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Public Finances and Economic Transition

by

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Abstract

This paper analyzes developments in general government expenditures and revenues for 26 reforming ex-socialist economies (RESEs) over the period 1989-1994. The data indicate that, rather than uniformly converging to a "Western European" norm, RESEs have followed a variety of patterns, depending on how successful they have been in economic reform in general and in tackling the increase in the demand for social protection in particular. The paper conducts an empirical investigation of spending patterns and the sustainability of revenues required to maintain current government spending, and concludes that there are strong indications that the fiscal accounts will remain under pressure in a number of RESEs in the foreseeable future.

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Contents:

Introduction

The economic transformation in reforming ex-socialist economies (RESEs) in Central and Eastern Europe and the FSU has profoundly affected public finances. As noted by many, solving the public finances crisis associated with the onset of economic transformation has been one of the main tasks that have confronted policy makers. A close association between success in public sector deficit containment and success in economic liberalization has also been noted (de Melo, Denizer, and Gelb, 1995).

Yet some observes are beginning to argue that, after 4-5 years of economic reforms, the fiscal systems of the RESEs may have converged to the advanced-European norm, characterized by high spending ratios, mature social welfare systems, and consequently high taxation. Worries are openly expressed as to the effects on long-term growth of such high spending and tax ratios.

This paper addresses two questions. First, whether the data support the "convergence" hypothesis. Second, whether, based on international experience, there are indications regarding the *direction* and *sustainability* of existing and prospective expenditure and revenue patterns. In the first section of the paper, we review the evidence on the behavior of general government spending in the 26 transition countries under consideration. In the empirical analysis of the second section, we seek to identify major determinants of government expenditures and to assess the adequacy and dynamics of the current levels of spending in the transition countries.

We find that although the data show that several countries are indeed high spenders, there is substantial variation. We identify some of the ways in which policy choices and initial conditions have interacted in individual economies during the transformation period. Our empirical analysis draws upon the standard tests of the Wagner's Hypothesis of the positive correlation between government expenditure and a country's level of economic development (Ram, 1987, Pryor, 1968 and Musgrave, 1969), but further develops the specification of the factors underlying public spending ratios. Rather than national income (per-capita GDP) as an explanatory variable, it emphasizes "structural" and collective choice features, which seem to play a crucial role during transition.

In the third section, we tackle the problem of assessing the future ability of transition governments to finance their expenditure trends. We provide some econometric evidence regarding the determinants and the sustainability of revenue collection required to this purpose. The econometric analysis is patterned on the classic "revenue capacity" and "tax effort" approaches (Lotz and Morss, 1967 and Tanzi, 1992), again, including other, specific factors that provide a degree of freedom for social preferences.

Conclusions, of a sobering nature, follow.

1. The Size of the State: A Convergence?

Any study of government expenditure patterns in the reforming former socialist economies (RESEs) must suffer from important definition and data availability problems. Most countries (in the FSU and in the former Yugoslavia, as well as the Czech and Slovak republics) did not exist as sovereign units only five years ago, and even for those that kept, for one reason or the other, some form of fiscal accounting, intertemporal comparisons are complicated by the need to control for functions that previously might have been carried out by a federal government authority. Perhaps even more important, at least for a number of RESEs, is the fact that the budget was a very incomplete measure of the public spending, which was greatly incremented by lending from the banking system as well as by off-budget expenditures and guarantees.

These caveats suggest that whatever international comparisons are made and trends detected, they should be taken with great care. Generally speaking, broad trends, and their driving forces, rather than a precise quantification should be sought.

This being said, there is little doubt that, at the start of transition, the countries of Eastern Europe and FSU recorded large government expenditure on both economic and non-economic sectors - on subsidies and transfers, on education and health care. These expenditure categories, as shares of GDP, matched or surpassed the amounts spent in Western Europe. In 1988-89, recorded consolidated general government expenditures (or some equivalent approximation) averaged some 53 per cent of GDP, ranging from a high of 67 for Mongolia to

40 per cent of GDP for Romania and the former Yugoslavia. This compares with an average OECD expenditure of 51 per cent of GDP (55 per cent for the West European countries).[1]

As it is well known, there have been multiple reasons for these high expenditure ratios. On average, some 15 per cent of GDP was devoted to subsidies to enterprises and households, ranging from the high of 20 per cent for Czechoslovakia to moderate 4 per cent for Yugoslavia.[2] The high subsidy ratios went hand-in glove with high revenue ratios, as a result of the duplications created by the distorted set of relative prices typical of socialist economies (Barbone and Marchetti, 1995). This engendered high profitability, and therefore high profit taxes, for a number of "favored" sectors, which was however counterbalanced by large losses in some sectors and the required subsidies from the budget. With the advent of economic liberalization and of market-based pricing, much of this "duplication" has disappeared, and with that both sides of the government budget's income and loss statement have been scaled down.

Prior to transition, most of the socialist countries had already developed a social safety net system, generally comprising a pay-as-you-go pension scheme, sick pay, generous maternity benefits and family allowances, retraining/labor funds, as well as specific welfare schemes. Social security transfers usually absorbed some 25 per cent of total expenditure. These did not include any unemployment benefits as unemployment, with the exception of Yugoslavia, was by definition non-existent. Similarly to the West European countries, however, large transfers were assigned to the provision of pensions.[3] Government expenditure on pensions ranged from about 6 per cent of GDP in the FSU, where pensions

[1] It should be noted that in 1993/94, the highest OECD spender Sweden, at 72 per cent of GDP, far surpassed the most profligate RESEs. In 1988-89, Sweden's general government expenditure accounted for about 62 per cent of GDP, but rose by 10 per cent of GDP thereafter.

[2] In addition to enterprise subsidies, government also carried cost of settling inter-enterprise arrears and non-repaid loan from the state-owned banks. The financial burden of this soft budget was quite heavy also on the government of Yugoslavia (Corricelli and Rocha, 1991). Also invisible in the budget figures, there used to be some implicit subsidies financed by tax offsets and negative real interest.

[3] The proportion of social transfers in the government budget was lower than in many OECD countries on account of the fact that many social functions were performed by the state enterprise system. For example, in the former Soviet Union, a large amount of goods and services, including day care, was provided through the social consumption funds of the SOEs. SOEs were also in charge of allocating the social security benefits as well as of collecting tax and social security contributions. Thus, most of the transition countries had developed neither strong social security administration nor historical records of individual contributions and benefits. Later, creation of new sovereign states required building of their public administration systems from virtually a zero base.

were conditioned by previous employment, to more than 9 per cent of GDP in Hungary, providing a universal pension coverage. Historically, the social benefits paid were not related to the social security contributions, and general revenues provided major source of financing the entire social security system.

Capital formation was also generally higher than in OECD countries, although often government expenditure data may have reflected fuzzy accounting procedures in the statistics of many RESEs. In Albania, for instance, all recorded investment was carried out by state enterprises, and took the form of central allocations to enterprises for investment purposes. Indeed, in keeping with the pure central planning model, enterprises were not allowed to retain any of their surplus, and could not, therefore invest on their own. A similar practice obtained in Romania and FSU. This had the effect of showing the entire domestic investment as a budgetary expenditure item, something that is not consistent with GFS practices with regard to general government reporting.

Finally, in a number of countries (particularly the FSU) large military expenditures contributed to overall high spending levels. For instance, it was estimated that at the end of the 1980s, military expenditures in the Soviet Union budget amounted to over 7 per cent of GDP.[4]

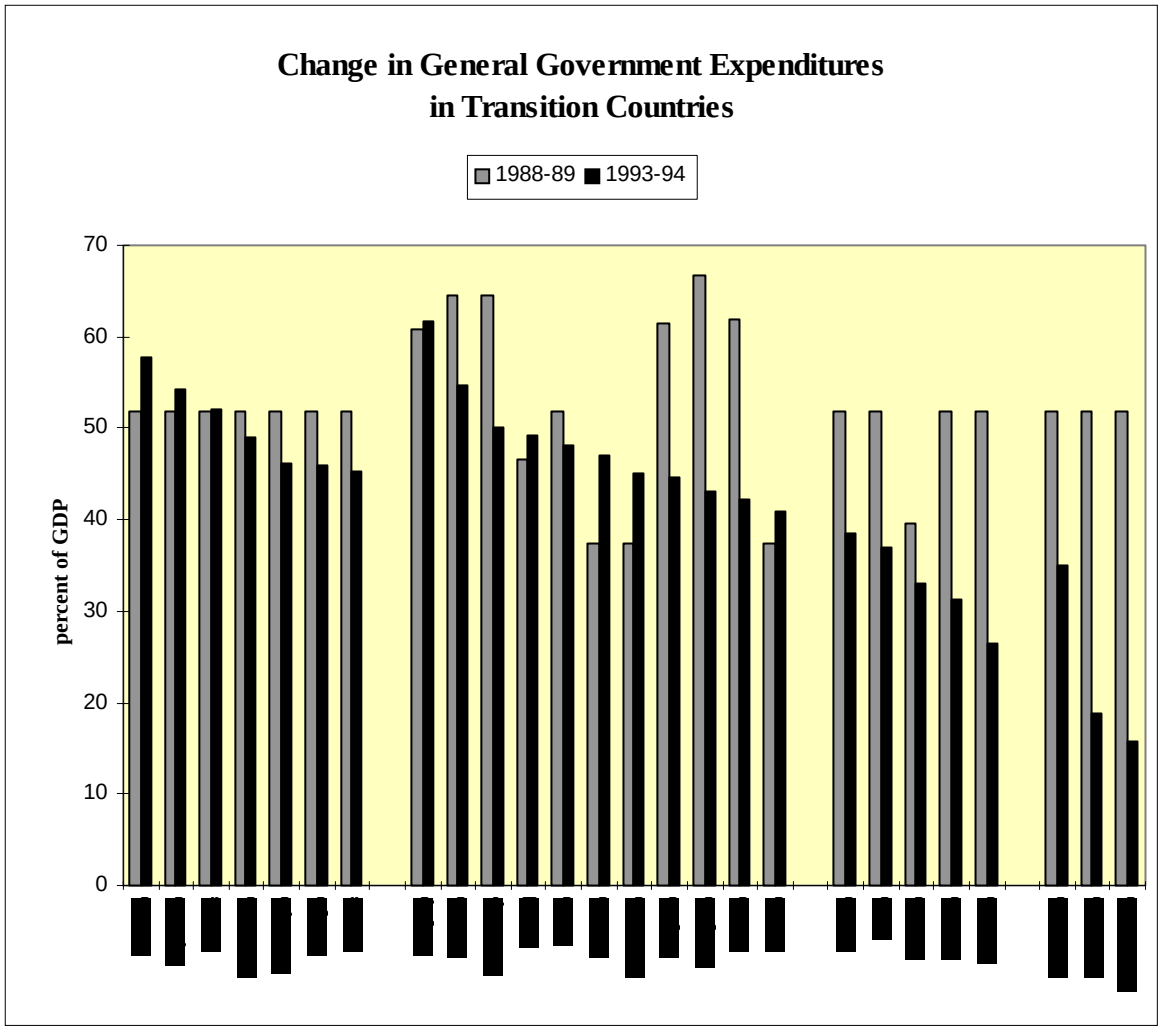
1.1. Transition and Government Spending

Spending ratios have changed drastically in a number of countries following the onset of economic liberalization (Figure 1). Between 1988/89 and 1993/94, the average general government expenditure declined from 53 to 39 per cent of GDP. Out of our sample of 26 transition countries, 18 countries decreased their total expenditure ratios. The reduction has been limited in some (for example, in Russia or Uzbekistan it was about 3 per cent of GDP), but very drastic in others, such as Kazakhstan and Turkmenistan, where the size of government expenditure has shrunk by more than 30 per cent of GDP (and where, as we will discuss later, the decline in expenditure was accompanied by swelling government

[4] These figures are disputed, as alternative estimates put military expenditures to as high as 20 per cent of GDP. See IMF, World Bank and OECD, 1991.

arrears in pensions and other assigned benefits). On the other hand, 8 countries expanded their governments. In 1993-94, for instance, government expenditure in Macedonia and Slovenia surpassed the 1988 average of the former Yugoslav government by more than 7 and 9 per cent of GDP, respectively.

Figure 1:



Notes: 1. Within each group countries are sorted according to their level of government expenditure in 1993-94.
2. The figures for 1988-89 assign to currently existing countries the averages of the their former federal states.

1.2. A Typology of Changing Expenditures

There are multiple reasons for the changing patterns, reflecting just as much successful reforms in the economic role of governments as well lack of restructuring in its social-security responsibilities, or, simply, a drastic fall in government revenues. While we are aware of all the risks associated with sweeping generalizations, we offer a four-fold

classification of the typology of changes in public expenditure in RESEs, based on an assessment of their reforming of major spending programs, particularly those that proxy the level of government economic interventionism and the role of government in social and welfare sectors.

Table 1: Classification of RESEs by Spending Patterns and the Average General Government Expenditure and Revenue, 1993-94.

Group No.	Group 1	Group 2	Group 3	Group 4
	Armenia Tajikistan Ukraine Uzbekistan Azerbaijan Georgia Belarus	Hungary Slovakia Czech Republic Poland Russia Slovenia Macedonia Bulgaria Mongolia Albania Croatia	Estonia Latvia Romania Lithuania Moldova	Kyrgyz Republic Kazakhstan Turkmenistan
Avg. gg Expenditure	50.1 % of GDP	47.9 % of GDP	33.3 % of GDP	23.1 % of GDP
Avg. gg Revenue	31.8 % of GDP	42.5 % of GDP	30.2 % of GDP	19.3 % of GDP

The first two groups include countries where changes in government expenditures may have been led mainly by *social demand*, albeit with sharply differing characteristics. The range of the countries in which social demand has proven to be the main determinant of government expenditure is broad and goes from those perceived as the leaders of transition (e.g., Hungary and Poland), to countries that became a common target of criticism for lack of reforms (e.g., Uzbekistan and Ukraine).

What all these countries have in common is that their governments, so far, have remained the major, if not the sole, entity responsible to accommodate the demand for social protection. They have inherited many of the social welfare functions that had previously been confined to the state enterprise sector, but have been unable to significantly promote involvement of the private sector in these areas. As a result, the size of the state in all these

countries remains high. With per-capita income near to the middle-income developing countries, these transition countries would thus seem outliers in the traditional positive correlation between the per capita GDP and the GDP share of government expenditure (e.g., Krumm, Milanovic, and Walton, 1994). In the next section, we will review this issue. Then, we will show that, particularly for countries with the lowest per capita incomes, such as Albania, Armenia, Azerbaijan, Georgia, or Tajikistan, legitimate doubts can be raised about their ability to collect a sufficient amount of tax revenues to sustain the large government programs.

Group 1 includes countries, which, so far, have had the worst of possible worlds. They have timidly initiated economic reform, and therefore stimulated the demand for social protection. But, at the same time, they have been most reluctant in reducing the intervention of the state in the economy and the required subsidization of enterprises. Slow in privatization, maintaining many loss-making enterprises afloat, and allowing for large over-employment, governments effectively hamper development of a market environment in the enterprise as well as social sectors.[5] For example, enterprise subsidies in Belarus and Ukraine amount to, respectively 6 and 9 per cent of GDP. In Armenia, Azerbaijan, Georgia, Tajikistan, and Uzbekistan enterprise subsidies have been about four per cent of GDP, but complemented by large net lending of and arrears to the government. In its fiscal effect, this reform "sequencing" brought about large deficits, reaching on average almost 20 per cent of GDP.

The second group of countries (***Group 2***) has been considerably bolder in reducing price distortions and the related need for subsidies from the government. At the same time, however, the emergence of a hard budget constraint on enterprises, the advances in privatization and restructuring in the enterprise and financial sectors, combined with inaction or explicit policy choice to result in a substantial increase in cash benefit outlays. These increases have more than compensated, in most cases, for the reduction in enterprise subsidies. In this group, Albania, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia,

[5] To differentiate the countries of the first group according to the remaining economic interventionism of their government, we consider the extent of cuts in enterprise subsidies, non-repaid tax- and enterprise arrears, government net lending, and the existing support to privatization and private sector development. See de Melo, Denizer, Gelb (1995).

Mongolia, Poland, Russia, Slovakia, and Slovenia, all experienced the budget cost of rising unemployment and retirement, or of consolidation of old enterprise arrears and bank recapitalization. Whereas the latter is a temporary expenditure only, the former may remain on high levels if government does not progress with a comprehensive reform of social security system. Indeed, economic growth, which resumed in most of the countries of the second group, has not brought about any decline in government social security and welfare expenditure. Governments have undertaken only very cautious steps in developing new, private, social security and welfare schemes, and in redirecting the social demand to the private sector. Similarly to the first group, the expenditure patterns of these countries have converged to the West European levels, while the income gap remains wide. But, much more than in the countries of the first group, economic liberalization in these countries allowed for some government savings. After hard budget constraint was introduced to enterprises and banks, governments cut enterprise and credit subsidies significantly. As discussed, in the Czech Republic, Hungary, Poland and Slovakia, enterprise subsidies have dropped by not less than ten per cent of GDP.

Other transition countries (group 3 and 4) had no choice to permit large increases in social security expenditure and, due to revenue collapses, had to reduce the size of government spending altogether. Initially, public expenditures in all these countries were shocked by a tight *financial constraint*. Governments have had only a very limited, or virtually none, access to credit, and collapse of revenues has required to switch to cash rationing and drastically restrain expenditure. We differentiate among these countries, again, according to their reform efforts.

Group 3 includes countries, which have not only resisted the temptation to provide generous social security and welfare benefits, but also forcefully moved towards new, fully funded, pension schemes, enhanced their social security administration, and reduced the scope of abuse of welfare benefits. In Estonia, Latvia, Lithuania, Moldova, and Romania, government has significantly liberalized the economy, almost eliminated enterprise subsidies, and reduced its responsibilities in the social sector. Although net lending figures may suggest that many enterprises in the Baltics have not become subject to the hard budget constraint entirely, the recent progress on the front of privatization may address this issue. Compared to the countries in the previous two groups, it is possible to suggest that, here,

government reform priorities, rather than social demand, took the lead in determining the expenditure dynamics. On the other hand, cuts undertaken by these governments in health care, or public investment, or (with the exception of Latvia) also in education, have not been fully counterbalanced by new services in the private sector. Thus, when tax revenues permit, governments might find themselves under pressure to pay for some of the current gaps. Nevertheless, as we discuss in the next section, expenditure levels in these countries appear at, or under, the values predicted by structural models of government expenditures, suggesting that they might be converging to the spending ratios of middle-income rather than West European countries.

With little progress in either economic liberalization or social expenditure reforms, the governments of Kazakhstan, the Kyrgyz Republic, and Turkmenistan (***Group 4***), resemble their counterparts in group 1, except for the drastically lower levels of general government expenditures. But closer examination reveals that the large drop in their public expenditure, so far, has been driven by the *financial constraint* only. With the exception of the Kyrgyz Republic, enterprise subsidies still account for a relatively high proportion of the government budget and the reduction in social expenditure may well be transitory - for as long as it is virtually impossible for the government to collect more revenues and/or access credit. Since the government has been facing increasing arrears in pensions, and under-spending on investment and maintenance, while allowing a very little room to private sector development, government spending may be bound to rise there as soon as recourses become available.[6] Thus, it is not clear whether social demand or new reform priorities will take the lead in determining the future government spending. When they finally emerge from recession, these countries might face the trap of falling back into their "traditional" high spending ratios. Compared to the first two groups of countries, however, here the pressure on the governments to privatize and contract-out social services is much greater, and, paradoxically, may be to these countries' long-term advantage.

[6] The drop in and shortage of tax revenues, more drastic here than in the other countries, are also due to the lack of economic reforms. And, as the state is running out of breath with financing of its economic interventions, there may be an increasing hope for the government permission to economic liberalization.

Table 2: Indicators of Spending Policies, General Government, 1993-94

	Total Expenditure	Change in Total Expenditure	Expenditure on Education	Expenditure on Health Care	Expenditure on Pensions	Expenditure on Enterprise Subsidies	Support to Economic Reforms
Group 1							
Armenia	57.8	5.9	5.7	4.6	6.9	4.9	1.2
Tajikistan	54.2	2.3	8.8	4.9	8.9	3.2	1.1
Ukraine	52.1	0.2	4.8	4.2	8.2	9.0	0.8
Uzbekistan	49.0	-2.9	9.8	4.8	10.3	3.1	1.2
Azerbaijan	46.1	-5.8	7.9	2.9	8.1	4.2	0.7
Georgia	46.0	-5.9	4.7	2.6	9.8	3.4	0.9
Belarus	45.2	-6.7	5.1	4.9	7.3	6.5	1.1
avg.	50.0	-1.8	6.7	4.1	8.5	4.9	1.0
Group 2							
Hungary	61.6	0.7	6.0	6.8	9.9	4.4	3.0
Slovakia	54.6	-9.9	6.0	5.6	9.7	4.9	3.5
Czech Rep	50.1	-14.4	5.8	7.1	8.4	3.9	3.7
Poland	49.3	2.7	4.9	4.5	15.0	2.0	3.6
Russia	48.1	-3.8	4.3	3.4	6.5	1.2	1.8
Slovenia	47.0	9.7	5.3	7.4	13.3	3.6	3.2
Macedonia	45.0	7.7	4.9	6.9	10.4	1.3	2.9
Bulgaria	44.6	-16.8	4.9	4.8	10.2	1.6	1.4
Mongolia	43.1	-23.7	7.6	4.4	8.0	3.9	2.6
Albania	42.2	-19.8	3.4	2.9	7.9	0.9	1.4
Croatia	40.9	3.6	2.9	8.1	9.1	2.1	3.3
avg.	47.9	-5.8	5.1	5.6	9.9	2.7	2.8
Group 3							
Estonia	38.4	-13.5	6.5	4.3	6.7	1.0	2.3
Latvia	37.0	-14.9	6.3	4.1	9.6	0.2	1.7
Romania	33.1	-6.6	3.4	3.0	8.6	3.2	1.6
Lithuania	31.3	-20.6	3.9	3.2	4.6	1.3	2.2
Moldova	26.5	-25.4	6.2	3.9	4.2	1.1	1.2
avg.	33.6	-16.2	5.3	3.7	6.7	1.4	1.8
Group 4							
Kyrgyz Rep.	34.9	-17.0	3.4	3.3	6.1	3.4	1.9
Kazakhstan	18.8	-33.1	3.3	2.1	0.2	3.2	1.1
Turkmenistan	15.7	-36.2	3.9	2.1	0.9	2.1	0.6
avg.	23.1	-28.8	3.5	2.5	2.4	2.9	1.2

Notes: 1. All expenditure items apply to consolidated general government accounts.

2. The indicator of economic reforms is up to 5, rising with the extent of government support to economic liberalization and to private sector development. For construction of the indicator, see de Melo, Denizer and Gelb (1995).

2. An Empirical Assessment of Patterns of Government Spending in RESEs

The data discussed in the previous section provide a "snapshot" of a fast-changing public spending picture in the reforming ex-socialist economies. In this and the next section, we want to address more directly the question of the adequacy and sustainability of the spending patterns that have emerged so far. More specifically, adopting a concept of "carrying capacity" of a fiscal burden for a given economy, we would like to assess: (i) whether the public-spending/GDP ratios presently observed in RESEs are in line with "comparable" indicators predicted from structural characteristics of advanced and less-advanced comparators; and, (ii) perhaps more importantly, whether the fiscal burden implied by the spending ratios is indeed bearable for the RESEs in the long term.

To shed light on these issues, we develop an empirical model aimed at explaining cross-country differences in the ratios of general government expenditure and revenues to GDP. The model picks up from and extends the existing empirical literature on spending and taxing ratios (See Lotz and Morss, 1967, and Heller and Diamond, 1990). The analysis is carried out using data on 73 countries, including the 26 RESEs, the OECD and a group of middle-income developing countries. The estimates are performed for 1993 or 1994, depending on data availability.

The purpose of the regressions is as follows. We first assess government spending ratios prevailing in RESEs by running a regression on non-RESE country spending patterns and selected structural indicators. The choice of indicators is discussed below. We then use the estimated parameter values to obtain theoretical spending ratios for RESEs, and compare them against the actual values. We use the difference between the theoretical and actual values as an indication of over- or under-spending, and provide comparisons based on the country groupings defined in the previous section. Next, we repeat the same procedure for government revenues. Then, we put the two sets of results together, and draw observations on adequacy and sustainability of expenditures.

2.1. Determinants of Public Expenditures

The determinants of the size of the state in modern market economies have been analyzed in the past and, not surprisingly, they appear complex and not easy to quantify.

The literature suggests that demographic factors are important in explaining government expenditures. For example, the age structure and growth of the population, urbanization, and ethnic or religious homogeneity, affect demand for both current and capital government expenditure (Goffman and Mahar, 1971, and Pryor, 1968). On the other hand, supply of government services may badly fail to meet the needs due to a rapid demographic changes (Brazer, 1959).[7]

General economic circumstances have been considered crucial since 1883, when Adolph Wagner suggested that, as an economy develops, the public sector (and consequently public spending) grows in relative importance. For example, industrialization, the ratio of manufacturing output to GDP, and market development tend to increase the amounts of government spending on education, research and development, health care and welfare. It is also commonly accepted that, as an economy develops, the relative importance of direct government provision of services, and thus the government's role as an employer falls, while other types of expenditure, such as transfers, become more important (Heller and Diamond, 1990); or that the more unequal is the distribution of income, the more police services may be desired (Pryor, 1968).[8]

The role of the determinants of public expenditure may change over time. For example, relationships between per capita GDP and government expenditure estimated from time series usually differ from those estimated by cross-section. Low income countries today do not operate under the same technical, political, and value conditions as prevailed in the past when now developed countries were at similar low levels of income (Musgrave, 1969).[9]

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[7] The extensive analysis of Heller and Diamond (1990) showed that: (i) The relative size of the non-adult population (as well as the per cent of pupils reaching grade six) has a positive and statistically significant influence on the size of gg expenditure on education. (ii) Surprisingly, birth and population growth rates and the size of the dependent population do not exercise any statistically significant influence of government health care expenditure. (iii) Old age dependency ratio and the proportion of labor force in manufacturing dominantly influence expenditure on welfare. Since private sector takes up unemployment pay and sickness and injury benefits for the higher-income countries, there is not a strong relationship between welfare expenditure and pro capita GDP. And, (iv) urban growth negatively affects public health care expenditure.

[8] Analysis of expenditure data for 1950s-1960s with respect to per capita GDP for socialist and non-socialist countries showed that expenditure on research and development, and external security was higher in the socialist countries. The "socialism dummy", however, was not significant for expenditure on education, health and welfare (Pryor, 1968).

[9] One of the reasons is development of new technologies. The impact of technology on government spending occurs directly through, for instance, an increasing demand for road construction and complementary services, and/or less directly through the subsequent greater mobility of the population and the exodus from the town to the suburbs, with resulting heavy social capital requirements (Biehl, Roskamp, and Stolper, 1983, and Heller and Diamond, 1990). Similarly to the Wagner's hypothesis, also the hypothesis about a productivity-lag (of the labor intensive public services) supports the relative growth of public expenditures (Baumol, 1967, and Baumol and Oates, 1975).

Influences on the government budget that are most difficult to assess, quantify and predict include social, political and administrative factors. Changes in cultural values, ideology and philosophy, and in the expected role of state, as well as modifications of political structure, alter the effective demand (distribution of votes) for public goods, and hence affect expenditure levels. For example, transition from authoritarian to representative government proves to strengthen the effective demand for social goods, as does the subsequent democratization of representative forms of government through the broadening of suffrage (Morss, Fredland and Hymans, 1967, Musgrave, 1969, and Diamond, 1977). Regional "traditions" influence demand for public intervention and effectiveness of public administration. Or, the level of social development, such as maturity of welfare system, or higher literacy level of the population, increases demand for public consumption expenditures (Pryor, 1968). Also, according to the Leviathan hypothesis, independence of unit for funds play an important role. For example, education expenditures are higher in countries in which the main decision unit is also responsible for taxation, than in units where the decision unit receives tax funds from other governmental units (Brennan and Buchanan, 1980).[10] Then there is various anecdotal evidence, such as that creating a supply of bureaucrats tends to create a demand for services of bureaucrats (Bird, 1970); or that different climate and natural disaster occurrence require different amounts of public services (Pryor, 1968).

The last group of important government expenditure determinants involves financial constraints. The tax system clearly influences the size of public expenditure (Hinrichs, 1966, Oshima, 1957, and Musgrave, 1969). Then, the built-in revenue response that exists due to the high income elasticity of taxation in developed countries favors public expenditure growth (Diamond, 1977). In addition, in many developing countries, grants and foreign loans shift the financial constraint on government spending, and, simultaneously foreign debt service, as usually, constrains spending on education and health care (Heller

[10] Ehdaie (1994) showed that, consistent with the Leviathan model, in estimating of the government expenditure, the coefficient of fiscal-decentralization variable is negative. He also stressed that fiscal decentralization must be considered as containing two inseparable elements of taxing and spending decisions. Peacock and Wiseman (1961) noted that transferring expenditure decisions from local to central government weakens the one-to-one relation between benefits received and taxes paid, and thus creates a loss of control reinforced by the possibilities of interdepartmental logrolling.

and Diamond, 1990). And anecdotal evidence suggests that supply limitation on the expansion of the public expenditures depends on the size of the previous year's deficit (Morss, Fredland and Hymans, 1967); and that expenditures rise to exhaust the revenue available (Parkinson, 1957).

In sum, the literature suggests that a meaningful analysis of government expenditures should take into account societal factors, portraying social demand and consensus, together with indicators of the government ability to pursue own policy priorities and overcome financial constraints. Change in any of these three factors may lead to significant shifts in the size and composition of government expenditure. Comprehensive empirical analysis (Heller and Diamond, 1990, and Tait and Heller, 1982) has shown that all these three areas are affected by myriad exogenous factors, which are outlined above, and some of which may be much more significant than the level of national income per capita. This is in contrast to the claim that the size of the state in post-transition economies remains vastly "oversized", which appear to be based on empirical evidence limited to regressions that use per-capita income as *the* explanatory variable.

2.2. Empirical Results for the Spending Adequacy

Based on the above discussion, we proceeded to develop an empirical model to explain the current spending ratios of the transition countries. We ran a series of regressions between general government expenditure to GDP ratios (gg) and a number of explanatory variables that proxy existing needs for, constraints to, social disposition toward, and the outcome of, government spending in the countries. We used data for 47 OECD and developing countries, focusing on the 1993-94 averages, to predict government spending ratios to transition countries.[11] Results of most significant regressions are shown in Box 1.

In our selected regressions, the old age dependency ratio (old) serves as a proxy for social need of public spending[12]; per capita GDP evaluated at purchasing power parity prices (gdp) refers to both social needs and revenue constraint of public programs; public debt to GDP ratio (d) directly illustrates the current and, also, the past financial constraints;

[11] For the sample of countries and figures, used in the selected regressions see Appendix.

[12] For empirical findings of a strong relationship between the percentage of the population over 60, see (World Bank, 1995).

infant mortality (mor) and secondary education enrolment (sec) illuminate the quality of government services; and commonalties in historical, philosophical and political experience are roughly expressed by the regional dummies of Europe (eu), and Asia and Latin America (las).[13] We also tested many other variables, such as primary school enrolment, access to health care, population per physician and per hospital bed, private expenditure on health care, unemployment rates, gross domestic investment, or the existence of war. These, however, yielded a lower explanatory power than the indicators above.

Box 1: Expenditure Regression Summary

All the following regressions apply to 47 countries and do not include any transition countries.
The t-statistics is in parentheses.

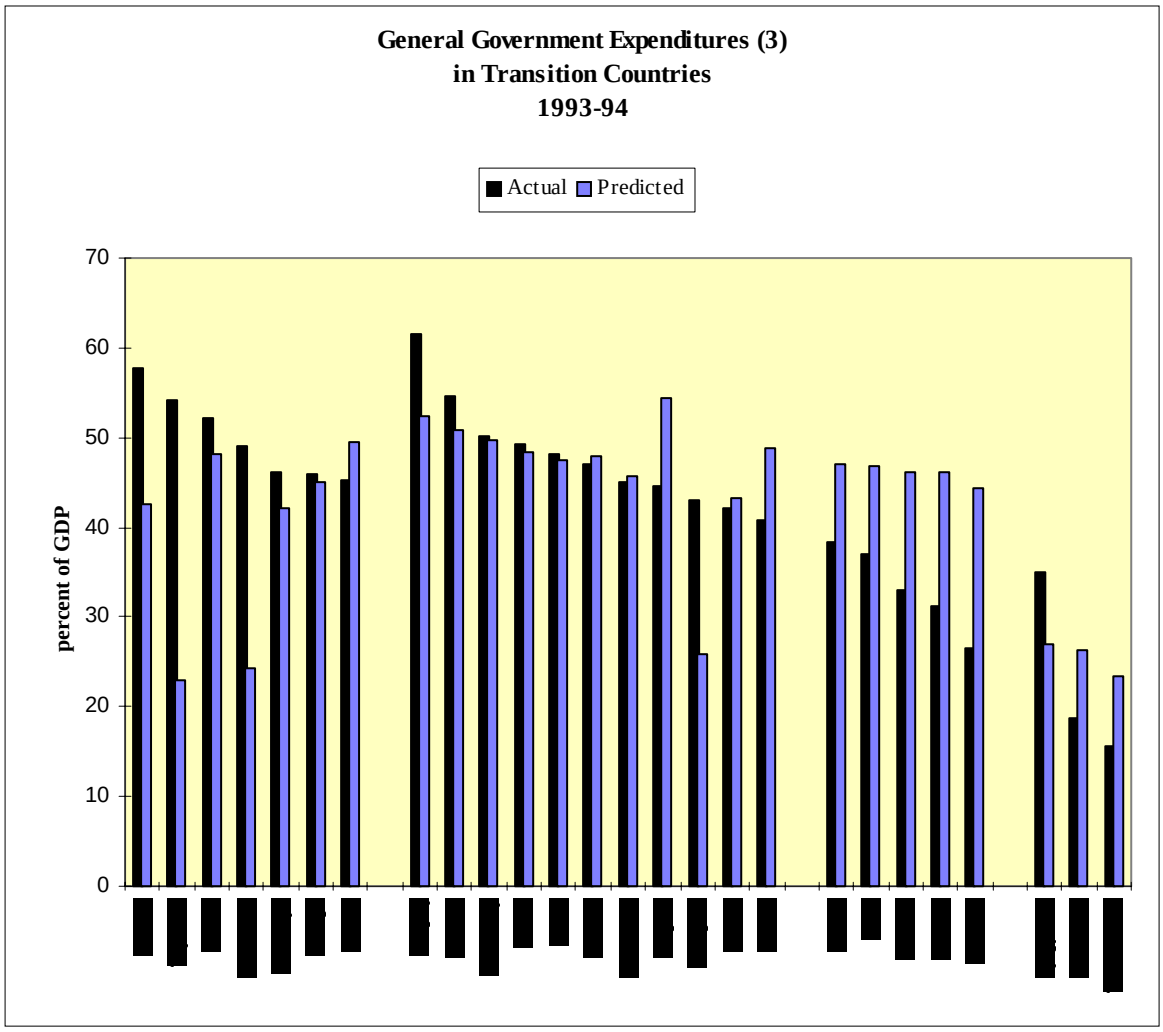
gg =						**Adj R-sqr**	**Root MSE**
(1)	**0.193 sec**	**+ 0.131 mor**	**+ 0.396 old**	**+ 0.455 oldeu**	**+ 5.094**		
	(2.46)	(1.96)	(1.63)	(3.98)	(0.74)	0.78	7.0
Comparator without the regional dummies:							
	0.158 sec	**+ 0.153 mor**	**+ 1.118 old**		**- 4.690**		
	(1.75)	(1.99)	(5.98)		(-0.63)	0.71	8.1
Problem: Infant mortality has but should not have a positive coeficcient							
(2)	**0.402 gdp**	**+ 16.877 eu**	**- 9.695 las**		**+ 31.062**		
	(2.45)	(6.00)	(-4.00)		(12.72)	0.81	6.5
Comparator without the regional dummies:							
	1.367 gdp				**+ 21.987**		
	(6.30)				(7.78)	0.46	11.0
(3)	**0.142 sec**	**+ 0.166 d**	**+ 0.429 oldeu**	**- 8.354 las**	**+ 21.110**		
	(3.60)	(2.17)	(6.10)	(-3.67)	(5.63)	0.85	5.8
Comparators:							
	0.154 sec	**+ 0.108 d**	**+ 0.540 oldeu**		**+ 12.690**		
	(3.46)	(3.35)	(7.49)		(3.77)	0.81	6.6
	0.065 sec	**+ 0.106 d**	**+ 0.934 old**		**+ 3.363**		
	(0.93)	(2.73)	(5.13)		(0.91)	0.73	7.8
		0.104 d	**+ 1.069 old**		**+ 4.919**		
		(2.67)	(9.61)		(1.50)	0.73	7.8

Notes: sec - secondary education enrolment ratio
mor - infant mortality
las = 1 if country belongs to Latin America or Asia; las = 0 otherwise
old - old age dependency ratio
gdp - per capita GDP evaluated at PPP
d - public debt to GDP ratio
eu = 1 if country belongs to Europe; eu = 0 otherwise
oldeu = old * eu

For further expenditure analysis in this section, we use the results of regression (3). For its results see Figures 2 and 3.

[13] For defining the dummies for countries of a common socio-historical experience, we tried various country groups, ad hoc, based on the shared political, philosophical, cultural, and religeous traditions. Most explanatory power was reached by the dummy representing all European countries. Dummies including countries of Latin America and Asia showed coefficients of nearly the same size and significance.

Figure 2:



2.3. Regression Results: Patterns of Spending

Expenditure/GDP ratios predicted on the basis of the preceding empirical analysis are quite revealing. First, several countries (Armenia, Tajikistan and Uzbekistan), particularly from the first group (large spenders with little success in reform), are heavily "overspending". Whether secondary education enrolment, infant mortality and old age dependency ratio, or per capita income, or secondary education enrolment jointly with public debt ratio and old age dependency ratio, are used as explanatory variables, and whether or not these are complemented by the regional dummies, Armenia, Tajikistan, and Uzbekistan, persistently show up as excessive spenders. All combinations of our proxies, for the level of social development (sec and mor), or economic of development (gdp), for

socio-cultural influences (eu and las), as well as for exogenous expenditure requirements (old and d), fail to justify the high spending ratios in the first group.[14]

Other countries that appear as excessive spenders based on our regressions include Hungary, Mongolia and Kyrgyz Republic. Both Hungary and Mongolia progressed significantly on the front of economic reforms and liberalization, and clearly belong rather to the second than to the first group. The reasons for their deviation from the predicted values include heavy fixed capital formation financed by loans from multilateral organization in Mongolia[15] and relatively high transfers to households, such as pensions and sick and family allowances, and interest payments in Hungary. Kyrgyz Republic is an example from the fourth group - while the Kyrgyz general government has not spent more than 35 per cent of GDP due to the revenue shortage, the relatively small shares of the old population and of the required government interest payments, the low-quality results of government services (relatively low secondary education enrolment, but high infant mortality), and GDP per capita (based on purchasing power parity prices, PPP) of less than US$2,400 do not justify even this level. This result holds even if we "allow" the Kyrgyz Republic to share the European social democratic/Christian preferences and add the eu-dummy premium.

Countries that are spending less than most of the regression results would suggest, while having at least some access to credit, include Belarus, Bulgaria and Croatia. These three countries cope with a high old age dependence ratio, and seem to supply relatively good amount of government services in the social sectors. Bulgaria's picture is the trickiest of all. Among all the transition countries, Bulgaria faces the highest share of elderly in

[14] Belarus is an exception in the first group. Having relatively high share of old population, very high secondary education enrolment, compared to most Eastern European countries quite a high GDP pro capita, and sharing the European historical preference for extensive social responsibility for all society members (hence, for a large-sized government), Belarus' actual general government expenditure was actually in all the instances slightly lower than the predicted value. The rationale for including Belarus into the group 1, however, is quite strong, considering its excessive government interference with the markets, which include enterprise subsidies surpassing six per cent of GDP and resistance to privatize most of the state owned enterprises. Similar arguments apply to Georgia and Ukraine, of which actual general government expenditures were usually only slightly above the predicted levels.

[15] In Mongolia, the total general government expenditure has declined from 67 per cent of GDP in 1988-89 to 43 per cent of GDP during 1993-94 when, however, only about 26 per cent of GDP are predicted. Current general government expenditure, however, count for less than 30% of GDP. Almost 15% of GDP cover investment projects into public enterprises prior to their privatization, projects that are led by multilateral organizations due to the absence

population and the heaviest public debt burden, requiring interest payments of about 11 per cent of GDP annually. Regression (3), therefore predicts that Bulgaria could spend more than it does. However, the (both current and PPP-based) national income per capita in Bulgaria, is low, about two thirds of that of Belarus or Croatia. And, regressions including per-capita GDP as an explanatory variable predict that Bulgaria (unlike Belarus and Croatia) should spend less than it actually does. Results of equation (1) suggest that Bulgaria's government spending is at about the right level, and thus, in sum, that its social development and pressures to spend are higher than what its stage of economic development would suggest.

To sum up, we can use Figure 3 to draw broad generalizations as to the current spending patterns of the four groupings of countries we previously identified. ***Group 1***, on the whole, appears to be spending considerably more than structural indicators would suggest, perhaps to the tune of some ten per cent of GDP. The choice for the policy-makers there is clear: economic reform must continue to be accompanied by a scaling down government. This policy option will be reinforced, as we will see, by the revenue considerations discussed in the next section. ***Group 2***, on the other hand, appears not to have, on average, an excessive size of the state compared to other countries. In this sense, these countries can be thought of as having completed their transition to a mature state. There are however two relevant questions that need to be addressed by policy-makers there. First, whether the revenues exist that can continue to support these spending levels (abstracting from the issue of the effects of high levels of taxation on long-term growth). As we will see, serious questions can be raised in this respect. Secondly, whether the composition of expenditures, and, most importantly, the dynamics of individual programs are optimal for the countries involved and sustainable over the medium term. While this paper cannot answer these questions, there are ample indications that the answer might be negative on both counts.

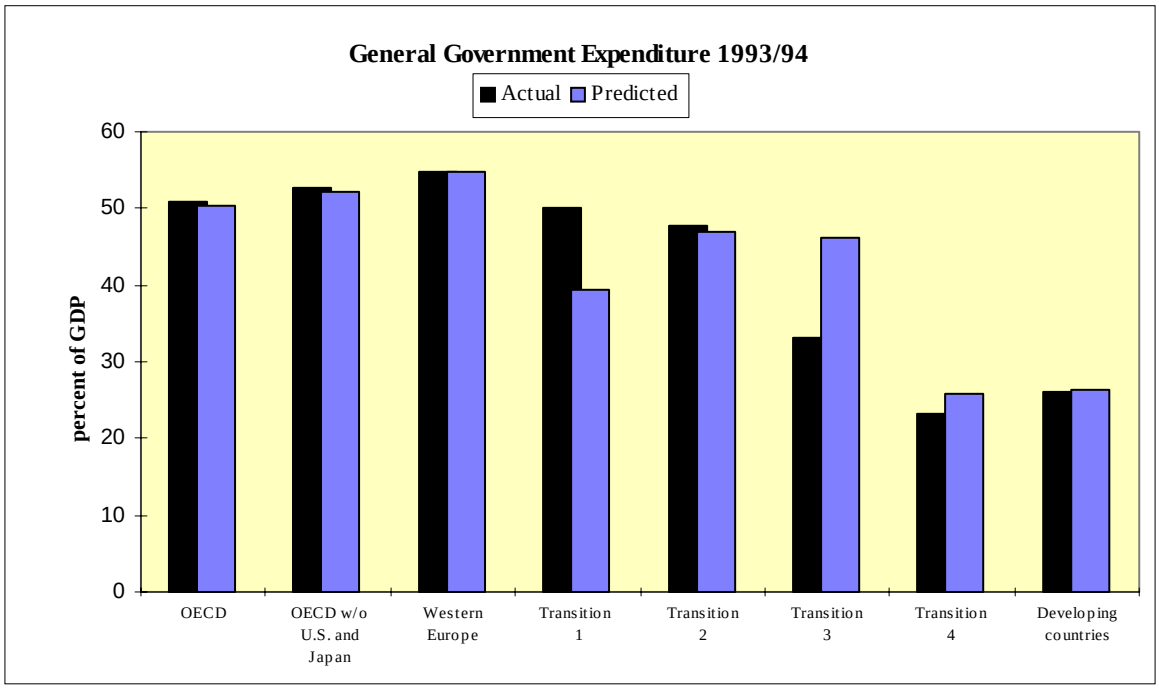
Group 3 provides an interesting perspective on what successful reform can accomplish in exceptional circumstances. Actual spending in these countries is, on average, more than ten percentage points of GDP lower than predicted. This implies that a considerable burden

of foreign direct investment. Thus, it should be reminded here that the lower is the willingness of private sector to

has been eased off the private sector in terms of reduced need for extracting resources to pay for government programs. At the same time, it also implies that the burden on the regulatory and oversight role of the state becomes even stronger, as the provision of many public and merit goods, as well as of social protection, is shifted to the private sector.

Finally, the data confirm that for ***Group 4*** there is little scope for expanding the size of the government. To the extent that the current provision of public goods and services is unsatisfactory, an answer can be found only through speeded-up reform of programs, within the continued strictures of the existing budget constraints.

Figure 3:



3. An Empirical Assessment of the Revenue Sustainability in RESEs

The finding of the previous section, namely whether the RESEs' general governments spend larger shares of GDP than predicted, does not reflect the fact, how much government spending the countries can actually afford. This leads us the next questions we want to

invest in a country, the lower is the opportunity cost of taxes (Peacock (1961).

address: what is the current and future ability of governments to collect sufficient revenues to finance their spending. What is the ”capacity” of RESEs to generate tax revenues; and to what extent do the RESEs use this capacity currently? Obviously, these questions are also valid for countries that are relatively close to their predicted levels of government spending.

In this section we develop an empirical model linking observed government revenues to structural indicators of the economies they pertain to. As in the previous section, a model fitted to a cross-section of non-RESE countries will be used to predict values of government revenues in RESEs. From the predicted and actual values, in accordance with the model developed by Chelliah, Baas and Kelly (1971 and 1975), we construct an index of tax effort. Defined as the actual revenue ratio divided by the predicted ratio, the index of tax effort indicates the future revenue potential in a country.[16] In broad terms, a high tax effort index should serve as a warning that the country's taxable capacities are overstretched.

3.1. Determinants of Government Revenue

Compared to the analysis of government expenditure, the literature has identified a relatively narrower number of determinants of government revenue. Among the demographic factors, urbanization positively affects tax revenue (Lotz and Morss, 1967). On the other hand, population densities do not help explain the country differences in taxable capacities (Tait, Gratz and Eichengreen, 1979). Population size is considered significant as it affects openness (the share of foreign trade in production) and is inversely related to foreign trade shares in GDP (Hinrichs, 1966).

The degree of economic openness appears to exert a significant economic influence on government revenue (Oshima, 1957, and Tanzi, 1992). Openness affects revenues directly, mainly in developing countries with high trade tariffs. (Of course, openness is losing its direct effect on revenue as countries liberalize their trade.) The degree of openness, however, does not affect revenues through actual tariff collection only; rather, in many countries, it indicates the relative importance of cash crops and subsistence agriculture, as

[16] As Tanzi (1986 and 1988) showed the extent of the country's exploiting its taxable capacities also depends on its revenue needs, which are determined by the expenditure target and by the existing public debt.

well as the degree of urbanization and industrialization, and, thus, is associated with conditions that facilitate internal taxation. For example, the degree of openness of an economy may be an indicator of the elasticity of the tax system, as well as a measure of the technological sophistication of the economy (Lotz and Morss, 1967).

Other economic measures of taxable capacity include aggregate GDP, national income per capita, the distribution of income, the industrial origin of output, and the composition of government expenditure. Again, per-capita GDP serves as a proxy for the level of economic development, which is usually accompanied by a higher rate of literacy, increased monetization, and stricter law enforcement - all of which help increase taxable capacity. With respect to the explanatory power of per-capita income, the past studies reached varying conclusions.[17] Compared to the previous studies, including Tanzi (1992), the regressions discussed below suggest that per capita GDP has been gaining significance in explaining actual government revenue - at the expense of openness. The sector composition of the economy (e.g., the share of agriculture, or mining), the extent of gray economy, the percentage of economic units exceeding a certain size limit and number of workers employed in such units, and the share of large retail establishments in the economy also affect the ease of tax collection (Heller and Diamond, 1990, and Tanzi, 1992). General economic factors, like prosperity and income distribution may also influence the tax system, the use of particular tax sources, the amount of tax exemptions, and, consequently, tax revenues (Heller and Diamond, 1990).

Another group of revenue determinants relates to technological advances. Higher sophistication in tax collection, expanding the available set of effective tax sources, reduces the sacrifice undertaken to raise taxes. On the other hand, the combination of low wages for tax administrators, high tax rates, inefficient system of identifying tax evaders, and low

[17] According to Tait, Gratz and Eichengreen (1979), per-capita income helps explain taxable capacities for countries with GDP $500 per capita and less. Hindrichs (1966), on the other hand, argued that only contrasting of government revenue shares of GDP between developed and less developed countries suggests that gg revenue shares increase with economic development; whereas it proves to be misleading or plain wrong when observing differences among less developed countries only. Compared to GDP per capita, he continued, openness of economy is a superior indicator of the government revenue shares for less developed countries (GDP per capita below $300); and for more developed countries, high GDP per capita is a sufficient though not necessary condition for higher revenue shares. Chelliah, Baas and Kelly (1975) and Tanzi (1992) agreed that regressions, which include the share of agriculture and/or mining in GDP in place of per capita income, display better goodness of fit. One reason for this may be that the share of

penalties for tax evasion is not conducive to efficient tax collection (Peacock, 1969). Precisely this unfavorable combination is present in most transition countries.

Social, political and administrative influences on government revenue are again very multifaceted and closely related to the determinants of the government expenditure. Social and political factors, such as attitude toward egalitarianism, allocative neutrality, fiscal centralization, the depth of democracy (civil society), and the influence of various interest groups, clearly predetermine the extent to which a government can exploit a potential tax base.[18] The attitude of citizens toward the government, hence to taxes, may be influenced by religious and ideological tendencies, as well as by the quality of public services and by the efficiency with which tax revenues are spent. Moreover, lack of public confidence in government and the national economy may cause capital flight and currency substitution, which further restrict government revenue (Heller and Diamond, 1990).

Also, war and crises seem to have a long-term tax effects: People accept, in a period of war, or depression, tax levels and methods of raising revenue that in quieter times they would have thought intolerable, and this acceptance remains long after the disturbance itself has disappeared (Peacock and Wiseman, 1961, and Oshima, 1957). Since the beginning of the century, and even in absence of major crisis, for example, during 1960-85, government expenditure and taxes (as well as deficits and public debt) in OECD countries were steadily rising (Tanzi, 1986). It has proven difficult to quantify what is the tolerable level of taxation (Peacock and Wiseman, 1961), or even to argue that such a "tolerable maximum" exists.

3.2. Empirical Results for Revenue Sustainability

Based on the indications provided by the literature, we ran a number of regressions to predict country capacity to raise revenue. The model is estimated from 1993/94 general government revenue (gr) figures of the same 47 countries, and applied on the transition

agriculture in GDP affects not only taxable capacity but also the willingness to tax -- since taxing the agricultural sector is generally politically difficult.

[18] Peacock (1969), for example, suggested that the share of Christian population and years of national independence have a positive relationship with the tax ratio; and that, with respect to both the willingness to pay taxes and demand for government services, some index of political democracy or ideologies can be roughly constructed.

countries. Our selected regressions (Box 2) use PPP-based per capita GDP (gdp), share of manufacturing in GDP (mn), share of exports in GDP (x), and share of urban population (urb), as proxies for the capacity to collect revenue.[19] In addition, secondary education enrolment (sec) is to indicate the country constraint on the tax system sophistication. Regional dummies (eu and las) again proxy the historical-philosophical traditions, and so the public willingness to pay taxes. We also include the public debt (d) in per cent of GDP to represent an exogenous pressure on the government effort to expand revenue (Tanzi, 1992). With respect to the literature above, we tested the explanatory power of several other variables, such as industry share in GDP, manufactures export share in GDP, gross domestic investment, gross domestic saving and previous year's government deficit, proxies for the country's access to credit (such as the depth of the domestic financial sector and Moody's current sovereign risk rating), different dummies for various country groups, and a war dummy. These variables, however, either proved less statistically significant, or appear as easily changing, and therefore misleading in indicating of the future sustainability of government finances.

Similarly to the analysis of government expenditure, our selected regressions for government revenue can explain a satisfactory amount of the sample variance, and have most coefficients significant at the 5 per cent level and of the expected sign. Comparing revenue equation 3, in Box 2, with expenditure equation 2, in Box 1, and their comparators without the regional dummies, we see that GDP per capita has a greater explanatory power in illustrating government revenue; whereas the regional dummies play a greater role in explaining government expenditure. From this and further comparisons, we may boldly conclude that, although socio-political traditions are an important determinant of the role and expenditure of government, the ability of government to raise revenue is determined mainly by the development of economy, at least for the sample under consideration. For purposes of our following analysis of government revenue level and sustainability, we choose equation (4). Its results are shown in Figures 4 and 5.

[19] The past literature usually emphasized imports, rather than exports, as the direct source of potential revenues. As for the long-term revenues, however, exports predetermine the sustainable level of both imports and tariff revenues.

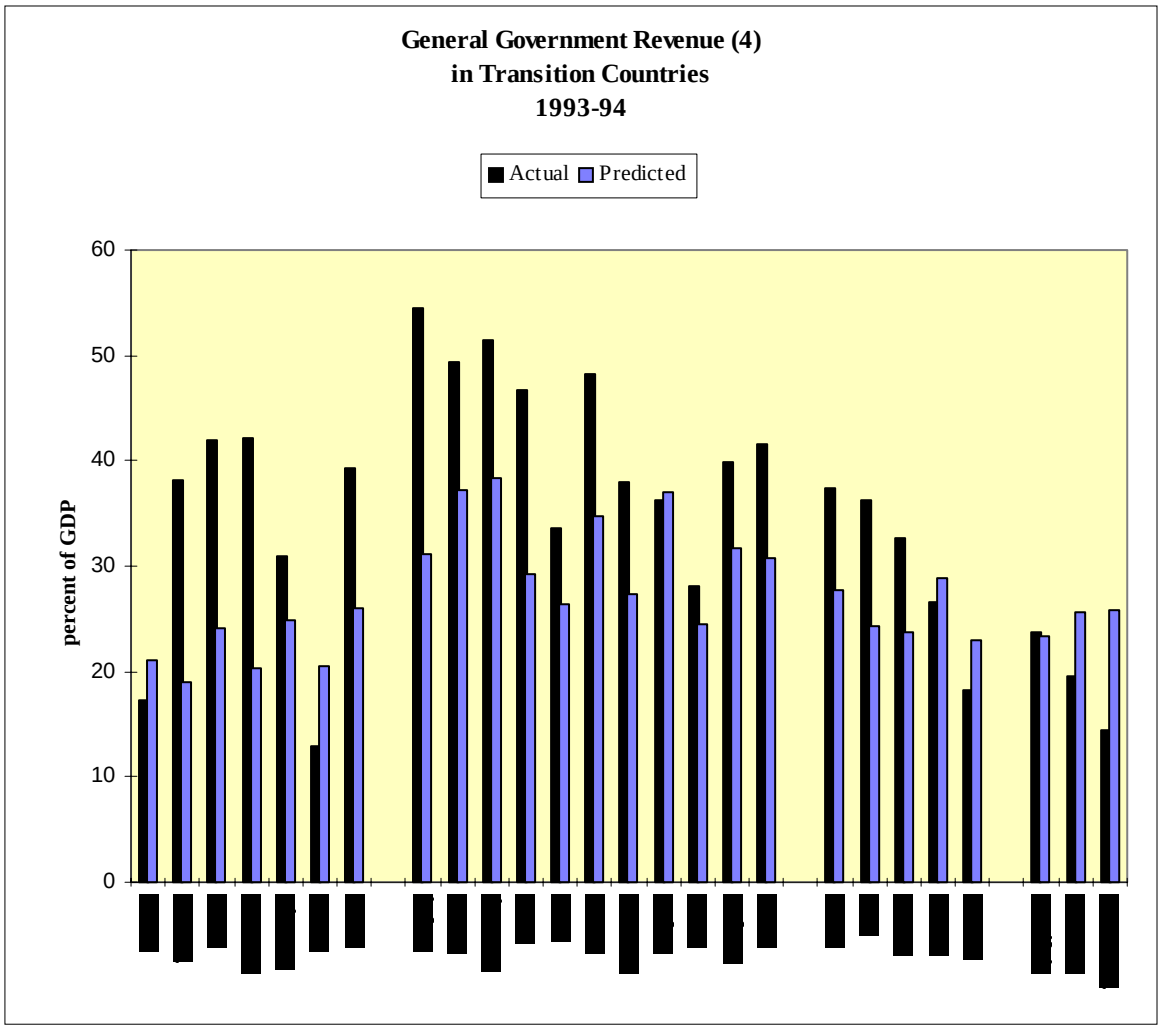
Box 2: Revenue Regression Summary

All the following regressions apply to 47 countries and do not include any transition countries.
The t-statistics are in parentheses.

gr =	**Adj R-sqr**	**Root MSE**
(1) 0.102 urb + 0.200 x +12.88 eu - 10.30 las +23.279 (2.42) (2.82) (4.98) (-4.49) (7.30)	0.78	6.2
Comparator without the regional dummies:		
0.199 urb + 0.383 x + 13.557 (2.67) (3.11) (2.57)	0.27	11.3
(2) 0.429 gdp + 0.164 x +0.087 sec-0.355 mn +11.37 eu - 4.83 las + 24.48 (1.92) (2.63) (1.65) (-2.10) (4.25) (-1.85) (7.24)	0.84	5.4
Comparators:		
0.940 gdp + 0.221 x +0.133 sec-0.580 mn + 20.64 (3.62) (2.64) (1.90) (-3.09) (4.55) Problem: Manufacturing has but should not have a negative coeficcient.		
0.842 gdp + 0.221 x +0.130 sec + 11.18 (3.00) (2.43) (1.71) (3.08)	0.63	8.1
1.23 gdp + 0.241 x + 15.67 (7.22) (2.61) (6.11)	0.61	8.2
(3) 0.587 gdp +11.83 eu - 7.60 las + 26.69 (3.49) (4.31) (-3.18) (11.06)	0.78	6.2
Comparator:		
1.34 gdp + 19.48 (7.66) (8.66)	0.56	8.8
(4) 0.824 gdp + 0.209 x +0.118 sec+ 0.085 d + 6.93 (3.08) (2.40) (1.62) (2.27) (1.76)	0.66	7.7

Notes: urb - share of urban population; gdp - per capita GDP evaluated at PPP
x- share of exports in GDP; mn - share of manufacturing in GDP
sec - secondary education enrolment ratio; d - public debt to GDP ratio
eu = 1 if country belongs to Europe; eu = 0 otherwise; las = 1 if country belongs to Latin America or Asia; las = 0 otherwise

Figure 4:



The predicted revenue/GDP ratios based on the regressions discussed above show interesting patterns among the four groups (Table 3 and 4). The countries of ***Group 1*** and ***Group 2,*** on average, display the highest tax effort compared to model predictions. There is some variation among individual countries, but the message is rather uniform.

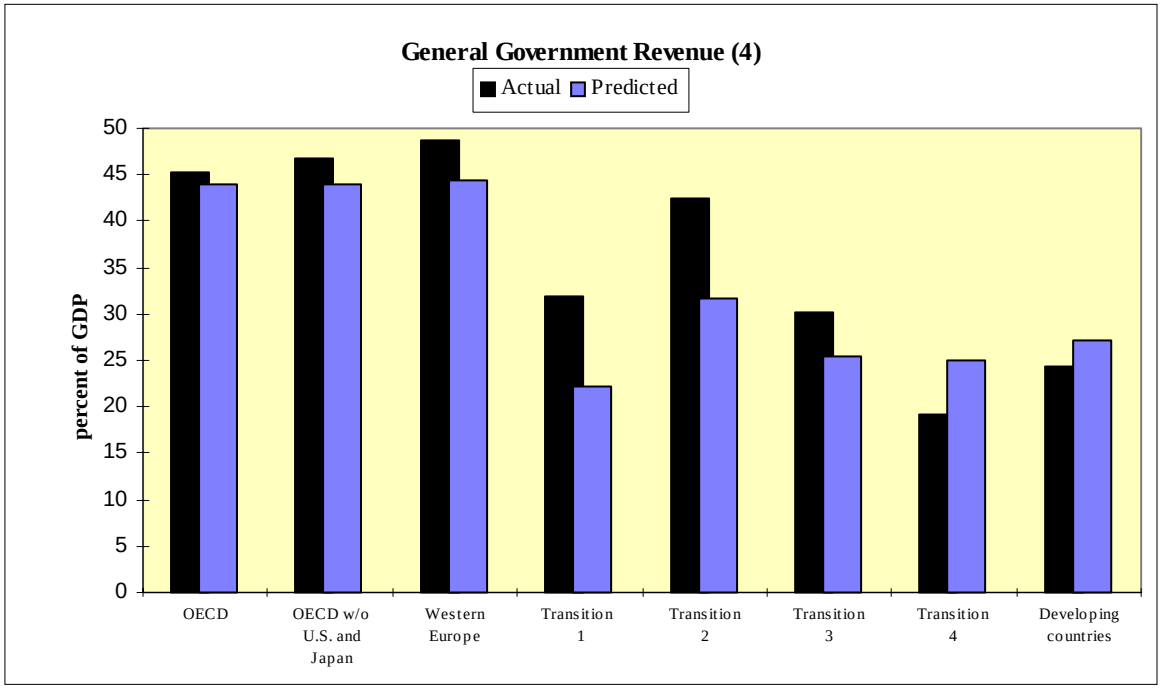
In Group 1, Tajikistan and Uzbekistan raised double the amount of revenue than predicted; Ukraine and Belarus surpassed their predicted revenue level by one-half. Only Armenia and Georgia have theoretically a greater potential to raise revenue than the amount they actually have collected.

In Group 2, Hungary and Poland collected 150 per cent of their predicted revenues. The (relatively) low predicted revenues for these two countries result, in part, from their relatively limited openness (with export share of only 18 per cent of GDP), which, theoretically, reduces their potential to raise revenues. Nonetheless, Hungary's high tax

effort index mainly reflects the very high level of actual revenue (the highest among the transition countries, and fourth-ranking in the world, after Sweden, Denmark and Netherlands). The only country from group 2 that shows a tax effort index below 1 is Bulgaria, whose predicted revenue level is quite high - owing mainly to strong pressure on raising revenue, which is predicted from servicing its high level of public debt.

Similarly to the previous groups, countries of ***Group 3*** have also, on average, collected revenues that seem to surpass their revenue capacities. There is, however, a great variation among them. Latvia, Estonia and Romania appear overstretched; whereas Lithuania and Moldova, do not seem to exploit their taxable capacity fully. Finally, as was hinted to in the discussion of the financial constraints, countries in ***Group 4***, apparently lacking the ability to collect revenue and utilize their taxable potential.

Figure 5:



Comparison of predicted and actual revenues and the tax effort indices (the first column in Tables 3 and 4), however, tell only a part of the story. Armenia and Georgia show tax effort ratio below one, and are predicted to collect, respectively, 4 and 8 per cent of GDP more revenue than they actually do. But their actual revenues fail to cover their expenditure by, respectively, 40 and 33 per cent of GDP!

Table 3: Index of Tax Effort and Actual and Predicted Deficits, General Government, 1993-94.

Group No.		Tax Effort Index	Predicted Revenue	Actual Revenue	Predicted Expenditure	Actual Expenditure	Actual Deficit	Deficit for Predict. Rev. and Predict. Expenditure	Deficit for Predict. Rev. and Actual Expenditure
1	Armenia	0.82	21.1	17.2	42.6	57.8	-40.6	-21.5	-36.7
	Tajikistan	2.02	18.9	38.2	23.0	54.2	-16.0	-4.1	-35.3
	Ukraine	1.74	24.1	41.9	48.2	52.1	-10.2	-24.1	-28.0
	Uzbekistan	2.08	20.3	42.2	24.3	49.0	-6.8	-4.0	-28.7
	Azerbaijan	1.24	24.9	31.0	42.1	46.1	-15.1	-17.2	-21.2
	Georgia	0.63	20.5	13.0	45.0	46.0	-33.0	-24.5	-25.5
	Belarus	1.51	26.1	39.3	49.6	45.2	-5.9	-23.5	-19.1
2	Hungary	1.75	31.1	54.4	52.4	61.6	-7.2	-21.3	-30.5
	Slovakia	1.33	37.2	49.3	50.8	54.6	-5.3	-13.6	-17.4
	Czech Rep	1.34	38.3	51.5	49.8	50.1	1.4	-11.5	-11.8
	Poland	1.59	29.3	46.7	48.3	49.3	-2.6	-19.0	-20.0
	Russia	1.28	26.3	33.7	47.4	48.1	-14.4	-21.1	-21.8
	Slovenia	1.39	34.7	48.2	48.0	47.0	1.2	-13.3	-12.3
	Macedonia	1.39	27.3	37.9	45.8	45.0	-7.1	-18.5	-17.7
	Bulgaria	0.98	37.0	36.2	54.3	44.6	-8.4	-17.3	-7.6
	Mongolia	1.15	24.5	28.1	25.9	43.1	-15.0	-1.4	-18.6
	Albania	1.25	31.8	39.9	43.3	42.2	-2.3	-11.5	-10.4
	Croatia	1.36	30.7	41.6	48.8	40.9	0.7	-18.1	-10.2
3	Estonia	1.35	27.7	37.5	47.0	38.4	-0.9	-19.3	-10.7
	Latvia	1.49	24.3	36.3	46.8	37.0	-0.7	-22.5	-12.7
	Romania	1.37	23.8	32.6	46.2	33.1	-0.5	-22.4	-9.3
	Lithuania	0.92	28.9	26.5	46.1	31.3	-4.8	-17.2	-2.4
	Moldova	0.80	22.9	18.3	44.4	26.5	-8.2	-21.5	-3.6
4	Kyrgyz Rep.	1.02	23.4	23.8	27.0	34.9	-11.1	-3.6	-11.5
	Kazakhstan	0.76	25.7	19.5	26.3	18.8	0.7	-0.6	6.9
	Turkmenistan	0.56	25.8	14.5	23.4	15.7	-1.2	2.4	10.1

In order to evidence "long-term discrepancies", we compare predicted revenue with actual expenditure (the last column in Tables 3 and 4). This approach, again, illustrates that such an implicit deficit is the largest, reaching 30 per cent of GDP, in countries of group 1 and - in Hungary. The large gaps between the predicted revenues and actual expenditures suggest that, in the long term, unless there is a fast economic growth and "formalization" of

gray economies, most countries of group 1 may fail to raise a sufficient amount of revenue to sustain their current expenditure heights. This conclusion is reinforced by the aging trends of the population, which are likely to result in increasing pressures on social security expenditures. The implicit deficit and potential for fiscal crisis applies to several countries of group 2 as well; the difference being only that the governments of these have so far easier access to credit. Countries of group 3 show levels of the implicit deficit similar to the OECD countries (about 8 per cent of GDP on average). Only group 4, except for the Kyrgyz Republic, which is the only country there with a high actual deficit, shows implicit surpluses, which are typical for middle-income developing countries.

Kazakhstan, Turkmenistan, as well as Lithuania, could be considered happy examples. They do not run excessive deficits and, yet, do not exhaust their revenue capacities above the predicted levels. However, these countries belong to the lowest spenders among the transition countries and, as we noted earlier, their governments have postponed spending on some of their current liabilities. Thus, they appear accumulating a hidden debt, to be repaid as soon as revenues recover. Moreover, if reforms and private initiatives are lacking in the social sectors, as is the case of Kazakhstan and Turkmenistan, a continuing financial constraint on government expenditure may annihilate their social security systems as well as pensioners.

Table 4: Index of Tax Effort and Actual and Predicted Deficits, General Government, 1993-94.

	Tax Effort Index	Predicted Revenue	Actual Revenue	Predicted Expenditure	Actual Expenditure	Actual Deficit	Deficit for Predict. Rev. and Predict. Expenditure	Deficit for Predict. Rev. and Actual Expenditure
OECD	1.03	44.0	45.3	50.4	50.8	-5.5	-6.4	-6.8
OECD w/o U.S.& Japan	1.07	43.9	46.8	52.1	52.6	-5.8	-8.2	-8.7
Western Europe	1.10	44.3	48.7	54.9	54.9	-6.2	-10.6	-10.5
Transition 1	1.43	22.3	31.8	39.3	50.1	-18.2	-17.0	-27.8
Transition 2	1.33	31.7	42.5	46.8	47.9	-5.4	-15.1	-16.2
Transition 3	1.18	25.5	30.2	46.1	33.3	-3.0	-20.6	-7.7
Transition 4	0.77	25.0	19.3	25.6	23.1	-3.9	-0.6	1.8
Developing countries	0.90	27.1	24.4	26.4	26.1	-1.7	0.7	1.0

We can see another interesting "warning" when we consolidate our predictions for the expenditure and revenue, and analyze the predicted deficits (the second column from the right, in Tables 3 and 4). The largest predicted deficits surface not only for high spenders, such as Georgia, Ukraine, Belarus and Armenia from group 1, and Hungary and Russia from group 2, but also for the low-spending reformers, such as Latvia, Romania and Moldova from group 3.

What does a large gap between the predicted revenue and predicted expenditure suggest? Our regressions have proven that factors of socio-political development play a greater role in determining government expenditure; whereas economic factors, and national income per capita in particular, are more important explanations of revenue collection. A large predicted deficit, or surplus, as it is in Turkmenistan and most developing countries, thus could be interpreted as the manifestation of a gap between the domestic social and economic development. These predicted deficits are relatively small for Mongolia, Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan demonstrate that their levels of economic and social development are rather consistent. But, Armenia, Belarus, Georgia, and Ukraine, from group 1, Hungary and Russia from group 2, and Latvia and Romania from group 3, seem to provide a very large amount of social services relatively to the development of their national economies. In such cases of relative economic underdevelopment, to sustain the level of social development, government should involve the private sector into rationalizing and providing of social services sooner than these services will become plain words of in-financable political promises.

4. Summary: Trouble Ahead?

A few remarks by way of summary. The data and analysis presented in the previous pages point to a multifaceted picture with regard to the evolution of public finances in RESEs, in the five or so years, since economic transformation began. The main common message is, perhaps, that the combination of success in the pursuit of economic reform and in dealing with the derived social pressures is the main determinant of the probability that a country will drift towards a high-spending government pattern. Of the four groups that we have identified, it would appear that sharpest choices will have to be made by countries of

group 1. Their economic realities may soon prevent the government from sustaining its existing services. A similar situation occurred at the beginning of transition in countries of group 3 and 4. In order to escape the future trap expanding public expenditure, group 4 will have to use the current financial constraint as a politically feasible reason for rationalizing and marketizing the social sectors. Due to such policy reforms, group 3 shows a good promise to escape a high spending pattern.

The analysis of revenue performance, in conjunction with the indications provided by the expenditure analysis, gives pause for thought, particularly for the countries in group 2. There, government spending is high, but spending patterns might be difficult to alter as this would require a fundamental reform of social security expenditures. Some of these countries, particularly the Czech Republic, Hungary, Poland, Slovakia and Slovenia, where governments enjoy a relatively good access to credit, may be considered as surely converging towards the Western European expenditure levels. But, even in these countries, the transition towards a sustainable public finance system is not completed at all. As the regression data suggest, most of the group 2 countries are likely to face a pressure on revenues. This pressure may be increasing also with the rising share of the private sector share in GDP, when compliance with high taxation becomes more problematic. But beyond paying increasing attention to tax administration reform, the message for these countries is similar to the message for the rest of the transition world: A serious reform of social expenditure is inescapable.

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