy that will require permanent current account surpluses to prevent an explosion of the net foreign debt of the country.

The analysis in the paper shows that the path of fiscal policy until 1994 was inconsistent with the long run solvency of the public sector. It also suggests that, in spite of the size and depth of the economic depression in Finland in the 1990s, the size of the fiscal deficits and debt accumulation was excessive and exacerbated by political biases. By 1994, a significant fiscal adjustment was required to prevent an upward trend in the debt to GDP ratio and to assure the solvency of the public sector.

The alternative scenarios for sustainable fiscal adjustment presented in the paper suggest that there was no easy trade-off for Finland: slowing and delaying the fiscal adjustment process would exacerbate the debt problem and require a much larger permanent adjustment at some point down the road. While the economic depression of the 1990s was unprecedented in size and partly unexpected in its persistence, the fiscal policies followed in the depression had already aggravated its long-run burden for the economy.

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