

IMF Working Paper

Transition Economies: How Appropriate Is the Size and Scope of Government?

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Abstract

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This paper assesses changes in the size and scope of government in 24 transition economies. Whereas these governments have retrenched in terms of public expenditures in relation to GDP, as well as public employment as a share of population, some indicators suggest that size remains high (e.g., rising indebtedness, a heavy regulatory burden, and prevalence of noncash transactions). At the same time, the scope of government activities—although evolving—has not necessarily become appropriate. This paper provides some recommendations for aligning the scope of government with the increasing market orientation of these economies.

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I. INTRODUCTION

With increasing market orientation in the past decade, the size and scope of government should have changed in transition economies. Rather than engaging in wide-ranging economic activities as under central planning, the focus of the government should have shifted to providing public goods and services, achieving society's distributive goals, and ensuring macroeconomic stability—the so-called classical functions of government (Musgrave, 1959).² Not only should the structure of government be changing, in terms of the expenditure and revenue mobilization roles at different levels, but also new institutions (e.g., in the budget area) should be emerging to shape the interface with the rest of the economy.

An analysis of the size and scope of government is complicated in transition economies by at least four factors. First, the coverage of government accounts as reported in the budget may be incomplete and reporting may vary from one time to another.³ Second, a full record of commitments entered into by all spending units is in general not available. Third, the use of noncash transactions by the government (e.g., tax offsets or “netting operations,” and in-kind payments) to settle accounts with the private sector further complicates the analysis. Finally, governments in some cases influence private sector activity in ways that are difficult to capture in reported statistics. For example, many governments in transition economies engage in quasi-fiscal activities and impose regulations to support public programs and activities in order to cope with falling revenues (Tanzi, 1998).

Notwithstanding these caveats, available data show on average that measured on a cash basis, government spending in relation to GDP—a conventional measure of government size—has declined in transition economies since the early 1990s.⁴ On this basis, governments in transition economies are now smaller than those in Western European countries.⁵ However, a reduction in government spending in relation to GDP does not

² The provision of public goods and services was perceived as the main role of government in the late eighteenth and early nineteenth centuries. The role of government was subsequently enlarged to address and to correct, whenever possible, inequalities in income distribution. More recently, the government is also expected to pursue price and macroeconomic stability, as well as a sustainable external position (Tanzi and Schuknecht, 2000).

³ The government could be defined narrowly to encompass the operations of the central government, or central government plus subnational governments, or central government plus subnational governments plus state-owned enterprises. Typically, the data in most transition countries cover the operation of the central government and subnational governments.

⁴ The paper covers the Baltic countries, Russia, and other countries of the former Soviet Union, Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia.

⁵ According to the typology proposed by Tanzi and Schuknecht (2000), governments in transition economies can now be labeled as “small.” Tanzi and Schuknecht categorize governments according to size in three groups: small (public expenditures below 40 percent of GDP), medium (public expenditures between 40 percent and 50 percent of GDP), and large (public expenditures above 50 percent of GDP).

necessarily imply a strategic scaling back of the government's role, but might be an ad hoc response to weak revenue mobilization capacity and effort. At the same time, the scope of government, typically understood in terms of how its resources are allocated across different, often competing, uses and functions, has changed.⁶ This shift has put pressure on spending and hampered efforts to reduce overall outlays. For example, governments, particularly at the subnational levels, have had to assume certain roles previously performed by state-owned enterprises such as providing housing and health care services, as well as day care for children. They have also had to cope with the growing expectation that governments will smooth the transition for those individuals or social groups negatively affected by economic reforms by increasing budgetary resources for social programs.

This paper seeks to assess the changes observed so far in the size and scope of government in transition economies, and the extent to which these changes are appropriate and adequate. It has often been argued that governments in transition economies are trying to do too much relative to their limited revenue-raising capacity. While there are several indicators suggesting a decline of the size of government in transition economies, this paper finds that the size is still large and the scope inappropriate, in many cases. The rest of this paper is organized as follows. Section II surveys the literature. Section III describes recent trends and indicators of government size. Finally, policy lessons are drawn in Section IV.

II. WHAT DO ECONOMIC THEORY AND EMPIRICAL STUDIES TELL US?

Economic literature offers limited guidance on the appropriate size and scope of government in transition economies. There is no consensus on what is "appropriate" from a practical point of view. The literature has sought to identify variables affecting the size and scope of government, to compare the size and scope across groups of countries, and to estimate the "optimal" size and scope on the basis of theoretical considerations.

Several studies have identified variables affecting the size and scope of government. The more recent literature focuses more on the political economy determinants of government size and scope. Only a few of these have focused on transition economies.⁷ Important determinants of the size and scope of government include the following:

- **Trade openness, and the degree of integration in the world economy.** Alesina and Wacziarg (1998) argue that the size of government correlates negatively with country size and trade openness. In contrast, Wei (2000) decomposes openness into "natural openness" (exports and imports, geographical location, language and ethnic diversity, and size of population) and "residual openness" (captured by other socio-economic

⁶ For an early study on size and scope in OECD countries, see OECD (1985).

⁷ For example, Begg and Wyplosz (1999).

factors) and notes that governments in countries with “natural openness” tend to spend more on payroll. In a somewhat similar context, Barro (1998) and Rodrik (1998) argue that bigger governments are needed to absorb external shocks in open economies.

- **Business and political cycles.** Galí (1994) shows that taxes and public spending on certain programs act as automatic stabilizers, and are correlated with output variability. Aziz and Leruth (1997) show that the composition of public spending has an impact on the business cycle and, hence, on welfare. Soh (1986) and Schuknecht (1994) distinguish between political and business cycles and observe an increase in government expenditure during and before an election year in many countries.
- **Demographics.** A high dependency ratio and ethno-linguistic fragmentation have been found to increase demand for public spending on education, health care, social security including pensions, and defense, and on programs to satisfy regional and ethnic interests (Bloomberg, 1996; Alesina, Baqir, and Easterly, 1997; Annett, 2000).
- **Budget institutions.** The absence of strong budgetary institutions can result in a mismatch between the costs of raising revenue and the benefits of expenditure programs. This might result in an overestimation of the marginal benefits of public spending. Public spending may therefore increase beyond desirable levels (Hagen and Harden, 1996).
- **Preferences and the heterogeneity of taxpayers and voters.** Governments spend more in societies with relatively unequal income distribution because the median voter is poorer than the mean voter. The benefits to a median voter of redistributive spending outweigh the costs borne by such a voter of increased taxation to finance spending (Persson and Tabellini, 1999; Krusell and Rios-Rull, 1999). La Porta and others (1998) provide empirical evidence that countries with a large share of transfers and subsidies in spending have larger governments.
- **The structure of government.** If taxpayers are mobile, the devolution of tax bases to subnational governments encourages competition for tax bases and may help to reduce the size of government. Reliance on grants and transfers from higher levels of government to finance subnational governments is associated with larger governments and fiscal imbalances at the subnational level (de Mello, 2000).

Whereas all the variables noted above would be expected to influence the size and scope of government in transition economies, it is almost impossible to aggregate their net effect. While some variables (e.g., changing demographics and weak budgetary institutions) are expected to put upward pressure on public spending, others (e.g., openness and increased integration of transition economies into the world economy) should have the opposite effect. There are also variables whose influence is difficult to ascertain empirically (e.g., the

heterogeneity of taxpayers and voters' preferences, or inertia on the part of voters when the government is too large).

Another strand of literature has focused on comparing the size and scope of government across countries and over time, usually with a view to assessing the impact of selected spending categories on economic growth and on social indicators. Measures of government size have varied (e.g., the number of employees in the public sector, the ratio of public spending to GDP, or the share of government consumption in total consumption). Tanzi and Schuknecht (1997) observe a shift in the composition of public expenditure away from defense, law and order, and property rights to social programs and health care, education, and environmental protection for industrial countries during the period 1870–1990. They find, however, that higher spending on social programs has not commensurately improved critical social indicators such as life expectancy, infant mortality, or school enrollment, suggesting that increases in public spending are not necessarily productive beyond a certain level.⁸ The authors conclude that government spending needs to be no higher than 30 percent of GDP to achieve socially desirable goals. They further conclude that “big” governments (those whose expenditures are greater than 50 percent of GDP) do not fare better than “small” governments (those whose spending accounts for 30–40 percent of GDP).

Finally, some theoretical studies have advocated the use of an allocative efficiency rule to establish the optimal size and scope of government. Although intellectually appealing, the rule that the size and scope of government are optimal when the social marginal cost of public resources is equal to their social marginal benefit is difficult to operationalize.⁹ In particular, it is difficult to take into account all relevant, country-specific determinants of social costs and benefits. However, the allocative efficiency principle has a number of important policy implications:

- **Size and scope are linked.** A change in the scope of government, for example, would necessarily affect the social marginal benefit of some programs and, hence, the overall marginal benefit of public spending. Similarly, a less distortionary tax system would decrease the marginal cost of raising funds. This would consequently affect the balance between social costs and benefits.
- **All sources of finance need to be taken into account.** At the “optimum,” the social costs of raising resources must be equated across all sources. Hence, the efficiency of the tax system, the cost of debt financing, and the buildup of expenditure arrears, as well as quasi-fiscal operations, must be taken into account. The same principle

⁸ A similar point was made by Devarajan and others (1996) in the context of public investment.

⁹ Pigou (1947) associated the social marginal cost of public spending with the efficiency loss induced by raising distortionary taxes (see also Dahlby, 1998). This concept was later developed in the context of optimal commodity taxation by Atkinson, King, and Stern (1984) and Sandmo (1998).

applies to the benefits accruing from public spending, which must be equated across programs. For example, debt financing generates a flow of future interest payments, thereby complicating the computation of marginal costs and benefits.

- **There is no unique optimum applicable to all countries.** The social cost of raising revenues, as well as their social benefits, can be expected to vary among countries because of political economy factors, such as differences in voters' preferences and in the effectiveness of budgetary institutions. In some countries, for example, citizens favor substantial redistributive policies, while in others, they do not.

Unfortunately, empirical studies based on allocative efficiency rules yield unrealistic results. This is partly because these studies are unable to integrate voter preferences into the cost-benefit framework—an important political economy determinant of government size. Using some variation of the allocative efficiency rule, Karras (1996) estimates the optimal size of government (measured as government consumption) to be in the range of 14 percent to 33 percent of GDP (with an average of 23 percent).¹⁰ Scully (1995) estimates that the average tax rate of 22 percent, for federal, state and local taxes combined, would maximize output growth in the U.S.—a ratio that has been exceeded since 1949.¹¹ The typical size of government, even in countries considered to be market oriented, exceeds these estimates. Among OECD countries, Richards (1994) shows a gradual convergence in the size of government during the period 1979–93 to the range of 40–50 percent of GDP.¹² In these countries, upward pressure on government spending has been exerted primarily by the welfare state. Approximately two-thirds of public spending in wealthy OECD countries is devoted to social programs. One more reason why results have been unrealistic is that, with the exception of Sachs and others (2000, see Box 1), empirical studies have traditionally

¹⁰ Karras (1996) uses Barro's rule (i.e., the size of government is optimal when the marginal product of capital equals unity) for a sample of 118 countries during 1960–85. There are several other similar studies. For example, Grossman (1988) estimates the optimal tax rate for the U.S. government at 19 percent of GDP. In a similar study covering the period 1889–1986, Peden (1991) estimates the optimal size of the U.S. government at 20 percent of GDP. He also notes, as did Feldstein (1997), that increased expenditure hurts output growth because of deadweight losses arising from higher taxation.

¹¹ Economic growth can only be fostered through government spending if the productivity of public outlays exceeds the dead-weight loss associated with distortionary taxation. Government expenditure may have an indirect impact on economic growth through the provision of public goods that benefit human capital formation, such as health care and education (Landau, 1983; Commander, Dolinskaya, and Mumssen, 2000; Kneller, Bleaney, and Gemmell, 1999). Using data for 1970–90 for 43 developing countries, Devarajan, Swaroop, and Zou (1996) show that seemingly productive expenditure, when financed through distortionary taxes, may be counterproductive. They find that even though expenditure on goods and services in the sample of developing countries grew by 8 percent over the last two decades to reach 26 percent of GDP, public outlays on health care, education, as well as on transport and communication have a negative or statistically insignificant impact on economic growth.

¹² According to OECD (2000), public expenditures in relation to GDP continue to move toward this range, particularly in the countries with the highest shares of public outlays in GDP.

focused on outcomes and the analysis has not been cast in terms of what determines a transition path, that is, the starting conditions and the policies implemented.

III. GENERAL TRENDS IN INDICATORS OF GOVERNMENT SIZE

Indicators of government size have changed significantly since the onset of economic transition. Conventional measures of government size—aggregate public spending measured on a cash basis in relation to GDP and the share of public employment—show that there has been widespread downsizing along with a steady expansion of the private sector. At the same time, there are indications that the government's role in transition economies has not diminished enough: public sector indebtedness has grown, expenditure arrears have persisted, the noncash system for settling accounts is still in use, and the regulatory burden remains high. There are also indications that the scope of government activity may be misdirected. For example, governments are unable to provide critical public services to their populations and most transition economies now have a higher incidence of poverty than before, as well as a more unequal distribution of income. In some cases, structural reforms have been slowed by inadequate funding to support accompanying measures (e.g., establishment of cost-effective social safety nets).

A. Indicators Suggesting a Decline in Government Size

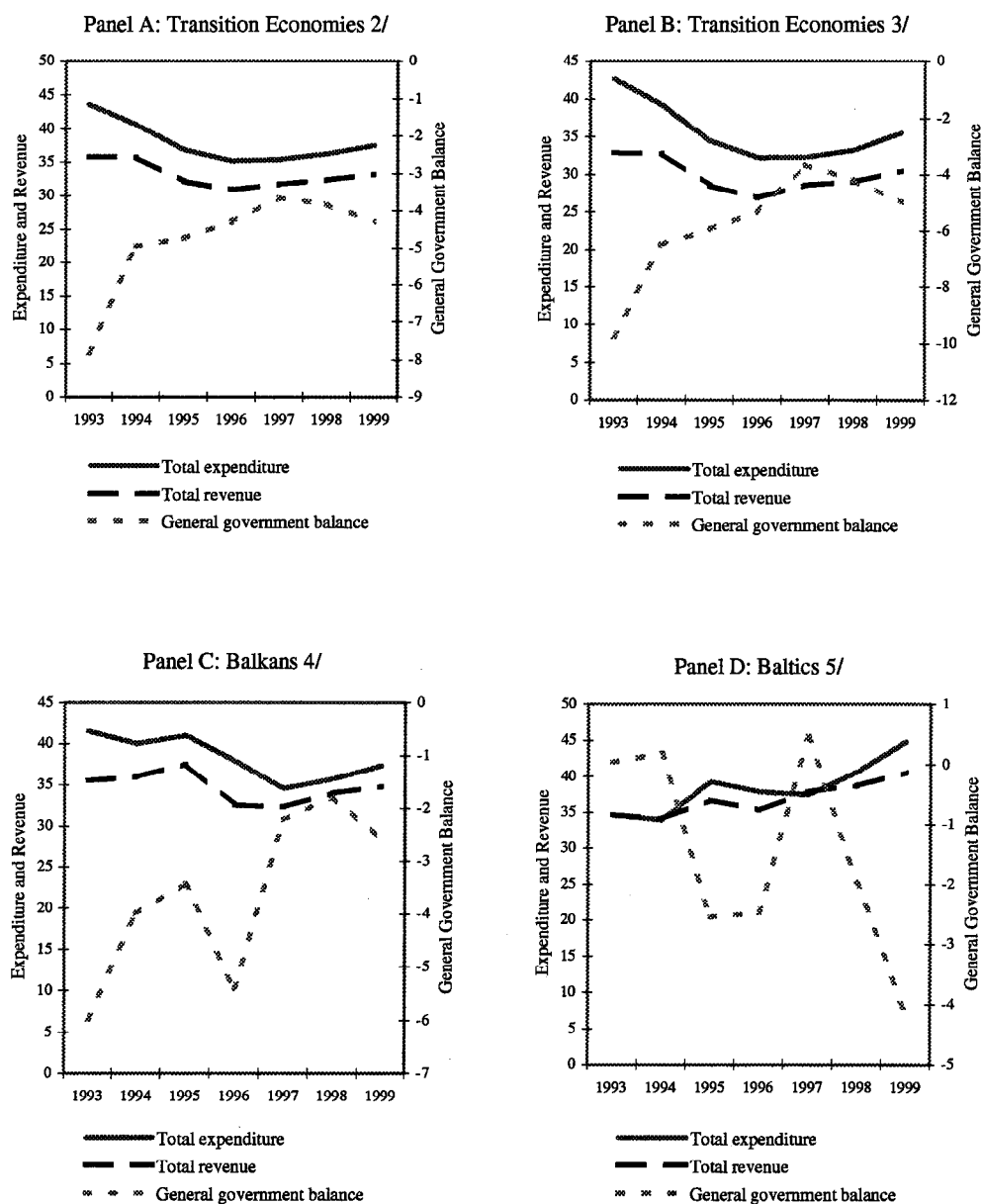
Public expenditure—measured on a cash basis—has declined substantially, contracting more than output in most transition economies. However, there is considerable variation in expenditure shares across countries.¹³ Data for transition economies show that public outlays declined by 6 percent of GDP during the period 1993–98 (Figure 1 and Appendix Table 5).^{14 15}

¹³ Total government expenditure and consumption expenditure are useful and widely-available indicators of government size, but when available, government production (value-added) could also be used as an indicator.

¹⁴ The sample comprises 24 countries, including 5 central Asian countries (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan); 3 Balkan countries (Bulgaria, the former Yugoslav Republic of Macedonia, and Romania); 3 Baltic countries (Estonia, Latvia, and Lithuania); 4 western BRO (Belarus, Moldova, Russia, and Ukraine); 3 countries in the Caucasus (Armenia, Azerbaijan, and Georgia); and 6 countries bordering the EU (Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia).

¹⁵ Expenditure analysis covers the post-1993 period to exclude relatively low-quality data available for the early years of transition. Deficiencies in measuring GDP, particularly in light of rising inflation, distort the relevant indicators of government size at the beginning of the transition period.

Figure 1. Transition Economies: Total Expenditure and Net Lending, Revenue, and General Government Balance, 1993–99 1/
(In percent of GDP)



Sources: National authorities; and IMF staff calculations.

1/ All fiscal aggregates are measured on a cash basis.

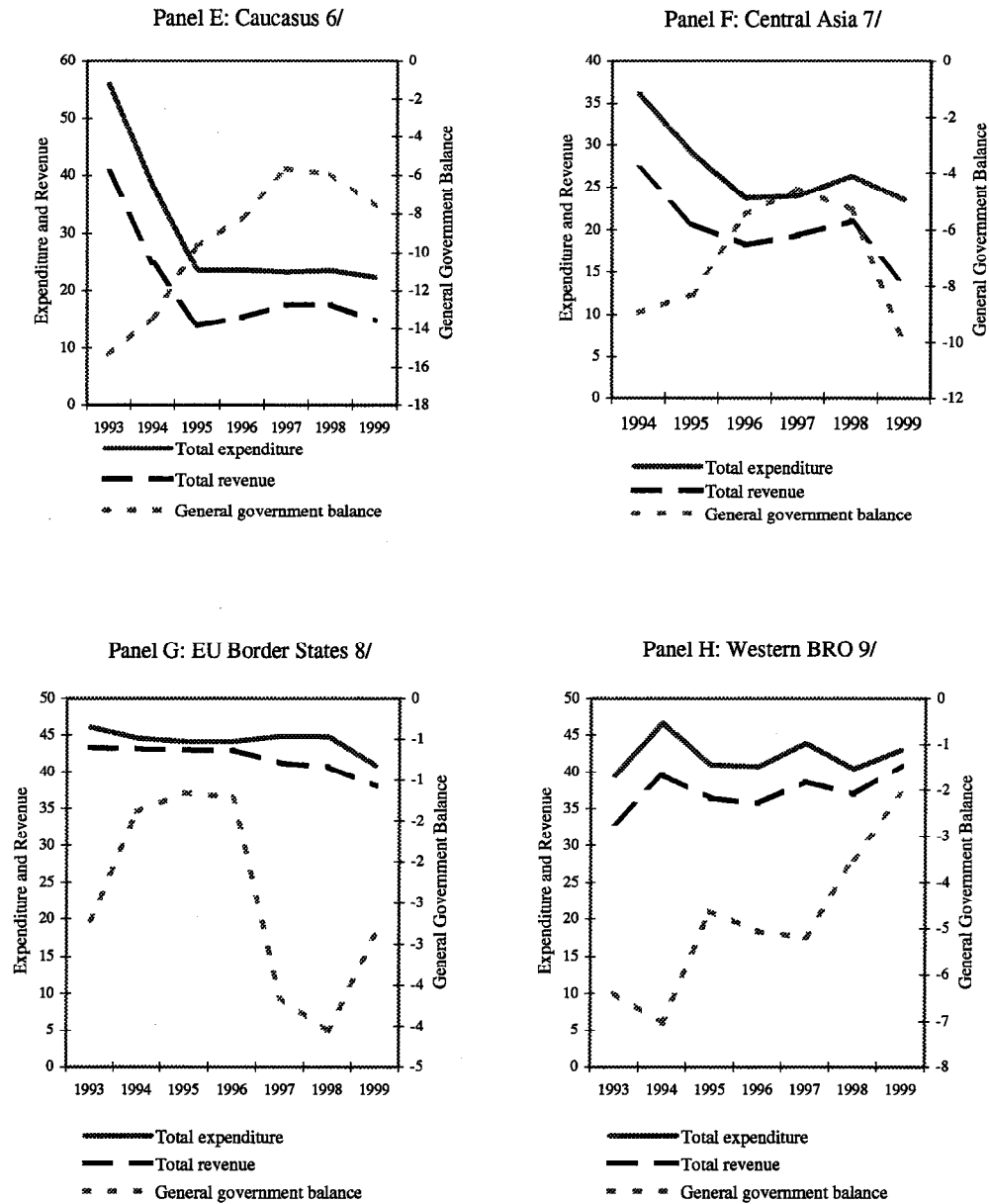
2/ Comprises 24 transition economies. Data available for only 14 countries in 1999.

3/ Comprises 15 BRO, and Bulgaria, the former Yugoslav Republic of Macedonia, and Romania. Excludes the 6 EU border states.

4/ Comprises Bulgaria, the former Yugoslav Republic of Macedonia, and Romania.

5/ Comprises Estonia, Latvia, and Lithuania.

Figure 1. Transition Economies: Total Expenditure and Net Lending, Revenue, and General Government Balance, 1993–99 (concluded) 1/



Sources: National authorities; and IMF staff calculations.

6/ Comprises Armenia, Azerbaijan, and Georgia.

7/ Comprises Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

8/ Comprises Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia.

9/ Comprises Belarus, Moldova, the Russian Federation, and Ukraine.

Various criteria have been proposed for grouping transition economies into more homogeneous groups (Box 1). A commonly used criterion, based on geographical proximity, points to two groups: central and eastern Europe and the former Soviet Union (Havrylyshyn and others, 1998; Fischer and Sahay, 2000). The former Soviet Union is often divided into subgroups such as the Baltics, Russia, and central Asia (Berg and others, 1999). In this study, the country grouping suggested by Sachs and others (2000) are used. This approach relies on initial conditions and other determinants of transition. Initial conditions are defined as “fixed,” such as geography, climate, natural resources, history, and culture; “hard,” such as the structure of public, private, market institutions, as well as quality of human and physical capital stocks; and “soft,” such as government policy on taxation, expenditures, and other macroeconomic variables.

While government spending measured on a cash basis remained steady at 43-46 percent of GDP in the European Union (EU) border states, it fell from an average of 43 percent in 1993 to 35 percent in 1998 in the remaining transition countries. The contraction in cash expenditures has been particularly severe in central Asia, where total outlays nearly halved as a share of GDP over the period 1993–98, and in the Caucasus.¹⁶ In contrast, government expenditure relative to GDP rose from 35 percent in 1993 to 41 percent in 1998 in the Baltics, and remained virtually unchanged in the Balkans.

Although in recent years the Baltic countries and EU border states have implemented a number of structural reforms and outperformed other transition economies in terms of various macroeconomic indicators, the recent increase in public spending may be neither sustainable nor growth enhancing.¹⁷ Buiter (1997) argues that, even in the EU border states where governments are able to secure noninflationary financing, the distortions and disincentives associated with the comparatively high level of revenues are excessive. This problem is aggravated by the worsening demographics. With a rapidly ageing population, governments in most transition economies are faced with expenditure pressures, particularly in social security and health care, as well as the challenge to reform existing pension and social security/assistance programs.

¹⁶ Caution needs to be exercised in interpreting these spending trends. Most budgets were narrowly defined at the beginning of the transition period. Social funds, parastatal and state-owned enterprises, and local governments were typically not consolidated in the fiscal accounts. In certain countries, consolidation was carried out on a net basis, including only central government transfers to these funds and enterprises. More importantly, the broadening of the coverage of fiscal accounts has occurred over time along with the declining share of government spending in GDP. The fall in the spending-to-GDP ratio is likely to have been higher if measured only for the narrowly defined government at the beginning of the transition period. Moreover, to the extent that GDP was overestimated at the beginning of the transition period, the fall in expenditure-to-GDP ratio over time is underestimated, thereby indicating a less drastic downsizing of the government in the course of transition.

¹⁷ See Fischer and Sahay (2000) for more information.

Box 1. The Grouping of Transition Economies

The main criteria for grouping transition economies are:

- **Geographical proximity.** This criterion typically leads to two groups: central and eastern Europe and the former Soviet Union (Havrylyshyn and others, 1998). In some studies, the former Soviet Union group is further divided into three subgroups: the Baltic countries, Russia, and other countries (Berg and others, 1999).
- **Degree of liberalization.** Based on the cumulative liberalization index (de Melo, Denizer, and Gelb, 1996), transition economies can be divided into five groups: “advanced reformers” (the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia); “high-intermediate reformers” (Albania, Baltics, Bulgaria, Mongolia, and Romania); “low-intermediate reformers” (Kazakhstan, the Kyrgyz Republic, Moldova, Russia); “slow reformers” (Belarus, Turkmenistan, Ukraine, Uzbekistan); and “countries with regional tensions” (Armenia, Azerbaijan, Croatia, Georgia, the former Yugoslav Republic of Macedonia, and Tajikistan).
- **Speed and comprehensiveness of transition.** Dabrowski (1996) classifies transition countries into the following categories: “immediate accession” (East Germany); “quick launchers” (Albania, the Czech Republic, Estonia, Latvia, Poland, and the Slovak Republic); “slow but coordinated” (Hungary and Slovenia); “significant but incomplete” (Bulgaria, Moldova, Romania, and Russia); “lack of systematic change” (Belarus, Kazakhstan, Turkmenistan, Ukraine, and Uzbekistan); and “countries at war” (Armenia, Azerbaijan, Georgia, Serbia, and Tajikistan).
- **Transition performance.** Szyrmer (1998)¹ divides transition economies into “successes in transition” (central and eastern Europe and the Baltics), “borderline” (the Czech Republic, Moldova, and Romania), “failures” (Russia and Ukraine), and “unallocated” (Balkans and the Commonwealth of Independent States[CIS]).
- **Cluster analysis.** A systematic approach is suggested by Sachs and others (2000), based on a cluster analysis of the initial conditions and determinants of transition. These are categorized under “fixed” initial conditions (geography, climate, natural resources, history and culture); “hard” initial conditions (structure of public, private and market institutions, as well as the quality of human and physical stocks); and “soft” initial conditions (government policy on tax, expenditures and other macroeconomic variables).

1/ Table 2, page 21 in Sachs and others (2000).

The expenditure decline has been accompanied by changes in the scope of government.

As noted earlier, governments in many transition economies have been called upon to provide services, such as kindergartens, health care centers, and housing, that were previously the responsibility of the state-owned enterprises. These, and other social mandates, have not been fully funded and exert pressure on overall public spending, particularly at the subnational level.¹⁸ This lack of funding has contributed, in part, to the buildup of expenditure arrears in the social sectors. Explicit subsidies for food items have generally been eliminated, but subsidies for heating, as well as for other communal services, have taken forms that are not always transparent. Privileges to different population groups in the payment for these services have particularly complicated the analysis of incidence of subsidies.¹⁹ Falling output and limited employment opportunities over a long period have generated largely unmet needs for social protection. Public outlays on transfers to households have fallen as a share of total expenditures in most transition economies, particularly the Baltics and central Asia, to a level far below that of the OECD countries (Figure 2). The introduction of market-based instruments in central Asia to finance government deficits, together with a rapid accumulation of debt, have increased interest payments from the budget, thereby squeezing other public spending. In these countries, public outlays on wages and salaries have risen significantly as share of total government spending. The share of capital outlays in total public spending has fallen, particularly in the Baltics.

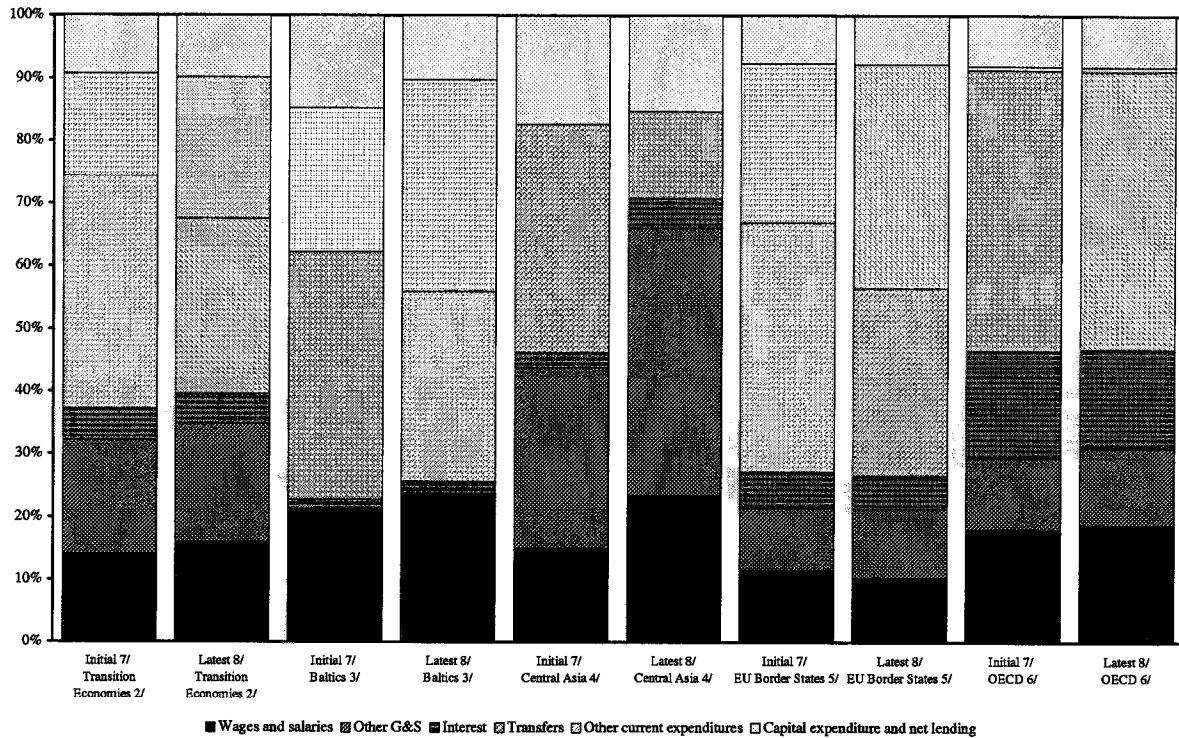
Although government spending levels have gone down on average, the fall in expenditure has partly been driven by the decline in the ability of governments to mobilize domestic revenue. On average, revenues have fallen as a share of GDP, but by less than the decline in average spending. In recent years, revenues have recovered in some countries; however, in others, persistent budgetary deficits have led to substantial debt accumulation. Revenues declined as a share of GDP by between 3–5 percent in the Baltics, the Balkans, and the EU border states during the transition years.²⁰ The decline in

¹⁸ For example, low cost recovery in the provision of energy and other communal services has imposed additional costs on the budgets of local governments in many countries. In Belarus, cost recovery in the provision of communal services was estimated at approximately 40 percent in February 1999, at a cost to the budget of 1.4 percent of GDP. The total (budgetary and nonbudgetary) cost of subsidies for housing and communal services was estimated at 3.3 percent of GDP in the Russian Federation in 1999. Effective cost recovery rates vary between 20 percent and 80 percent across regions and averaged between 40–45 percent in early 2000.

¹⁹ In the Russian Federation, there were more than 220 population categories (covering about 100 million people) entitled to approximately 150 privileges in 2000. The cost of privileges and exemptions (free transportation and concessions for housing and communal services) for veterans of labor was estimated at roughly 1.1 percent of GDP in 1999.

²⁰ The ratio of revenue to GDP is affected by the efficiency of both tax administration and tax policy. Thus, fast reformers, such as the EU border states and the Baltics, have experienced a U-shaped trajectory of tax collections and, in certain cases, revenues now exceed their share in GDP at the beginning of the transition period. In these countries, the fall in revenues was less pronounced at the beginning of the transition period, and tax collection improved over time; economic activity accelerated, and tax policy and administration reform took hold.

Figure 2. Transition Economies: Economic Classification of Expenditure, 1993–98 1/



Sources: National authorities; and IMF staff calculations

1/ Expenditures are measured on a cash basis.

2/ Comprises 15 BRO and 3 Balkan countries. Excludes the 6 EU border states.

3/ Comprises Estonia, Latvia, and Lithuania.

4/ Comprises Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

5/ Comprises Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia.

6/ Comprises 24 countries which became OECD members before 1994.

7/ Refers to 1993.

8/ Refers to 1998.

revenues was particularly sharp in the countries of central Asia and the Caucasus, where revenue-to-GDP ratios were already low at the beginning of the transition period. Buiter (1997) noted that even the “barest night-watchman duties” of the state cannot be discharged in some countries with such low revenue-to-GDP ratios. Various factors have contributed to the deterioration of revenue performance:

- In many countries, the tax system has been unable to capture fully the growing private sector and to bring small businesses into the tax net. Also, existing tax bases have shrunk in most countries because of the decline in economic activity and the growth of the underground economy.
- Relatively high statutory social contribution rates (particularly from employers) and marginal tax rates, as well as a weak link between social security contributions and benefits, have created a wedge between the cost of labor and employees’ take-home

pay.²¹ Together with weak tax administration, this has encouraged tax evasion and the emergence of informal markets.

- Recorded revenue does not always accurately measure the actual financing ability of governments because of the practice of collecting taxes and social contributions in kind, and offsetting the tax obligations of enterprises against the obligations of the government.²²
- The removal of restrictions on the methods of payment among taxpayers, and between taxpayers and tax authorities (that is, through the banking system), has overwhelmed the capacity of the tax authorities to monitor compliance and identify delinquent taxpayers.

Public sector employment—another conventional measure of government size—has also fallen, although it remains high by international standards. Consistent time-series data on employment are not readily available for transition economies, but government employment (measured per thousand population) has fallen in most transition economies (Table 1), particularly in the EU border states and the western BRO. On average, the government employs 60 in 1000 people, as opposed to nearly 80 at the beginning of the transition progress. In the course of transition, over 7.5 million government jobs were retrenched in transition economies.²³ Notwithstanding data deficiencies, government employment in transition economies is higher than in all other country groupings for which data are available except the OECD.

Average civil service retrenchment in transition economies masks sizable regional disparities. Despite data inadequacies, government employment seems to have increased substantially in Azerbaijan, the Czech Republic, Moldova, and Uzbekistan. In these countries, government employment in health care and education fell at the same time, suggesting that the social sectors were affected more by employment downsizing. More importantly, falling government expenditures in transition countries have not been accompanied by a commensurate reduction in government employment. Public outlays on wages and salaries constitute on average nearly 6 ½ percent of GDP, and have risen during the period 1993–98, particularly in the Baltics and the western BRO. Information comparing

²¹ Social contribution rates are typically around 30–32 percent for employers and 1–2 percent for employees.

²² During the period 1996–98, noncash revenues varied between 5 percent and 30 percent of total revenues in Armenia, the Kyrgyz Republic, Moldova, the Russian Federation, and Tajikistan. See Flanagan and Richardson (2001).

²³ At 43 percent, the share of public sector employment in total employment is nearly twice as high in transition economies as in the advanced economies and in the western hemisphere countries for which information is available (Hammouya, 1999). Also see Schiavo-Campo, De Tommaso, and Mukherjee (1997), for more information. The latter authors identify weak institutional capacity as an obstacle to progress in civil service reform in many transition economies.

Table 1. Government Employment, 1992-99
(In percent of population)

	Government Employment 1/									Government Wage Bill (In Percent of GDP)			Compression Ratio 4/	Relative Wage (In Percent) 5/
	Total			Education 2/			Health Care 3/							
	Initial 6/	Latest 7/	Change 8/	Initial 6/	Latest 7/	Change 8/	Initial 6/	Latest 7/	Change 8/	Initial 6/	Latest 7/	Change		
Transition economies	7.9	6.0	-7569.0	3.8	1.5	-8905.0	2.4	1.4	-4163.0	3.7	6.3	2.6	...	....
Balkans	4.5	4.0	-165.6	1.8	1.1	-254.0	1.2	0.8	-142.0	4.8	6.4	1.6	....	....
Bulgaria	7.7	4.2	-314.8	3.0	1.0	-172.0	2.3	1.1	-107.9	2.7	5.2	2.5	....	....
Macedonia	3.9	4.8	21.0	0.9	1.0	2.7	1.4	0.8	-9.3	6.0	8.5	2.5	....	118.2
Romania	3.3	3.9	128.0	1.4	1.1	-84.7	0.7	0.6	-24.9	5.8	5.6	-0.2	2.3	....
Baltics	8.2	6.3	-164.0	3.5	2.4	-93.0	2.6	1.5	-93.0	5.2	9.3	4.2	...	...
Estonia 9/	7.8	1.8	-93.6	2.8	....	....	1.9	....	....	5.6	8.3	2.7	6.0	...
Latvia 9/	8.2	4.9	-95.0	3.5	1.5	-55.2	2.8	0.9	-52.9	6.3	9.4	3.1	...	...
Lithuania	8.3	9.0	24.4	3.8	3.9	5.2	2.8	2.5	-11.4	3.6	10.3	6.7	6.8	111.8
Caucasus	10.5	10.1	-5.5	4.7	1.1	-590.0	2.2	0.8	-219.0	1.5	2.5	1.1	...	...
Armenia 9/	13.2	7.9	-186.0	4.1	2.2	-65.5	2.0	0.1	-69.7	1.8	2.9	1.1	8.0	52.9
Azerbaijan 9/	9.5	13.5	346.0	5.2	0.5	-348.6	2.3	1.5	-54.3	1.8	2.4	0.6	...	...
Georgia 9/	10.0	7.0	-165.0	4.5	1.3	-175.8	2.1	0.4	-94.8	0.8	2.3	1.5	10.0	83.3
Central Asia	7.7	12.0	2550.0	3.6	3.0	-330.8	2.5	1.6	-428.0	3.9	7.3	3.4	...	...
Kazakhstan 9/	6.9	5.6	-240.0	1.8	3.1	191.0	3.1	1.7	-236.8	2.8	4.9	2.1	4.2	...
Kyrgyz Republic 9/	12.1	7.2	-210.0	3.6	1.6	-86.6	2.4	0.8	-69.2	4.9	4.6	-0.3	3.4	...
Tajikistan 9/	6.5	0.9	-307.0	4.0	0.2	-209.0	2.0	0.6	-73.2	...	3.5	...	...	...
Turkmenistan 9/	8.4	4.4	-135.7	4.3	1.8	-89.3	2.0	1.7	-4.7	...	...	...	...	...
Uzbekistan 9/	7.6	21.6	3442.0	4.8	3.8	-137.0	2.3	1.9	-44.0	...	16.0	...	...	...
EU border states	5.8	5.0	-671.0	2.0	1.2	-517.0	2.0	0.9	-751.0	3.3	5.2	1.9	...	...
Croatia	7.2	6.4	-50.0	1.4	1.2	-10.1	1.5	0.7	-37.4	3.0	...	...	...	...
Czech Republic 9/	4.3	8.7	448.0	1.7	0.7	-99.3	1.2	0.3	-90.6	...	2.7	...	...	...
Hungary	8.7	8.0	-83.0	2.9	2.3	-62.6	2.4	2.2	-21.1	3.3	7.3	4.0	3.6	70.0
Poland	4.9	3.4	-568.0	1.6	1.2	-149.3	2.0	0.9	-439.6	6.1	3.9	-2.2	...	106.2
Slovakia 9/	8.6	1.6	-369.0	3.2	...	...	2.4	...	...	0.7	3.7	3.0	...	...
Slovenia 9/	6.9	4.5	-49.0	2.5	1.3	-24.0	2.7	0.9	-35.1	...	5.8	...	...	...
Western BRO	9.0	4.7	-9112.0	4.7	1.4	-7121.0	2.8	1.6	-2531.0	3.7	7.3	3.6	...	...
Belarus 9/	5.5	4.2	-132.0	1.1	1.6	57.2	2.8	1.2	-163.2	3.9	7.0	3.1	9.7	114.4
Moldova 9/	7.4	9.9	106.0	4.2	1.1	-138.8	2.5	1.1	-58.5	5.5	6.2	0.7	...	...
Russia 9/	9.3	4.3	-7411.0	5.1	1.5	-5331.3	2.8	1.3	-2234.3	1.7	...	...	...	...
Ukraine 9/	8.8	5.7	-1676.0	4.4	1.1	-1707.9	2.9	2.8	-74.7	...	8.7	...	...	...
Memorandum items: 10/														
OECD	6.5	7.8	12289.2	1.7	1.7	659.8	0.6	0.7	825.6	3.3	3.3	0.0	2.5	128.5
Sub-Saharan Africa	1.2	0.7	-2517.0	0.3	0.2	-648.1	0.1	0.0	-424.5	6.7	6.8	0.1	14.8	135.0
Middle East	3.2	5.1	6238.7	0.8	1.0	853.5	0.3	0.3	108.9	10.3	11.0	0.7	4.9	107.5
Asia	2.3	1.6	-18442.0	0.7	0.6	-383.4	0.2	0.1	-3111.3	7.7	7.5	-0.2	10.0	127.6

Sources: Salvatore Schiavo-Campo, Giulio de Tommaso, and Amitabha Mukherjee, 1997, "An International Statistical Survey of Government Employment and Wages," World Bank Policy Research Paper 1806; and an update of the same work by Giulio de Tommaso and Amitabha Mukherjee, forthcoming.

1/ Total government employment includes employment in the central government, and the subnational governments.

2/ Education employment covers primary, secondary, and university education. Where possible, administrative employees working in the ministry of education or in the school system were placed in government administration.

3/ Health employment covers employees of government hospitals and health institutions at all levels of government.

Wherever possible, administrative employees working in the health sector have been placed in government administration and not in health employment.

4/ Refers to the period 1995-99.

5/ Ratio of average government wage to private sector wage. Refers to the period 1995-99.

6/ Refers to the period 1990-95.

7/ Refers to the period 1995-99.

8/ Measured in thousands of population.

9/ The trend in total employment should be interpreted with caution since data for all components are not available for initial and latest years for these countries.

10/ Weighted by employment.

public and private sector wages and salaries is scarce but labor compensation in the government has typically not kept pace with the private sector in some countries, including Armenia, Georgia, and Hungary. Government pay scales also remain compressed in most transition economies particularly in Central Asia.²⁴ These governments are unable to raise wages in part because government employment is still excessive.²⁵ The government's wage bill has increased in most countries and accounts for as much as 10 percent of GDP in Lithuania and 16 percent of GDP in Uzbekistan.

The size of the private sector has expanded in virtually all transition economies. Private sector activities now account for the largest share of GDP in most transition economies (EBRD, 1998; and Tanzi and Tsibouris, 2000). There has been a gradual transfer of ownership of previously government-owned assets and some reduction in the regulatory burden through the liberalization of prices and foreign exchange markets. The private sector has also increased participation in the production of public goods, an area where the government had hitherto been the sole producer as well as provider. However, the overall regulatory burden is perceived to be high and continues to distort economic incentives and foster rent-seeking behavior and corruption in transition economies (see Table 2).²⁶ The EU border states, as well as the countries in the Baltics, score better than other transition economies (e.g., Central Asia) in measures of governance, such as voice and accountability, rule of law, and corruption.

B. Indicators Suggesting That Government Size Is Still Too Large and Scope Inappropriate

Whereas a reduction in cash expenditure has been necessary to keep overall budget deficits in relation to GDP at manageable levels, several indicators suggest that the scope of government continues to be inappropriate in transition economies. Begg and Wyplosz (1999) contend that governments in transition countries, measured in terms of consumption and transfers, are still too large relative to the OECD average. The persistence of expenditure arrears suggests that the actual size of government, measured on a commitment basis, may be larger than that suggested by the cash expenditure-to-GDP ratios. Moreover, although high-income countries tend to have larger governments, the size of governments in many transition economies is bigger than predicted on the basis of income

²⁴ International experience suggests that, if the compression ratio, defined as the ratio of the highest- to lowest-grade wage, is less than 10, the wage scale does not provide sufficient incentives for higher levels of productivity. The compression ratio, is on average low, in transition economies. In Moldova, in 1995, the highest public sector wage was 6.6 times the lowest. In Azerbaijan, the compression ratio was 5.5 in the executive bodies in 1996. In Belarus, it was 6.5 in 1999.

²⁵ Comparisons over time are complicated by the fact that governments in many transition economies continue to grant wage supplements, often on an ad hoc basis.

²⁶ Shleifer and Vishny (1993) discuss the relationship between rent-seeking behavior and corruption in transition economies.

Table 2. Governance Indicators and Private Sector Share

	Government Effectiveness 1/	Regulatory Burden 1/	Voice and Accountability 2/	Rule of Law 3/	Graft 4/	Gastil 5/	Corruption 6/	Private Sector Share 7/	
								Mid 1993	Mid 2000
Balkans	-0.6	0.2	0.4	-0.1	-0.5	5.0	3.0	32.0	60.0
Romania	-0.6	0.2	0.4	-0.1	-0.5	5.0	3.0	32.0	60.0
Baltics	0.2	0.6	0.7	0.3	0.2	2.3	4.0	40.0	70.0
Estonia	0.3	0.7	0.8	0.5	0.6	2.2	5.0	39.8	75.0
Latvia	0.1	0.5	0.6	0.2	-0.3	2.3	3.0	39.2	65.0
Caucasus	-0.8	-1.0	-0.9	-0.6	-1.0	5.0	2.0	13.3	45.0
Azerbaijan	-0.8	-1.0	-0.9	-0.6	-1.0	5.0	2.0	13.3	45.0
Central Asia	-0.8	-0.4	...	...	...	...	...	10.6	60.0
Kazakhstan	-0.8	-0.4	...	...	...	...	...	10.6	60.0
EU border states	0.5	0.6	0.8	0.5	0.3	3.5	3.8	38.0	69.0
Croatia	0.1	0.2	-0.3	0.1	-0.5	4.0	2.0	31.0	60.0
Czech Republic	0.6	0.6	1.2	0.5	0.4	...	4.1	33.1	80.0
Hungary	0.6	0.9	1.2	0.7	0.6	3.3	4.6	54.0	80.0
Poland	0.7	0.6	1.1	0.5	0.5	3.3	4.6	47.0	70.0
Slovenia	0.6	0.5	...	...	...	...	...	25.0	55.0
Western BRO	-0.7	-0.7	-0.4	-0.8	-0.6	4.9	3.4	20.5	50.0
Belarus	-0.7	-1.5	-0.5	-0.9	-0.7	4.9	4.0	13.3	20.0
Moldova	-0.5	-0.3	...	...	...	...	...	17.0	50.0
Russia	-0.6	-0.3	-0.3	-0.7	-0.6	...	2.8	33.0	70.0
Ukraine	-0.9	-0.7	...	...	...	...	...	18.7	60.0
Memorandum items: 8/									
Advanced economies	1.5	1.0	...	...	...	...	...	...	...
Asia	-0.2	-0.2	...	...	...	...	...	...	...
Middle Eastern	-0.2	-0.5	...	...	...	...	...	...	...
Sub-Saharan Africa	-0.4	0.1	...	...	...	...	...	...	...
Transition economies	-0.2	0.0	...	...	...	...	...	...	...
Western hemisphere	0.0	0.6	...	...	...	...	...	...	...

Sources: Kaufmann, Kraay, and Zoido-Lobaton (1999); ICRG, and EBRD Transition Reports; and IMF staff calculations.

1/ Measured on a scale of about -2.5 to 2.5, with higher values corresponding to better outcomes. The index of government effectiveness combines perception of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies. The index of Regulatory Burden includes measures of the incidence of market-unfriendly policies, such as price controls or inadequate bank supervision, as well as perception of the burdens imposed by excessive regulation in several areas, such as foreign trade and business development, among others. Scores refer to 1996 or 1997 for most countries.

2/ The index of Voice and Accountability is composed of several measures relating to the political process, civil liberties, and political rights, and is based on information on the extent to which citizens of a country are able to participate in the selection of governments, and on measures of the independence of the media. Scores refer to 1970-95 averages.

3/ The index of Rule of Law includes several indicators measuring the extent to which agents have confidence in, and abide by, the rules of society, and is based on information on the perceived incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. Scores refer to 1970-95 averages.

4/ The index of Graft measures the perception of corruption, generally defined as the exercise of public power for private gain. Scores refer to 1970-95 averages.

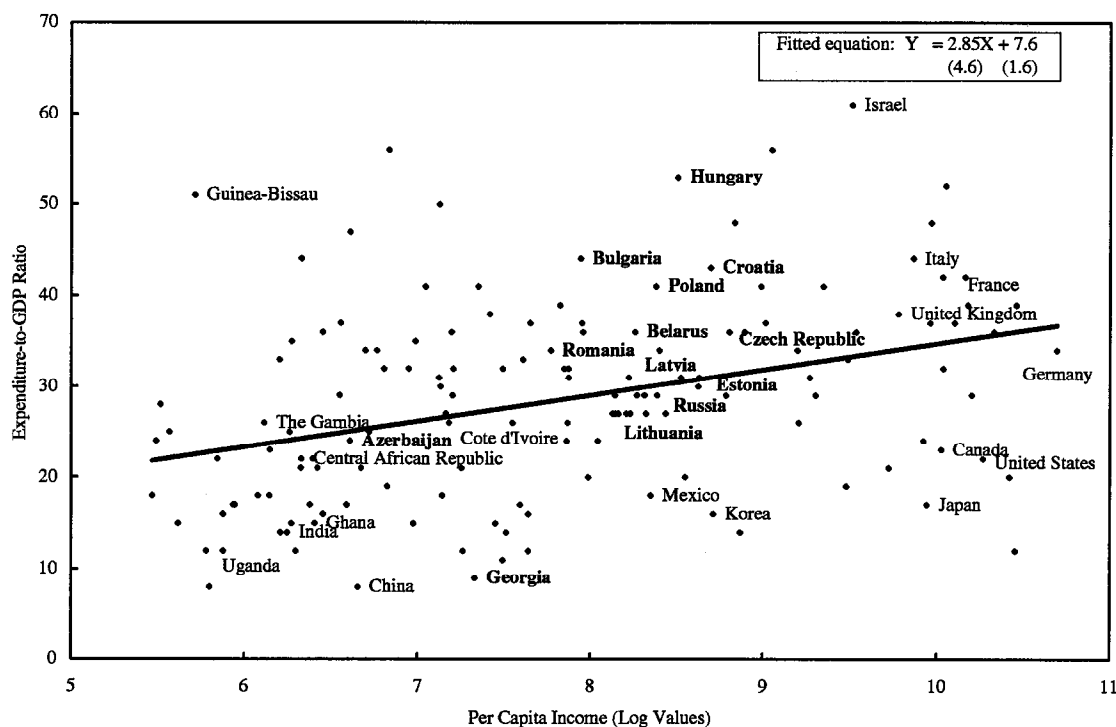
5/ The Gastil index of civil liberties ranges from one (most freedom) to seven (least freedom). Scores refer to 1970-95 averages.

6/ The ICRG index measures a country's corruption as perceived by foreign investors. It varies from zero (most corrupt) to 6 (least corrupt). Corruption is defined as the likelihood of a government official to demand special payments, whether illegal payments are expected throughout lower levels of government in the form of bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans. Scores refer to 1970-95 averages.

7/ In percent of GDP.

8/ Unweighted average.

Figure 3. Income and Government Size 1/



Source: *World Development Indicators*, 2000 (Washington: World Bank).

1/ Based on data for 148 countries, averaged for the period, 1970-98. Countries in bold are sample transition economies.

alone (Figure 3). In Figure 3, many transition economies (labeled in bold) lie above the regression line for a sample of 148 countries for which information on government spending and per capita income is available.

The wedge between cash and commitment expenditures further indicates that the scope of government, as gauged by the entitlements granted to the population, is broader than that suggested by the magnitude of total cash spending.²⁷ The inability of most governments to curb public consumption, particularly in the energy sector (such as heating subsidies), has increased indebtedness and led to the accumulation of expenditure arrears, often to foreign suppliers as well as the emergence of contingent liabilities in the budget. Reliable information on expenditure arrears is not available for most transition economies, and countries which keep track of this information tend to be those where the problem is less

²⁷ According to Hagen and Harden (1996), a mismatch between revenues and expenditures leads to an overestimation of the marginal benefits of spending and, hence, to an increase in the size of government beyond the level that equates social marginal costs and benefits.

severe. In addition, there are methodological difficulties in measuring expenditure arrears.²⁸ The limited data suggest that the bulk of expenditure arrears comprises wages and salaries, social security payments, and arrears to suppliers, including energy companies. The stock of arrears accounted for nearly 10 percent of GDP on average between 1995–98 in Moldova (Table 3). Energy arrears accounted for nearly half of the flows of total arrears in Ukraine. Failure to revise expenditure commitments in line with revenue capacity has compromised the actuarial sustainability of pension funds in most transition economies. Difficulties faced in reforming expenditure commitments, particularly in the social area, as well as in stemming the accumulation of arrears, are due to entrenched interests in these countries.

Rising national indebtedness also implies that, in transition economies, spending is high compared to the government's ability to raise domestic resources. Most transition economies had virtually no national, and relatively little foreign, debt in the early 1990s. For example, external debt averaged 26 percent of GDP in 1993 in the BRO, but had risen 15 percentage points by 1998 (Table 4). The rise in public indebtedness was more pronounced in the slow-reforming countries of central Asia. Information on the size of the domestic debt stock at the beginning of the transition period is hard to come by. The rapid increase in indebtedness during economic transition is traceable to:²⁹

- The practice of extending public guarantees for private debt in many countries. The benefits of spending financed through government-guaranteed debt has accrued to private borrowers, whereas the costs have been shared by all taxpayers.
- The increased access to foreign markets together with the inability of the governments to prioritize and restructure public spending.
- The financial support for economic reforms by bilateral and multilateral agencies, albeit at concessional terms.

²⁸ Information on tax rather than expenditure arrears is more readily available in transition economies. In the Russian Federation, noncash transactions through the issuance of promissory notes, tax offsets, and the accumulation of arrears, make up a significant proportion of total transactions. It is estimated that the total overdue debt of enterprises accounted for nearly 40 percent of GDP in 1998. Total payables to large- and medium-size enterprises rose from 20 percent to 70 percent of GDP between 1994 and 1997, while total receivables rose from 20 percent to 45 percent of GDP over the same period. See Commander, Dolinskaya, and Mumssen (2000) for more information. In Azerbaijan, pension arrears were nearly eliminated in 1997, but increased to more than ½ percent of GDP by end-1998 and rose further in 1999. Arrears to utility companies accounted for almost 2½ percent of GDP by end-1998.

²⁹ This does not necessarily apply to concessional debt. There is, however, considerable variation in debt ratios in transition economies. Maturity structures and the share of concessional debt in total foreign liabilities also differ widely. See Hamann and Mourmouras (2000) for more information.

Table 3. Selected Transition Economies, Arrears, 1995–2000

	Georgia				Kyrgyz Republic				Ukraine				Moldova				Russia 2/	
	1996	1997	1998	1999	1995	1996	1997	1998	1997	1998	1999	2000	1995	1996	1997	1998	1996	1997
(In percent of GDP)																		
Expenditure arrears	0.9	1.6	2.9	3.4	1.9	0.7	0.5	1.8	3.5	4.2	6.1	1.6	7.9	10.9	6.7	11.0	0.45	0.37
<i>of which:</i>																		
Social payments 1/	...	0.3	1.8	2.2	1.0	0.4	0.3	1.2	3.5	4.2	2.4	0.8	...	...	2.1	2.8	...	...
Energy	...	...	...	...	...	...	0.1	0.3	...	...	2.8	0.6	...	...	...	...	...	...
Tax arrears	...	4.1	4.6	6.8	...	...	...	...	3.6	5.3	...	...	11.0	13.6	11.2	14.7	...	...
(In percent of total government expenditure)																		
Expenditure arrears	4.0	7.5	13.2	16.0	5.6	2.7	2.2	6.9	8.0	10.9	17.0	5.0	20.5	20.5	27.2	15.7	2.6	2.09
<i>of which:</i>																		
Social payments 1/	...	1.3	8.0	10.1	3.0	1.4	1.2	4.7	8.0	10.9	6.6	2.3	...	...	4.8	7.5	...	...
Energy	...	...	...	...	...	...	0.3	0.9	...	...	7.7	1.8	...	...	...	...	...	...

Sources: Data provided by authorities; and IMF staff calculations.

1/ Arrears on social payments include arrears on pensions and wages.

2/ Refers to flow of arrears.

- The liberalization of financial markets, which has increased the cost of servicing debt. Moreover, dependence of some energy-deficient transition economies on foreign energy suppliers has contributed to increasing external indebtedness.
- The weak public expenditure management and planning systems, as well as lack of administrative control, which have prevented adjustment of expenditures over time in line with budget allocations.³⁰
- The low rates of return on the use of funds which did not sufficiently contribute to growth of GDP to keep the debt-to-GDP ratio at manageable levels.

The regulatory burden remains high in transition economies despite the reforms.

Regulation remains high in most countries, with the exception of the EU border states and the Baltics, as discussed above. This fact is confirmed by the indicator of openness constructed by Sachs, Zinnes, and Eilat (2000), which also comprises the quality of the regulatory

³⁰ See Velasco (2000), Schultz and Sjöström (1997), and, for an overview, Persson and Tabellini (2000, Chapter 1).

Table 4. External Debt, 1993–98
(In percent of GDP)

	1993	Latest 1/	Change
Baltics 2/	8.5	23.6	15.1
Estonia	5.0	27.6	22.6
Latvia	10.3	16.9	6.6
Lithuania	10.3	26.3	16.0
Caucasus 2/	21.6	41.8	20.2
Armenia	14.5	49.1	34.6
Azerbaijan	4.0	13.3	9.3
Georgia	46.4	63.0	16.6
Central Asia 2/	35.4	70.5	35.1
Kazakhstan	35.7	33.5	-2.2
Kyrgyz Republic	43.7	112.2	68.5
Tajikistan	75.0	117.2	42.2
Turkmenistan	3.2	67.2	64.0
Uzbekistan	19.3	22.4	3.1
Western BRO 2/	37.8	49.3	11.5
Belarus	39.8	21.1	-18.7
Moldova	19.6	79.8	60.2
Russia	61.3	68.8	7.5
Ukraine	30.3	27.4	-2.9

Sources: Data provided by the authorities; and IMF staff calculations.

1/ 1999 for Armenia, Georgia, the Kyrgyz Republic, Moldova, and Tajikistan, and 1998 for other countries.

2/ Sample averages.

environment.³¹ Governments are also influencing the private sector through the retention of large direct and indirect minority shareholding in seemingly “privatized” companies.³² Overregulation and poor governance have driven businesses underground and, therefore, reduced tax collections.³³ In particular:

- Many transition economies still lack institutions to promote the democratic process, encourage good governance, and support private sector development. In most countries, progress in institutional and structural reform, including the buildup of institutions promoting the democratic process, has been slower than originally expected. Countries in the Caucasus and the Western BRO fare particularly poorly in terms of indicators of voice and accountability, rule of law, and political liberties.
- Poor corporate governance (i.e., insider lending operations, quasi-fiscal operations of the state enterprise sector, barter and noncash operations, entry and exit restrictions) has hampered the use of public policies as a means of encouraging private sector development and strengthening incentives for allocative efficiency.
- Although reforms in the financial sector have progressed in some countries (e.g., the Baltics), regulatory mechanisms for the banking sector and capital markets, as well as their strict enforcement, need to be improved in most countries in order to achieve full gains from the market economy (Kornai, 1993 and 1994; Havrylyshyn and van Rooden, 2000).³⁴
- The recent shift away from privatization, as well as price and exchange rate liberalization, toward financial market restructuring and private sector enhancement,

³¹ The openness indicator (not reported) seeks to capture the ease with which economic activity can take advantage of the foreign sector for markets, know-how, competition, financing, investment, source of inputs, and other components linking its markets and firms to the global economy. It is based on three subcomponents: (1) the regulatory environment, which captures the state of general regulations directly impacting commerce and foreign participation in the economy; (2) the current account, which captures the trade flows and direct regulatory obstacles impeding them; and (3) the capital account, which captures aggregate financial flows both in and out of the country, as well as various forms of foreign investment participation in the domestic economy. The indicator is a weighted average of a country's score in these three subcomponents. In particular, Armenia, Azerbaijan, the Kyrgyz Republic, and Uzbekistan score relatively low in terms of this index. See Sachs, Zinnes, and Eilat (2000) for details.

³² See Crama and others (1999) for a discussion of corporate governance issues.

³³ Improvements in governance are expected to boost revenue collection in the future, but the impact is hard to measure.

³⁴ The creation of an environment conducive to market-based financial discipline is also contingent on an independent central bank, and on a two-tier banking system. While some progress has been observed, the independence of the central bank, and the restructuring of the financial sector as a whole, remain a high priority in many transition economies.

also needs to be strengthened. In particular, institutional development is needed to enforce contracts and to protect property rights, as well as to strengthen the legal framework. Many countries lack bankruptcy and collateral legislation, thereby weakening incentives for investment and capital market development.

- In the fiscal area, efforts must be made to strengthen tax administration and to improve expenditure management and control. Progress in tax administration reform has been slow, in part because of political constraints. For example, tax liabilities are negotiated in some countries, the legislative framework for tax administration is uncertain, and political commitment to institutional reform is weak in many transition economies (Ebrill and Havrylyshyn, 1999). Centralized treasury systems are in operation in a number of countries, but they remain weak, leading to inadequate expenditure monitoring and control.
- Failure to strengthen reform efforts has been attributed to weak ownership of the reform process. The political process continues to reflect the preferences of interest groups rather than those of the electorate at large. Moreover, weak administrative capacity has hampered the implementation of reforms.

The changing composition of government spending raises questions about the appropriateness of the scope of government. The composition of government spending seems to have become somewhat more “productive”; public spending on defense has fallen in relation to GDP, the decline being particularly large in the western BRO and the Caucasus. Central Asian countries have experienced significant reductions in capital spending and outlays on social security and welfare. However, some authors (Milanovic, 1999) have suggested that worsening income distribution reflects the failure of governments to target social programs to the poor and other social groups adversely affected by reforms (Appendix Table 6). The decline in the share of outlays on social programs has been more pronounced in the Caucasus and the western BRO than in the other country groups.

Public spending on education and health care remains relatively high. Total outlays on these programs declined as a percent of GDP but remained stable in relation to total government outlays. Although the composition of education spending favors primary and secondary education, a large proportion of these outlays is directed at providing child care to children between ages 1 and 5.³⁵ Teaching loads are typically low.³⁶ Budget allocations for books and teaching material have been squeezed, and per capita spending for tertiary

³⁵ In Ukraine, between 1995 and 1998, spending per student at the preschool level was on average nearly 70 percent higher than for general education, and was equivalent to spending per student in vocational training and higher education. In Lithuania, outlays on preschool education, at approximately 14.5 percent of total public spending on education were nearly as high as those on tertiary education in 1993–98. In developed countries, spending on preschool rarely exceeds 10 percent of public spending on education.

³⁶ The normal workload for a secondary education teacher in Moldova in 1998 was 18 teaching hours per week.

education is a multiple of spending on primary and secondary education. Some transition countries are spending between 30 percent and 50 percent of their total education budget on energy.³⁷ Informal charges to secure admission to secondary schools and universities are common in many transition economies (World Bank, 2000). Similarly, curative health care accounts for a large share of health spending. The prevalence of informal user charges has limited the access of the poor to basic health services, and most social indicators have worsened (Appendix Table 7).³⁸ There is a marked disparity in the amounts spent by different countries on health care—while countries in the Caucasus and central Asia (e.g., Azerbaijan, Georgia, and Tajikistan) are spending much too little, the EU border states and the Baltics (e.g., the Czech Republic, Croatia, Lithuania, and Slovenia) are spending a higher percentage of their GDP on health care than some of the richer OECD countries.³⁹ The health care system in most countries needs to be rationalized, as reflected in an oversupply of poorly maintained health care facilities, an excessive number of hospital beds and average stays at hospitals,⁴⁰ inadequately paid health care personnel, and an overstaffing of administrative personnel.

Increased income inequality in transition economies is expected to exert pressure on the size of government through higher spending on redistributive programs.⁴¹ However, this distribution may not happen in transition economies because the preferences of the poor are not always taken into account in the political process, democratic institutions are weak and corruption is pervasive (as discussed earlier in the context of governance).⁴² Governments in more unequal societies tend to redistribute less, not more, than their more egalitarian

³⁷ In Ukraine, outlays on maintenance (including energy and heating) accounted for 17–20 percent of total public spending on health care on average between 1995–98.

³⁸ In the Kyrgyz Republic, it is estimated that whereas, in 1993, only 11 percent of those seeking consultations with physicians made informal payments, this proportion had risen to 51 percent by 1996.

³⁹ Aggregate outlays in the health sector can, however, be misleading as data coverage varies. For example, the Health Insurance Fund is consolidated with the fiscal accounts in Lithuania, but not necessarily in other countries.

⁴⁰ Moldova had nearly 12 hospital beds per 1000 population on average between 1994–97, and more than 4 doctors per 1000 population. These ratios are higher than in other transition economies. At 18.1 days, on average, stay in hospital is also long in Moldova against 14.4 days, on average, in OECD countries and 15.7 days in Central Asia and Azerbaijan.

⁴¹ Meltzer, Cukierman, and Richard (1991) show that an increase in mean income relative to the income of the median voter increases the size of government. The argument is that, since the share of income redistributed is determined by the majority rule, an increase in the number of voters below the mean income increases the votes for redistribution, and thus the size of government.

⁴² The median voter hypothesis may also fail due to a number of reasons, such as rent-seeking behavior and political influence (Alesina and Perotti, 1996; and Rodriguez, 1999), capital market imperfections (Bénabou, 1996 and 2000), and a large concentration of income at the top of a country's income distribution (Bassett, Burkett, and Putterman, 1999).

counterparts. Moreover, the effectiveness of the government in redistributing income through public policies depends primarily on the incidence of public spending on social programs and, therefore, on the scope for capture of the benefits of government spending by special interest groups and the middle class.⁴³ Furthermore, taxation has played a limited role in income distribution in transition economies.⁴⁴

The transition economies have inherited a fairly decentralized structure of government even in relatively small countries, but lack preconditions for decentralization to result in smaller governments. More recently, many transition economies have been pursuing fiscal decentralization to improve service delivery and to accommodate regional pressures for greater policymaking autonomy. Fiscal decentralization reduces the size of government when subnational jurisdictions are free to set their tax rates, and taxpayers are mobile across jurisdictional borders. It has been suggested that transition economies do not meet these conditions.⁴⁵ Moreover, local tax bases are not being fully exploited because most subnational provision is financed primarily through revenue sharing and higher levels of government have weak incentives for effective local revenue mobilization. In addition, existing institutions do not necessarily foster coordination among subnational governments to facilitate the provision of regional public goods and to support private sector development.

⁴³ Several studies (Anand and Ravallion (1993); and Alesina and Rodrik (1991)) focus on the efficiency of social policies in fostering a more equitable income distribution. Ahmad (1993) analyses the relationship between poverty and public policy issues in the CIS during transition and recommends the use of targeted subsidies for essential goods as a poverty alleviation measure. Similarly, Van Rijckeghem (1994) finds a significant decline in real urban income and government transfers during transition in Albania and recommends the use of targeted transfers to mitigate the adverse impact of transition on vulnerable social groups. Tanzi (1998) argues that expenditure programs can be hijacked by interest groups, or by the providers of public services, through inefficiency and job shirking, particularly in the case of labor-intensive programs such as education and health care.

⁴⁴ A more effective redistributive role for the government could be pursued through the taxation of land and property. The tax system in transition economies has nevertheless relied on traditional bases, such as labor income and enterprise payroll and earnings, rather than wealth (Tanzi, 1998).

⁴⁵ The relationship between decentralization and macroeconomic performance is prominent in the literature. Qian and Weingast (1997) stress the need for market-preserving federalism, defined as the system of intergovernmental fiscal relations that is conducive to private sector development. Zhuravskaya (1999) warns against an excessive reliance on local taxes to finance subnational expenditures. In their analysis of decentralization in the Russian Federation, both Lavrov (1996) and Shleifer (1997) attribute low business activity to the disincentives created by excessive transfers from the central government, while Craig and others (1997) emphasize the need for a comprehensive, stable, and transparent tax and expenditure system in order to limit borrowing by subnational governments. In his study of Bulgaria, Bogetic (1997) argues that the efficiency gains from decentralization must be secured with careful sequencing of capacity building at the local level. In their analysis of Hungarian decentralization, Lutz and others (1997) highlight the risk of an increase in the size of government in the absence of hard budget constraints or clearly defined fiscal rules to guide intergovernmental fiscal relations. De Mello (2001) describes recent reform in intergovernmental fiscal relations in Moldova and shows that most transition economies lack the conditions for decentralization to reduce the size of government.

Fiscal decentralization also affects the scope of government to the extent that expenditure and revenue functions are re-assigned among different levels of government.

IV. POSSIBLE LESSONS

Although some indicators in transition economies point to a contracting size of government, others suggest that the government continues to play too large a role. Growing national indebtedness, the accumulation of arrears, the proliferation of noncash transactions, and the heavy regulatory burden are reflections of governments seeking to do more than they should. The reliance on sources other than domestic revenue to finance public spending has increased the social marginal cost of raising resources. Further, the failure to align expenditure commitments to available revenues can be attributed, at least in part, to the absence of well-functioning institutions that strengthen governance and promote transparency and accountability in government. The stronger the budgetary institutions, the greater the control of expenditure. The apparent downsizing of the government has thus been prompted more by falling revenues, rather than a conscious strategy to constrain the government's role and to promote private sector development. In many countries, the size of government continues to be determined by revenue mobilization constraint, rather than allocative efficiency considerations.

EU border states appear to be more efficient than other country groups, in terms of both raising resources and spending them. This conclusion stems from the aggregation of selected elements of the costs of raising resources and benefits from spending programs (Figure 4).^{46 47} For example, the Balkans and Central Asian republics have higher costs of raising resources and lower benefits from government spending than EU border states. Caucasus and western BRO countries are in a similar situation. Although the benefits are slightly lower in the Baltics than in EU border states, costs are similar and the overall level of expenditure is lower. These results are consistent with the earlier discussion that there is no unique optimum for the size of government.

⁴⁶ The costs are measured by the regulatory burden, an indicator of government including the burden of taxation, and the level of public or publicly guaranteed debt. The benefits are proxied by life expectancy at birth, secondary school enrollment, and an index of government effectiveness.

⁴⁷ The area covered by the lower portion of the diamond can be interpreted as the cost of raising resources from three major sources of funds. Everything else being equal, a higher point on the axis indicates a higher cost of raising funds. The same applies to benefits.

Figure 4. Transition Economies: Benefit and Cost of Public Spending—Selected Indicators, Averages 1995–98

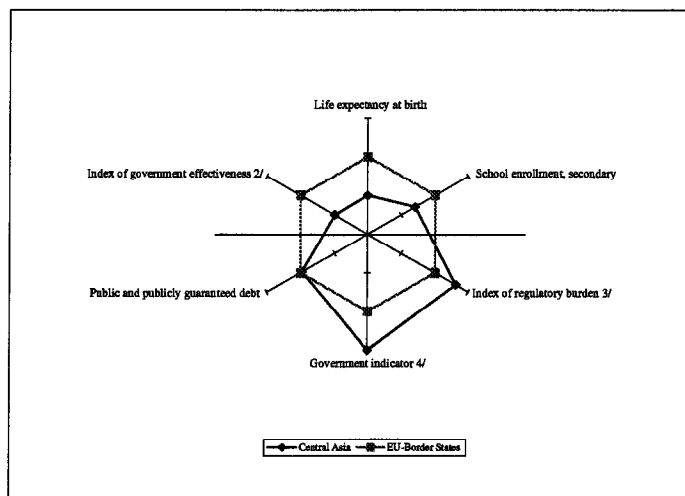
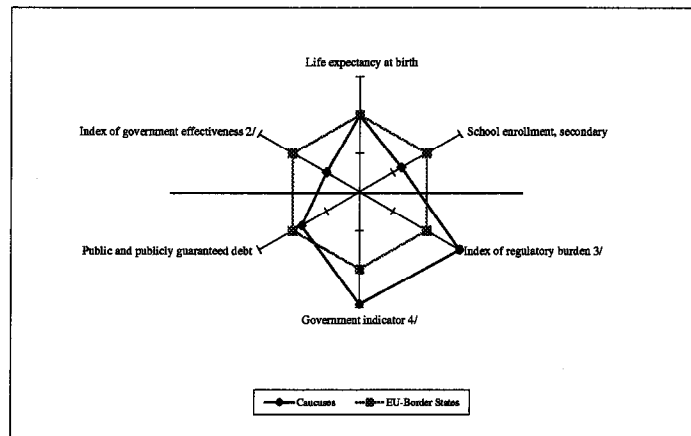
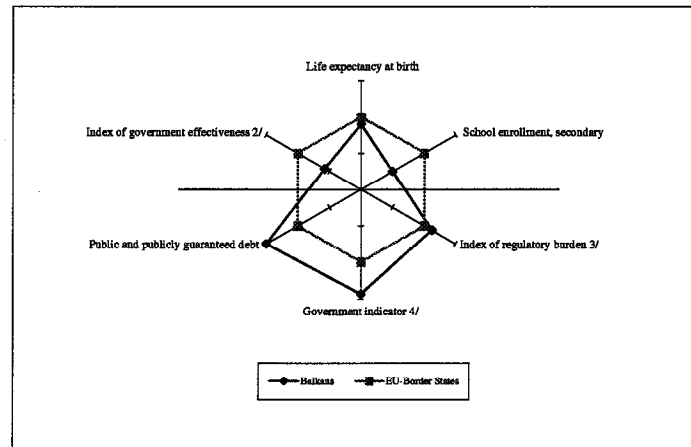
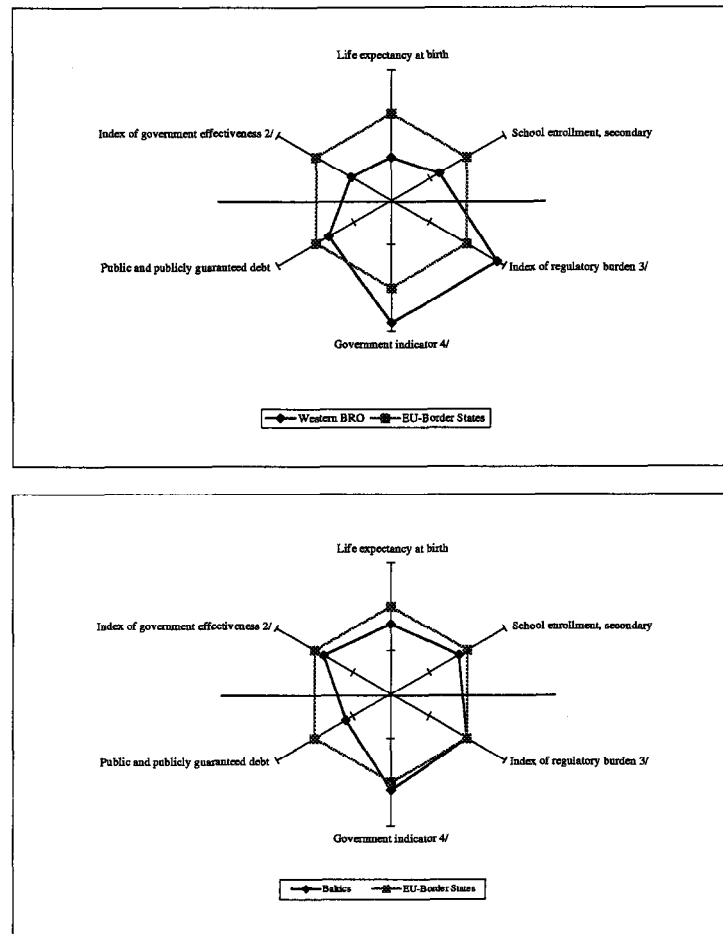


Figure 4. Transition Economies: Benefit and Cost of Public Spending—Selected Indicators, Averages 1995–98 (concluded)



1/ The index of government effectiveness, life expectancy at birth, secondary school enrolment are used as proxies of the "benefit" of public spending, and are presented above the horizontal axis. The indices of regulatory burden and government, and the amount of public and publicly guaranteed debt are used as proxies of the "cost" of raising resources for public spending, and are presented below the horizontal axis.

2/ The index of government effectiveness, available from Kaufmann, Kraay, and Zoido-Lobaton (1999), combines perception of the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies. The higher the index, the more effective the government.

3/ The index of regulatory burden, Kaufmann, Kraay, and Zoido-Lobaton (1999) includes measures of the incidence of market-unfriendly policies, such as price controls or inadequate bank supervision, as well as perception of the burdens imposed by excessive regulation in several areas, such as foreign trade and business development, among others. The higher the index, the higher is the regulatory burden.

4/ The indicator of government, available from Sachs, Jeffrey, Clifford Zinnes, Yair Eilat, (2000), is based on the quality of public administration, macroeconomic policy, fiscal policy, and overall policy coherence and control. Regarding fiscal policy, it focuses on how taxes are collected, the existence and sophistication of government bond markets, and the use of the inflation tax. The higher the index, the higher is the cost of public spending.

More attention needs to be paid to rationalizing the scope of government in transition economies than to expenditure cuts per se. This would also increase the marginal benefit of various public programs. In particular, social programs need to be better targeted, and allocations shifted within these sectors in favor of activities that yield higher social rates of return. This shift could mean reducing allocations for kindergartens and tertiary education, as well as for specialized hospital services. It could also involve reforming existing pension and other social programs to make them more efficient and equitable. Such reforms pose a challenge for the governments of transition economies in light of pressures exerted by the rapid aging of the population. The observed fall in aggregate expenditures in relation to GDP is not necessarily efficient or growth promoting when the scope of government remains inappropriate, inconsistent with the required functions of government. Moreover, public provision of public goods and services does not imply that a government should also be involved in their production. In particular, in most, but by no means in all, transition economies, existing social programs could be reformed by:⁴⁸

- Unifying contribution rates for social benefits to enhance revenue collection. Employee contribution rates could be increased to strengthen the link between contributions and benefits and to reduce the size of the informal labor market.
- Increasing the pension age, as well as eliminating untargeted benefits, to improve the financial position of social (or pension) funds and generate resources in the budget for increasing the real value of pensions for all.
- Eliminating privileges in the consumption of communal services, to improve the financial position of public enterprises and the budget, reduce the incentive for overconsumption and misuse, and allow for an increase in budget allocations for targeted social assistance to the truly needy.
- Reforming unemployment benefit entitlements, to facilitate access of the unemployed to social assistance in the course of transition and garner support for the implementation of structural reforms.
- Reducing overstaffing of administrative personnel in the social sector, to create room in the budget for increasing real wages and reallocating spending in favor of primary education and preventive health care. In education, the normal teaching load could be increased and the preschool system could be streamlined. In health care, the elimination of excessive hospital beds, and a reduction in the average stay in hospitals, would generate savings in the budget that could finance the provision of a basic health care package for all.

⁴⁸ See Gupta (1998) for more information on social protection issues in transition economies.

Ongoing efforts to reform intergovernmental fiscal relations must also address the issue of the overall size and scope of governments at all levels. In this context, local tax bases need to be exploited fully through an adequate incentive structure, and coordination among local governments should be promoted to ensure the provision of regional public goods and foster private sector activity. That is, conditions need to be created such that decentralization will lead to a reduction in the size of government. There is no unique optimal size that would apply to all countries, particularly when expenditure mandates are not clearly assigned among different levels of government.

Declining public expenditures will not necessarily lead to the development of the private sector. The government may fail to regulate economic activity in new markets in order to avoid market failures and build institutions that are supportive of entrepreneurship and private sector development. This is particularly important in countries that fare poorly in the governance scores reported above, such as those in central Asia and in the Caucasus. In this case, public sector downsizing may not promote private sector development.

The political economy determinants of the size and scope of government also need to be addressed. These determinants should be taken into account if the efforts to prioritize and rationalize existing programs are to come to fruition. Better understanding of the political economy constraints to reform will guide policymakers in the design and implementation of social policies. Failure to reform the role of government in transition economies may be due, at least in part, to strong vested interests. The political process may reflect the preferences of regional interest groups rather than those of the electorate at large. Poor governance has hampered the resumption of sustained growth, the expansion of private sector activity, and the reduction of poverty. Strengthening budgetary institutions, particularly in the areas of tax administration and expenditure management and control, will also help limit the size and improve the scope of government.⁴⁹ The stronger the budgetary institutions, the greater the control on expenditures and the more successful the implementation of structural reforms in the fiscal area.⁵⁰

⁴⁹ Hallerberg and von Hagen (1997) provide empirical evidence of an association between budget deficits and budgetary institutions in EU countries. Alesina and Perotti (1995, 1996) show that coalition governments, tax smoothing and intergenerational distribution concerns, as well as electoral systems and the strength of budgetary institutions are important determinants of budget deficits.

⁵⁰ Feldstein (1997) notes that the size of government increases with the dead-weight loss associated with transfers from the private sector to finance government spending.

Appendix Table 5. Transition Economies: Revenues and Expenditures
(In percent of GDP)

	Transition Economies 1/					Transition Economies 2/					Balkans					Baltics				
	Initial 3/	Latest 4/	Change	Sample Size		Initial 3/	Latest 4/	Change	Sample Size		Initial 3/	Latest 4/	Change	Sample Size		Initial 3/	Latest 4/	Change	Sample Size	
Expenditure (economic classification)																				
Total expenditure and net lending	43.3	37.4	-5.9	18		42.2	35.0	-7.2	13		34.9	35.6	0.7	1		34.7	40.7	6.0	3	
Current expenditure	36.3	30.4	-5.9	14		37.7	27.4	-10.3	9		29.3	31.3	2.0	1		30.3	34.7	4.4	2	
Goods and services	15.7	12.6	-3.1	10		17.9	13.1	-4.8	7		12.0	5.1	-6.9	1		13.9	23.0	9.1	2	
Wages and salaries	6.5	6.4	-0.1	9		6.9	6.5	-0.4	6		6.8	5.1	-1.7	1		6.6	9.9	3.3	2	
Other goods and services	12.0	6.3	-5.7	7		19.1	7.0	-12.1	3		5.2	5.8	0.6	1		11.4	15.0	3.6	1	
Interest	1.6	2.5	0.9	13		0.8	2.0	1.2	8		0.9	4.7	3.8	1		0.5	0.8	0.3	2	
Transfers	16.1	12.3	-3.8	13		16.1	9.8	-6.3	9		16.3	15.0	-1.3	1		12.2	12.3	0.1	3	
Other current expenditures	9.8	10.7	...	8		7.2	9.9	...	2		...	...	...	1		11.2	13.7	2.5	1	
Capital expenditure and net lending	6.0	4.4	-1.6	14		7.1	4.5	-2.6	9		5.0	4.3	-0.7	1		4.5	4.1	-0.4	2	
Expenditure (functional classification) 7/																				
Total expenditure	37.0	36.7	-0.3	6		30.6	31.6	1.0	3		31.5	31.5	0.0	1		28.5	32.6	4.1	3	
Social spending	7.1	7.1	0.0	6		5.6	5.7	0.1	3		5.5	5.1	-0.3	1		5.8	6.8	1.0	3	
Health	4.0	4.4	0.4	6		2.8	3.7	0.9	3		2.3	2.2	-0.1	1		2.9	4.6	1.7	3	
Education	5.0	3.1	-1.9	3		2.8	2.0	-0.8	3		3.2	3.0	-0.2	1		2.9	2.2	-0.7	3	
Social security and welfare	12.3	12.3	0.0	6		10.7	10.4	-0.3	3		9.2	9.8	0.6	1		9.7	11.3	1.7	3	
Defense	3.1	1.9	-1.2	6		1.4	1.2	-0.2	3		2.1	2.3	0.2	1		0.8	1.1	0.3	3	
Agriculture, forestry, fishing and hunting, fuel and energy, manufacturing and construction	2.6	1.8	-0.8	4		3.2	2.3	-0.9	2		7.3	2.5	-4.8	1		2.9	1.8	-1.2	1	
Transport and communication, housing and community amenities	2.7	2.0	-0.7	5		3.5	1.6	-1.9	2		5.2	2.1	-3.1	1		0.9	2.1	1.1	2	
General public services and public order	3.8	3.6	-0.2	6		3.2	3.5	0.3	3		2.0	1.9	0.0	1		4.1	4.1	0.1	3	
Other	6.2	7.5	1.3	6		5.2	7.0	1.8	3		4.2	8.2	4.0	1		5.0	5.3	0.3	3	
Revenue																				
Total revenue	36.0	33.0	-3.0	18		33.0	31.0	-2.0	13		33.9	30.1	-3.7	2		34.7	38.7	4.0	3	
Tax revenue	29.0	30.0	1.0	18		28.0	29.0	1.0	13		31.3	28.2	-3.1	2		32.1	35.2	3.1	3	
Tax on income and profits	11.0	9.0	-2.0	18		12.0	9.0	-3.0	13		10.4	7.1	-3.3	2		16.9	17.3	0.4	3	
Tax on payroll/social security contributions	12.0	11.0	-1.0	18		10.0	8.0	-2.0	13		10.7	9.1	-1.6	2		9.2	10.1	0.9	3	
Taxes on goods and services	12.0	12.0	0.0	18		11.0	12.0	1.0	13		9.4	10.0	0.5	2		9.2	12.9	3.7	3	
Other taxes	3.0	3.0	0.0	18		2.0	3.0	1.0	13		0.8	2.1	1.3	2		1.6	0.8	-0.8	3	
Non-tax revenue	3.0	2.0	-1.0	18		3.0	2.0	-1.0	13		2.3	1.9	-0.5	2		2.0	1.5	-0.5	3	

Sources: National authorities and IMF staff calculations.

1/ Comprises 24 countries, including 5 Central Asian countries (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan); 3 Balkan countries (Bulgaria, the former Yugoslav Republic of Macedonia, and Romania); 3 Baltic countries (Estonia, 4 Western BFO countries (Belarus, Moldova, the Russian Federation, and Ukraine); 3 countries in the Caucasus (Armenia, Azerbaijan, and Georgia); and 6 countries bordering the EU (Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia. To ensure intertemporal comparability in each subgroup, only the countries for which data are available for the initial and latest year of observation were selected.

2/ Comprises 18 transition economies.

3/ Refers to 1993.

4/ Refers to 1998.

5/ Refers to 1994.

6/ Revenue data refer to 1994, expenditure data refer to 1993.

7/ Data on functional categories available from GFS (Government Finance Statistics).

Appendix Table 5. Transition Economies: Revenues and Expenditures (concluded)
(In percent of GDP)

	Caucasus				Central Asia				EU Border States				Western BRO			
	Initial 5/	Latest 4/	Change	Sample Size	Initial 6/	Latest 4/	Change	Sample Size	Initial 3/	Latest 4/	Change	Sample Size	Initial 3/	Latest 4/	Change	Sample Size
Expenditure (economic classification)																
Total expenditure and net lending	36.2	23.5	-14.7	3	38.4	19.8	-18.6	3	46.0	43.2	-2.8	5	39.5	40.4	0.9	4
Current expenditure	34.2	19.4	-14.8	3	37.7	18.0	-19.7	2	33.2	37.2	4.0	4	35.5	37.7	2.2	2
Goods and services	9.7	10.2	0.5	3	20.0	10.0	-10.0	2	20.3	20.2	-0.1	3	28.3	18.5	-9.8	1
Wages and salaries	2.4	4.0	1.6	3	7.0	5.6	-1.4	2	5.7	6.0	0.3	3	4.9	8.2	3.3	1
Other goods and services	7.3	6.3	-1.0	3	15.0	6.6	-8.4	1	4.8	5.6	0.8	3	23.4	10.3	-13.1	1
Interest	1.5	1.5	0.0	3	1.0	1.4	0.4	2	2.8	3.3	0.5	5	0.9	2.5	1.6	2
Transfers	14.9	5.0	-9.9	3	16.5	2.8	-13.7	2	19.5	19.7	0.2	4	14.4	13.6	-0.8	1
Other current expenditures	2.5	4.0	1.5	2	...	...	...	0	12.5	11.6	-0.9	2	3.2	6.1	2.9	1
Capital expenditure and net lending	3.9	3.0	-0.9	3	7.9	4.5	-3.4	2	3.7	4.0	0.3	4	2.6	5.7	3.1	2
Expenditure (functional classification) 7/																
Total expenditure	36.8	24.7	-12.1	1	19.6	18.5	-1.1	1	43	40.7	-2.3	4	35.6	31.6	-4.0	1
Social spending	37.2	25.0	-12.2	1	2.4	2.3	-0.1	1	8.1	7.9	-0.2	4	4.6	2.3	-2.4	1
Health	0.4	0.3	-0.1	1	1.6	1.4	-0.2	1	4.6	4.8	0.2	4	1.6	1.0	-0.6	1
Education	1.1	0.9	-0.2	1	0.8	0.9	0.1	1	3.5	3.1	-0.4	4	3.0	1.3	-1.8	1
Social security and welfare	4.7	7.6	2.9	1	9.0	7.0	-2.0	1	15.7	15.3	-0.4	4	11.0	11.5	0.4	1
Defense	7.9	2.9	-5.1	1	0.9	0.9	0.0	1	3.4	2.3	-1.1	4	3.4	1.4	-2.0	1
Agriculture, forestry, fishing and hunting, fuel and energy, manufacturing and construction	6.7	...	...	1	0.8	0.3	-0.5	1	2.0	1.3	-0.8	4	...	2.8	...	1
Transport and communication, housing and community amenities	3.2	1.4	-1.8	1	0.8	0.6	-0.2	1	2.5	1.9	-0.6	4	3.4	1.1	-2.2	1
General public services and public order	6.2	3.9	-2.3	1	2.7	2.8	0.1	1	4.4	3.6	-0.7	4	2.8	2.7	-0.1	1
Other	9.2	7.2	-2.0	1	3.1	4.4	1.3	1	7.3	7.8	0.5	4	9.9	9.8	-0.1	1
Revenue																
Total revenue	24.8	18.6	-6.2	2	27.2	21.0	-6.2	3	43.3	38.4	-4.9	5	33.1	36.9	3.8	4
Tax revenue	13.0	17.1	4.0	2	23.8	14.7	-9.1	3	30.6	33.9	3.4	5	30.0	35.0	5.0	3
Tax on income and profits	6.8	4.0	-2.9	2	8.4	4.8	-3.6	3	9.1	8.8	-0.3	5	10.4	7.2	-3.1	3
Tax on payroll/social security contributions	2.9	2.6	-0.2	2	3.9	5.4	1.5	3	14.4	14.2	-0.2	5	9.0	11.0	2.0	3
Taxes on goods and services	4.8	8.2	3.4	2	12.1	8.8	-3.3	3	14.3	13.4	-0.9	5	12.4	16.3	3.9	3
Other taxes	9.0	2.4	-6.6	2	2.3	2.2	-0.1	3	3.2	2.0	-1.2	5	1.7	5.6	3.8	3
Non-tax revenue	2.8	2.8	0.0	2	3.4	2.2	-1.2	3	4.2	2.9	-1.3	5	2.0	3.4	1.4	3

Sources: National authorities; and IMF staff calculations.

1/ Comprises 24 countries, including 5 Central Asian countries (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan); 3 Balkan countries (Bulgaria, the former Yugoslav Republic of Macedonia, and Romania); 3 Baltic countries (Estonia, Lithuania, and Latvia); 4 Western BRO countries (Belarus, Moldova, the Russian Federation, and Ukraine); 3 countries in the Caucasus (Armenia, Azerbaijan, and Georgia); and 6 countries bordering the EU (Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia). To ensure intertemporal comparability in each subgroup, only the countries for which data are available for the initial and latest year of observation were selected.

2/ Comprises 18 transition economies.

3/ Refers to 1993.

4/ Refers to 1998.

5/ Refers to 1994.

6/ Revenue data refer to 1994; expenditure data refer to 1993.

7/ Data on functional categories available from GFS (Government Finance Statistics).

Appendix Table 6. Transition Economies: Poverty and Income Distribution Indicators

	Poverty Headcounts (In Percent) 1/		Headcount Index	Gini Coefficient 5/		Distribution of Earnings 6/	
	National Poverty Line		\$2.15 per day 4/	1989	1996	1989	1997
	Initial 2/	Latest 3/					
Balkans							
Bulgaria	...	...	3.1	26.2	34.6	...	...
Macedonia	...	...	6.7	...	31.2 *	...	...
Romania	21.5	...	6.8	23.0	28.7	1.9	5.2
Baltics							
Estonia	...	8.9	2.1	39.5	34.1	...	...
Latvia	...	...	6.6	28.0	32.2	...	4.3
Lithuania	...	...	3.1	...	33.1 *	...	4.4
Caucasus							
Armenia	...	...	43.5	39.4	43.1	...	...
Azerbaijan	...	68.1	23.5	25.0	42.0	...	...
Georgia	...	11.1	18.9	31.0	51.9	3.3	9.4
Central Asia							
Kazakhstan	...	34.6	5.7	33.0	35.4 *	...	...
Kyrgyz Republic	40	51	49.1	26.0	...	...	8.5
Tajikistan	...	...	68.3	27.0	...	...	...
Turkmenistan	...	...	7	28.0	40.8 *	...	...
Uzbekistan	...	...	...	28.0	...	...	...
EU border states							
Croatia	...	...	0.2	...	26.8 *	...	...
Czech Republic	...	...	0	19.4	27.6	2.4	3.0
Hungary	8.6	...	1.3	23.3	25.3	...	4.2
Poland	23.8	...	1.2	23.3	34.2	2.4	3.5
Slovak Republic	...	...	2.6	18.1	23.4	2.4	...
Slovenia	...	...	0	22.7	25.0	2.7	3.3
Western BRO							
Belarus	...	22.5	1	23.0	25.0	...	...
Moldova	...	23.3	55.4	23.0	24.0	...	...
Russia	30.9	...	18.8	27.2	37.8	3.3	10.4
Ukraine	...	31.7	3	26.5	31.3	...	...

Sources: *World Development Indicators*, 2000, The World Bank; UNICEF's Transmonee database, 2000, UN's WIDER database on income inequality.

1/ *World Development Indicators*, 2000, The World Bank.

2/ Initial observation refers to the earliest available estimate between 1990 and 1994.

3/ Latest observation refers to most recent estimate after (and including) 1995.

4/ Selected years, 1995-99. Drawn from Table 1.1, pg. 35, "Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia," World Bank, 2000.

5/ Most observations are based on household per capita income. Observations marked with an asterisk are based on expenditure measures. Data drawn from the UN's WIDER database on income inequality.

6/ Ratio of 90th percentile to 10th percentile. Distribution of earnings by percentile groups are given in terms of percent of median value. UNICEF's Transmonee Database, 2000.

Appendix Table 7. Transition Economies: Social Indicators

	Transition Economies 1/				Transition Economies 2/ (Excluding the EU Border States)				Baltics			
	Latest 4/		Change		Latest 4/		Change		Latest 4/		Change	
	Initial 3/	Latest 4/	Change	Initial 3/	Latest 4/	Change	Initial 3/	Latest 4/	Initial 3/	Latest 4/	Initial 3/	Change
Education indicators 5/												
Literacy rate, adult total (percent of people aged 15 and above)	2.3	1.8	-0.5	2.7	2.1	-0.6	2.6	2.1	0.4	0.4	0.4	-0.1
Persistence to grade 5, total (percent of cohort)	94.7	...	...	89.7	...	...	89.7	...	...	...	...	...
School enrollment, primary (percent gross)	94.7	...	...	94.0	...	...	92.0	...	...	...	...	...
School enrollment, primary (percent net)	92.2	98.4	6.3	92.4	98.0	5.6	94.0	98.9	97.4	99.9	97.4	2.5
School enrollment, secondary (percent gross)	83.8	93.4	7.6	85.4	93.4	8.0	70.7	...	88.2	...	...	...
School enrollment, secondary (percent net)	83.5	83.4	-0.1	82.6	80.2	-2.4	78.7	76.7	80.1	83.3	80.1	3.2
Health indicators 5/												
Births attended by health staff (percent of total)	...	...	...	...	...	...	...	...	...	...	...	...
Immunization, DPT (percent of children under 12 months)	84.2	93.7	9.5	81.2	92.9	11.7	93.3	96.0	77.7	83.3	77.7	5.7
Immunization, measles (percent of children under 12 months)	83.8	95.0	11.2	80.9	95.4	14.5	78.7	96.0	86.3	93.7	86.3	7.3
Low birthweight babies (percent of births)	6.3	...	...	6.2	...	...	8.2	...	4.7	...	...	...
Life expectancy at birth, total (years)	70.1	70.0	0.0	69.6	69.1	-0.5	71.0	70.7	69.4	70.4	69.4	1.0
Mortality rate, infant (per 1,000 live births)	20.7	15.6	-4.1	23.5	19.5	-4.0	23.3	18.4	16.6	11.9	16.6	-4.7
Mortality rate, under 5 (per 1,000 live births)	22.0	20.9	-1.1	25.8	24.6	-1.1	27.8	20.7	21.1	15.0	21.1	-6.1
Demographics 6/												
Age dependency ratio (dependents to working age population)	69.6	65.5	-4.1	72.0	68.3	-3.7	62.6	60.3	64.6	63.0	64.6	-1.6
Proportion of population aged 60 and above	14.1	15.4	1.3	13.1	14.5	1.4	16.3	18.0	17.2	19.4	17.2	2.2
Public spending 7/												
Education												
In percent of GDP	6.1	4.3	-1.7	6.1	4.6	-1.5	4.8	3.8	4.2	4.5	4.2	0.3
In percent of total government spending	12.9	13.1	0.2	13.2	14.9	1.7	9.9	10.0	11.4	12.8	11.4	1.4
Health												
In percent of GDP	4.2	3.5	-0.7	3.7	2.7	-1.0	4.3	3.4	1.9	1.1	1.9	-0.8
In percent of total government spending	8.6	5.6	1.0	7.9	8.3	0.4	8.8	8.9	5.3	3.1	5.3	-2.2

Sources: *World Development Indicators*; UNICEF Transmonex Database 2000; and IMF staff calculations.
 1/ Comprises 24 countries in all: 5 Central Asian (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan); 3 Balkan (Bulgaria, Macedonia, FYR, and Romania); 3 Baltic (Estonia, Latvia, and Lithuania); 4 Western
 BRO (Belarus, Moldova, the Russian Federation, and Ukraine); 3 Caucasian (Armenia, Azerbaijan, and Georgia); and 6 EU border states (Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia).
 2/ Comprises 18 transition economies.
 3/ Refers to 1992.
 4/ Refers to 1997, except for demographic data where it refers to 1999 and for public spending data, where it refers to 1998.
 5/ *World Development Indicators*, 2000, The World Bank.
 6/ UNICEF, Transmonex database, 2000.
 7/ Data provided by authorities; and IMF staff estimates.

Appendix Table 7. Transition Economies: Social Indicators (concluded)

	Caucasus			Central Asia			EU Border States			Western BRO		
	Initial 3/	Latest 4/	Change	Initial 3/	Latest 4/	Change	Initial 3/	Latest 4/	Change	Initial 3/	Latest 4/	Change
Education indicators 5/												
Illiteracy rate, adult total (percent of people aged 15 and above)	2.3	1.9	-0.5	8.5	6.8	-1.7	1.1	0.9	-0.3	1.0	0.7	-0.3
Persistence to grade 5, total (percent of cohort)	...	...	...	...	...	...	99.7	...	...	...	...	...
School enrollment, primary (percent gross)	100.5	...	...	90.2	...	...	96.7	...	...	95.8	...	...
School enrollment, primary (percent net)	86.3	89.0	2.7	99.9	99.5	-0.4	91.8	99.2	7.4	97.4	99.9	2.5
School enrollment, secondary (percent gross)	83.9	...	...	94.4	...	...	87.0	...	...	86.1	93.4	7.4
School enrollment, secondary (percent net)	77.4	75.9	-1.5	91.5	77.8	-13.7	85.1	88.9	3.9	91.5	87.6	-3.9
Health indicators 3/												
Births attended by health staff (percent of total)	...	...	...	...	...	...	...	...	...	...	...	...
Immunization, DPT (percent of children under 12 months)	69.0	89.5	20.5	85.2	96.6	11.4	94.8	95.8	1.0	79.0	97.0	18.0
Immunization, measles (percent of children under 12 months)	58.3	93.5	35.2	85.6	95.6	10.0	94.2	93.8	-0.4	89.8	98.5	8.8
Low birthweight babies (percent of births)	...	...	...	6.3	...	...	7.5	...	...	6.6	...	...
Life expectancy at birth, total (years)	71.2	72.4	1.2	68.0	66.9	-1.1	71.4	72.9	1.4	68.6	67.2	-1.4
Mortality rate, infant (per 1,000 live births)	18.8	17.4	-1.4	36.9	28.9	-8.0	12.4	8.0	-4.4	15.7	15.9	0.2
Mortality rate, under 5 (per 1,000 live births)	24.2	21.3	-2.9	37.8	38.4	0.6	14.4	9.7	-4.8	20.9	20.0	-0.9
Demographics 6/												
Age dependency ratio (dependents to working age population)	73.0	71.2	-1.8	86.0	80.0	-6.0	62.1	57.0	-5.1	66.0	61.5	-4.5
Proportion of population aged 60 and above	11.3	13.6	2.3	7.3	7.4	0.1	17.0	18.1	1.1	16.2	17.6	1.4
Public spending 7/												
Education												
In percent of GDP	4.5	2.6	-1.9	8.4	5.2	-3.2	5.6	3.6	-2.0	5.5	5.3	-0.2
In percent of total government spending	12.7	14.2	1.5	18.2	18.5	0.3	9.3	8.4	-0.9	11.3	13.2	1.9
Health												
In percent of GDP	1.6	0.8	-0.8	4.2	2.5	-1.7	9.1	5.5	-3.6	3.5	3.7	0.2
In percent of total government spending	4.5	4.3	-0.2	2.5	8.9	6.4	15.2	12.8	-2.4	7.3	9.2	1.9

Source: *World Development Indicators*; UNICEF Transnum Database 2000; and IMF staff calculations

1/ Comprises 24 countries in all: 5 Central Asian (Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan); 3 Balkan (Bulgaria, Macedonia, FYR, and Romania); 3 Baltic (Estonia, Latvia, and Lithuania); 4 Western BRO (Belarus, Moldova, the Russian Federation, and Ukraine); 3 Caucasian (Armenia, Azerbaijan, and Georgia); and 6 EU border states (Croatia, the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia).

2/ Comprises 18 transition economies.

3/ Refers to 1992.

4/ Refers to 1997, except for demographic data where it refers to 1999, and for public spending data, where it refers to 1998.

5/ *World Development Indicators*, 2000, The World Bank.

6/ UNICEF Transnum Database, 2000.

7/ Data provided by authorities; and IMF staff estimates.

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