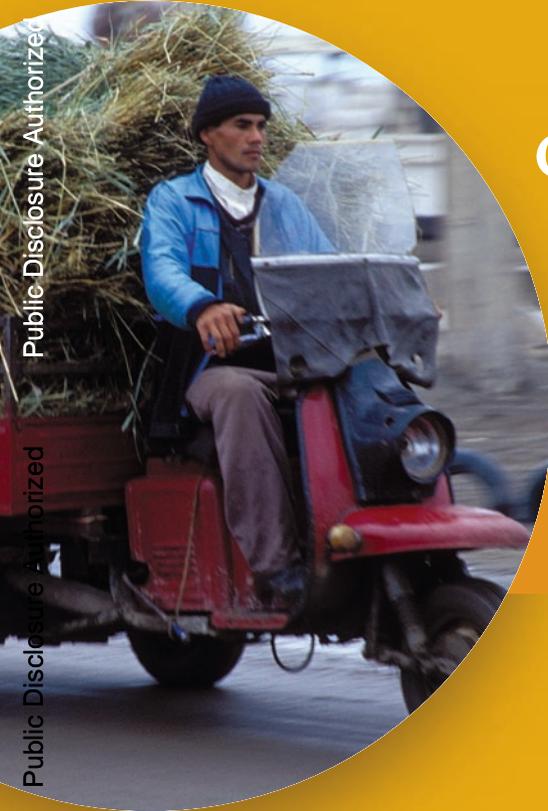


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# GROWTH, POVERTY, AND INEQUALITY

*Eastern Europe and the  
Former Soviet Union*



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Asad Alam, Mamta Murthi, Ruslan Yemtsov,  
Edmundo Murrugarra, Nora Dudwick,  
Ellen Hamilton, and Erwin Tiongson

*Europe and Central Asia Region*



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## Foreword

Five years ago the World Bank report, *Making Transition Work for Everyone*, helped focus public attention and debate on the urgent challenge of reducing poverty and inequality in the countries of Eastern Europe and Central Asia. The report found that one out of five people survived on less than \$2.15 a day compared with fewer than one in twenty-five a decade earlier. The sharp increase in poverty was driven in large part by the collapse in incomes and the increase in inequality. The working poor, children, rural households, and specific groups (such as the Roma in Eastern Europe) were at greatest poverty risk. Capabilities of the poor were being endangered from falling access to education, corruption (particularly in public service delivery), nutritional deficiencies, and communicable diseases. And prospects for rapid poverty reduction seemed remote.

Much has changed in these countries since then. Growth has rebounded in the Commonwealth of Independent States (CIS) from the depths of the financial crisis of 1998. This was driven by several factors, in particular, the boost to the Russian Federation's competitiveness provided by a large devaluation, the supply response from structural reforms that had been undertaken by many of the Region's countries, and the income windfall from the large and unexpected increases in the prices of oil and other energy exports. At the same time, the process of European Union integration has helped broaden

markets, lock in domestic reforms, and attract higher investment in acceding countries. The cessation of war in the western Balkans has also helped make the economic environment more conducive to investment and growth.

*Growth, Poverty, and Inequality: Eastern Europe and the Former Soviet Union* takes stock of the impact of growth on poverty and inequality during 1998–2003, provides systematic evidence-based analysis to understand the different outcomes, and suggests areas for further action. It is heartening to find that during this period growth has helped more than 40 million people move out of poverty. This has been aided by improved income distribution in many countries, especially in the CIS. But poverty and vulnerability still remain a significant problem. More than 60 million are poor (that is, living on incomes less than \$2.15 a day), and more than 150 million are vulnerable (that is, living on incomes between \$2.15 and \$4.30 a day). Most of them are in the middle-income countries even as the low income countries have higher rates of poverty. Working families constitute the largest group among the poor. Many others face deprivations in access and quality of public services. Regional inequalities, both between and within countries, are large. The heterogeneity of countries in the Region suggests a differentiated approach across countries. But it is obvious that prospects for reducing poverty and vulnerability—and achieving the Millennium Development Goals—will be crucially dependent on the ability of countries to accelerate growth and create well-paying jobs; improve the quality of education, health care, and public infrastructure; and strengthen social safety nets. Achieving these will require stepping up efforts to complete the institutional and policy reform agendas and sustaining them.

This report—the first in a new series of regional studies—is an important contribution to our thinking about how the World Bank can work more effectively with clients and partners in the Region to reduce poverty and vulnerability in a rapidly changing world. Forthcoming reports on jobs, trade, infrastructure, migration, and demographics will look at the key economic and social opportunities and challenges. I hope that these reports will stimulate debate, promote better understanding, and spur action to bring about prosperity for all.

*Shigeo Katsu*  
*Vice President*  
*Europe and Central Asia Region*

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## Acronyms and Abbreviations

AIDS	acquired immune deficiency syndrome
ALB	Albania
ARM	Armenia
ASR	age-standardized rate
AZE	Azerbaijan
BEL	Belarus
BiH	Bosnia and Herzegovina
BUL	Bulgaria
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
CPI	consumer price index
CRO	Croatia
CZE	Czech Republic
DFID	U.K. Department for International Development
DHS	Demographic and Health Survey
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	Europe and Central Asia
ECHP	European Community Household Panel
ECSIE	Infrastructure and Energy Services Department
ECSSD	Environmentally and Socially Sustainable Development Network

EI	Expenditure and Income (survey)
EST	Estonia
EU	European Union
EU-15	First 15 member states of the European Union
EU-8	Eight new member states of the European Union
Eurostat	Statistical Office of the European Communities
EU-SILC	European Community Statistics on Income and Living Conditions
FYR	Former Yugoslav Republic of (Macedonia)
GDP	gross domestic product
GEO	Georgia
HBS	Household Budget Survey
HIV	human immunodeficiency virus
HUN	Hungary
IBRD	International Bank for Reconstruction and Development
IDP	internally displaced person
ILO	International Labour Organization
IMF	International Monetary Fund
IN	Integrated (survey)
ISCED	International Standard Classification of Education
IZA	Institute for the Study of Labor
KAZ	Kazakhstan
KILM	Key Indicators of the Labour Market
KYR	Kyrgyz Republic
LAT	Latvia
LIS	Luxembourg Income Study
LIT	Lithuania
LPG	liquefied petroleum gas
LSMS	Living Standards Measurement Study
MAC	Macedonia, former Yugoslav Republic of
MDG	Millennium Development Goal
MOL	Moldova
NBER	National Bureau of Economic Research
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
POL	Poland
PPP	purchasing power parity
RLMS	Russian Longitudinal Monitoring Survey
ROM	Romania
RUS	Russian Federation
SAM	Serbia and Montenegro

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SEE	Southeastern Europe
SLK	Slovak Republic
SLN	Slovenia
SNA	System of National Accounts
SSA	Sub-Saharan Africa
TAJ	Tajikistan
TB	tuberculosis
TIMSS	Trends in International Mathematics and Science Study
UKR	Ukraine
UN	United Nations
UNICEF	United Nations Children's Fund
UNMIK	United Nations Mission in Kosovo
UNU	United Nations University
UZB	Uzbekistan
WBI	World Bank Institute
WDI	World Development Indicators
WHO	World Health Organization
WIDER	World Institute for Development Economics Research

*Note:* All dollar amounts are U.S. dollars (\$) unless otherwise indicated.



## Overview

This study examines the impact of growth on poverty and inequality in Eastern Europe and the Former Soviet Union during 1998–2003. It updates the World Bank’s previous study on poverty, entitled *Making Transition Work for Everyone*, which appeared in 2000. It asks three questions: What are the recent trends in poverty and inequality? Why do we see different outcomes across countries? And how can public policy help maximize the impact of growth on poverty reduction?

To measure poverty, an absolute poverty line of \$2 a day<sup>1</sup> is used, comparing it with household consumption per capita. This line is a closer approximation to basic material needs in the Region than the well-known global standard of \$1 a day because of the additional expenditures on heating and warm clothing that are required by the cold climate. Using an absolute—as opposed to a relative—poverty line allows us to focus on those who are deprived of the most basic needs, rather than those who may be deprived relative to their better-off fellow citizens. It also allows us to determine trends over time and make comparisons across countries, both of which would be difficult if we were using a relative notion of poverty. In addition to the \$2-a-day poverty line, a \$4-a-day line is used to capture the notion of “economic vulnerability,” that is, to measure the proportion of the popula-

tion that is not absolutely poor, but could become poor in the event of an economic downturn.

In terms of poverty levels, the Region is best thought of in four distinct subgroups of countries. The eight new member states of the European Union (EU-8) have low poverty (less than 5 percent) confined to specific subgroups of the population.<sup>2</sup> Countries in Southeastern Europe (SEE) have generally moderate levels of poverty (around 5–20 percent).<sup>3</sup> The same is true of the middle-income countries in the Commonwealth of Independent States (CIS).<sup>4</sup> The low-income countries in the CIS, however, have extremely high levels of poverty (more than 40 percent).<sup>5</sup> In addition to countries in these four subgroups, the Europe and Central Asia Region of the World Bank (ECA) also includes Turkey. Wherever possible, we treat Turkey as a “benchmark” against which to evaluate the performance of postsocialist countries in the Region. Turkey has moderate poverty. We also include two countries from outside the Region as benchmarks: Colombia (a middle-income country) and Vietnam (a low-income country).

## Summary

The resurgence of growth in the eastern half of the Region, particularly in the CIS, resulted in a significant decline in poverty in the Region during 1998–2003 (figure 1):<sup>6</sup> more than 40 million people have moved out of poverty during this period. Where roughly 20 percent of the population (or one in five people) was living in poverty, today poverty affects only 12 percent (or one in eight people). While much of this poverty reduction has occurred in the populous middle-income countries in the Region (Kazakhstan, the Russian Federation, and Ukraine), poverty has fallen almost everywhere. During 1998–2003, poverty fell in most countries of the Region, except for Poland and Lithuania in the EU-8 and Georgia in the low income CIS group.<sup>7</sup> However, in the context of the EU-8, the low overall levels of poverty need to be borne in mind. Income (consumption) inequality showed no clear trend in the EU-8 and SEE; however, inequality declined in the CIS, with the notable exceptions of Georgia and Tajikistan.

At the same time that 40 million people have moved out of poverty in ECA as a whole, more than 60 million people remain poor, and more than 150 million people are economically vulnerable.<sup>8</sup> Progress on the nonincome dimensions of poverty—such as access to education, health care, safe water, and heating—is very mixed, with improvements in some cases and deterioration in others. In education, although access has improved, no subregion is free from countries experiencing declining standards. In health, no subregion is free

from the growing epidemic of human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS). Quite apart from HIV/AIDS and other communicable diseases, attaining the health Millennium Development Goals (MDGs) will prove difficult for many countries in the CIS and SEE because of the failure of health services to deliver adequate and timely services. Access to key infrastructure services—in particular lighting and heating—is actually deteriorating in some countries of the low income CIS group.

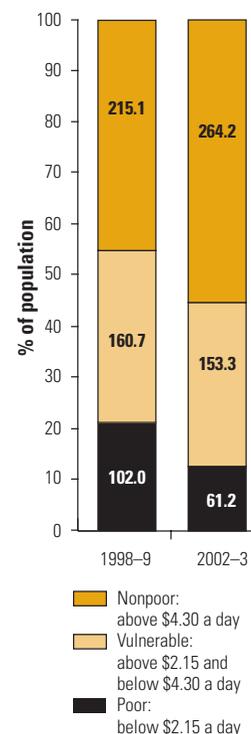
The single most important factor behind the significant decline in poverty in the period in question is high growth in the CIS, where the bulk of the poor reside. Combined with moderate levels of inequality, economic growth has delivered significant poverty reduction. To some extent, this rebound in growth rates in the CIS is unsurprising, although at the height of the financial crisis in Russia and neighboring contagion—which came at the end of a decade of difficult transition—it was hard to see the prospects for resumption in growth. A further factor influencing poverty reduction since 1999 is the reduction in consumption inequality in some countries of the CIS, which, too, can be viewed as a rebound from the levels observed in the 1990s.

Because the substantial reduction in poverty is the result of a unique constellation of factors—rapid “catch-up” growth in the CIS accompanied by reductions in inequality in some countries—prospects for poverty reduction going forward are less propitious. Very few countries, even those that have made the most progress in reducing poverty, have been successful in creating jobs to fully replace those that have been destroyed. To some extent, reduction in overall employment was only to be expected, given the socialist legacy of high employment-to-population ratios. However, the failure to generate a sufficient number of jobs means that employment-to-population ratios have been falling, except in a few of the rapidly growing countries of the CIS. In the EU-8 and SEE, the employment ratio is well below what is found in Organisation for Economic Co-operation and Development (OECD) countries. If it persists, this failure to expand employment will fundamentally limit the poverty reduction impact of growth and act as a brake on further reduction of absolute poverty. This is an issue even in countries where poverty is relatively low (for example, Poland, where rising poverty is related to the growing divide between those with and without employment).

In addition to concerns on the jobs front, there is a marked regional and spatial dimension to both the income and nonincome dimensions of poverty in the Region. The most rapid declines in poverty have been observed in capital cities, as opposed to secondary cities and rural areas. In parts of the CIS, poverty rates are just as high in

### FIGURE 1 More than 40 Million People Moved out of Poverty during 1998–2003

Distribution of Population by Poverty Status



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: In million persons and in percent to population. Poverty lines converted to local currencies using 2000 PPP. Data refer to ECA Region as defined by the World Bank, and Turkey is included in the aggregate figures.

secondary cities as in rural areas. Throughout the Region, the quality of public services is also poorer outside of capital cities, and trends are mixed, with some differences between capital and noncapital areas getting smaller and others larger.

Overall, there is a substantial agenda of reforms if countries wish to reduce poverty in all its dimensions over the coming years. While specific actions will vary from country to country, all countries need to focus on policies that will accelerate rates of growth and ensure that benefits are widely shared among the population. In addition, efficiency and equity concerns warrant strengthening delivery of education, health, and public utilities services, and enhancing social protection. It is also essential to monitor progress on poverty reduction.

Poverty and poverty reduction have a special significance in the Region that is different from that in other parts of the world. First, as mentioned previously, the cold climate means that the notion of “basic needs” has to be expanded to take into account the need for warmth. Only a small fraction of the population in the developing world would require a similar expansion of the basic needs set. Second, many countries in the Region completed the demographic and epidemiological transition a few decades ago. This graying of the population poses significant challenges for public policy, particularly where there are trade-offs involved in relation to the working (or the young) versus the elderly. There is also a greater burden of noncommunicable diseases, with implications for costs and access to health care. Again, there are few countries at equivalent levels of income that face a similar challenge. Finally, the legacy of the former socialist systems of production means that huge inefficiencies exist in the way production is organized, how infrastructure is deployed, and where people are located. Breaking with the past represents not only an opportunity but also a challenge.

### **Trends in Poverty in the Region, 1998–2003**

Since 1998, absolute poverty at \$2 a day (or, more accurately, \$2.15 a day) has declined in most countries in the Region (figure 2). Two countries, Georgia and Poland, bucked the trend of declining poverty, and in another one, Lithuania, poverty was largely unchanged.

These trends, which are based on comparable consumption aggregates specially constructed for the purposes of this report, reflect the use of the latest purchasing power parity (PPP) exchange rates (2000 PPP) available for the countries of the Region. The use of different PPP revisions affects the ranking of a few countries in the Region,

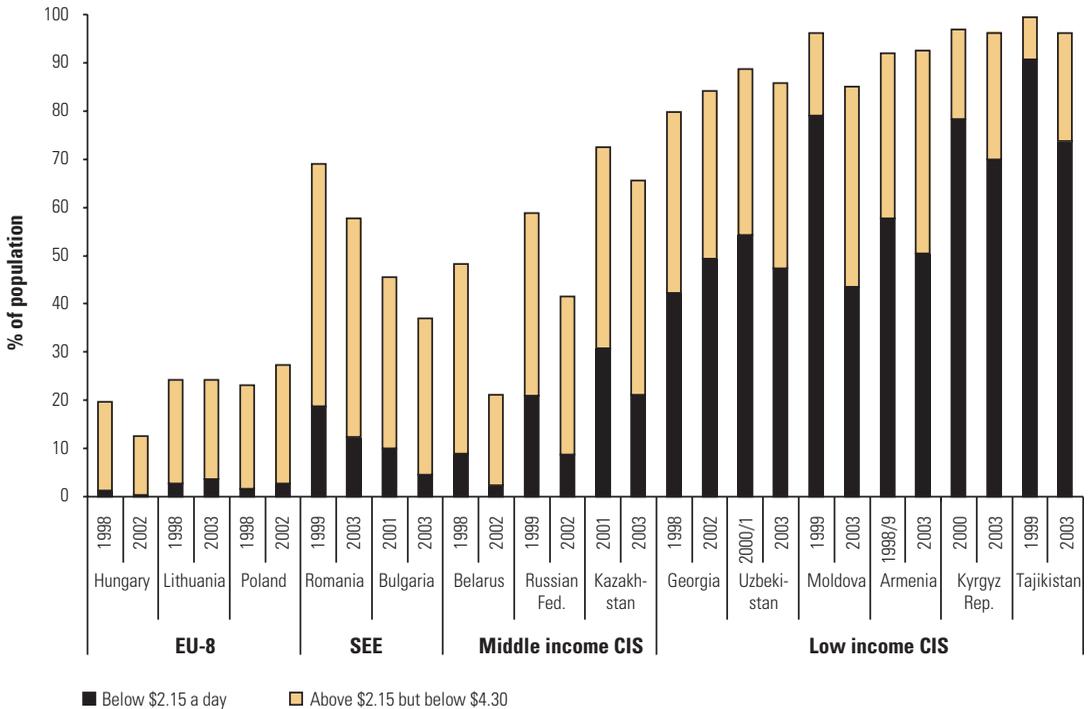
especially those that experienced hyperinflation or continue to practice administrative price setting, but leaves the overall extent of poverty and trends unchanged (see overview box 1).

As it did five years ago, absolute deprivation varies enormously across the Region. At one end of the spectrum are countries in the low income CIS group such as Tajikistan, where the proportion of the population living on less than \$2.15 per day is more than 70 percent, while at the other end are countries in the EU-8 such as Hungary, where absolute poverty, by this definition, is virtually absent. Countries fall into three broad groups: those with high poverty (all low income CIS countries), those with low poverty (typically EU-8), and those in between with moderate poverty (typically SEE and middle income CIS countries). These groupings are not hard and fast, with some countries in SEE (for example, Bulgaria) and the middle income CIS group (for example, Belarus) having low levels of poverty.

Even where incomes have grown and absolute material deprivation at \$2.15 per day is low, the standard of living is not high, and

**FIGURE 2**  
**At the Country Level, Absolute Poverty Has Declined Almost Everywhere**

Poverty Rates by Country



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: 2000 PPP.

## OVERVIEW BOX 1

### Using Purchasing Power Parity to Measure Poverty

An absolute poverty line, as the name implies, attempts to establish the value of consumption that a person needs to stay out of poverty, regardless of time and place. The first widely accepted global poverty estimates, produced by the World Bank's *World Development Report* in 1990, chose a poverty line measured in 1985 PPP. Chen and Ravallion (2001) have since updated these numbers, using 1993 PPP exchange rates for consumption. The PPPs were again updated for the Region in 1996, and this updated set was used by *Making Transition Work for Everyone* (World Bank 2000a).

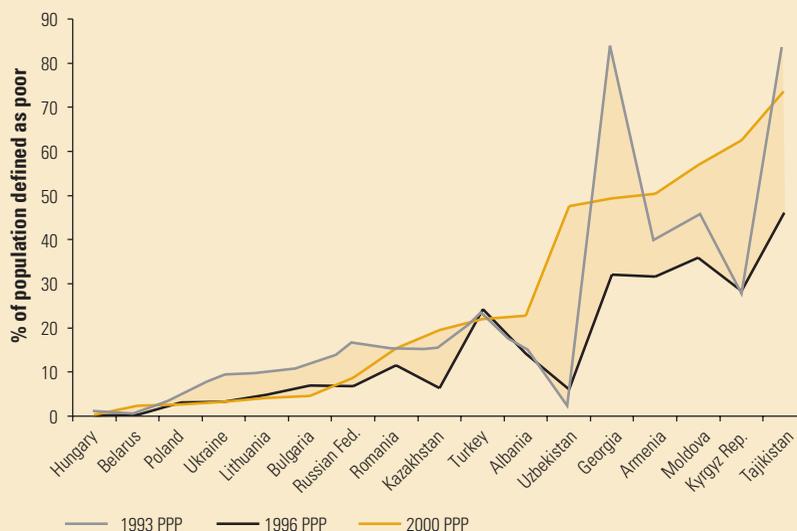
This report uses the most recent PPP numbers from 2000 (OECD 2003). More recent data on PPP are more relevant for the transition economies of the Region because they reflect contemporary (in many cases, liberalized) prices, as opposed to the administered prices of the past. For Turkey, a country without the legacy of an administratively directed economy, all PPP revisions produce approximately the same poverty counts (see figure). The economies of all formerly socialist countries exhibit significant changes, with more recent numbers being more plausible. For example, it is highly implausible that poverty in Uzbekistan is negligible (which is the impression that one gets using 1993 and 1996 PPPs and could be traced to widespread price controls in that country practiced during the 1990s). Errors can also go the other way (that is, overstate poverty), as appears to be the case when the 1993 PPP is used for Georgia. In addition to issues with relative prices, Georgia experienced hyperinflations around 1993, which would have made measurement of prices problematic. It would be incorrect to say that the 2000 PPP revision solves all comparability problems. Where interferences in market mechanisms continue, price surveys that form the basis for PPPs will deliver incorrect results (a factor that can be partly responsible for the low poverty headcount for Belarus).

large shares of the population are found to consume between \$2.15 and \$4.30 per capita per day. This group, while not absolutely deprived, is likely to have relatively low savings and is vulnerable to poverty in the event of shocks that affect earning potential.

Of course, an absolute poverty line of \$2.15 a day (or some multiple) is one of many potential lines that could be drawn. Often what is relevant from the perspective of the poor is the level of resources that may be needed in the country context to be free from hunger, cold, and other forms of deprivation. In this report, the authors have chosen to use an absolute concept of deprivation, not only to focus more on those who are deprived in some "fundamental" sense but also to facilitate comparisons across countries and over time. The basic needs without which individuals would be

### Poverty Rates at \$2.15 a Day with Different PPPs

Countries Sorted by Poverty, Based on 2000 PPPs



Sources: Staff estimates; OECD 2003.

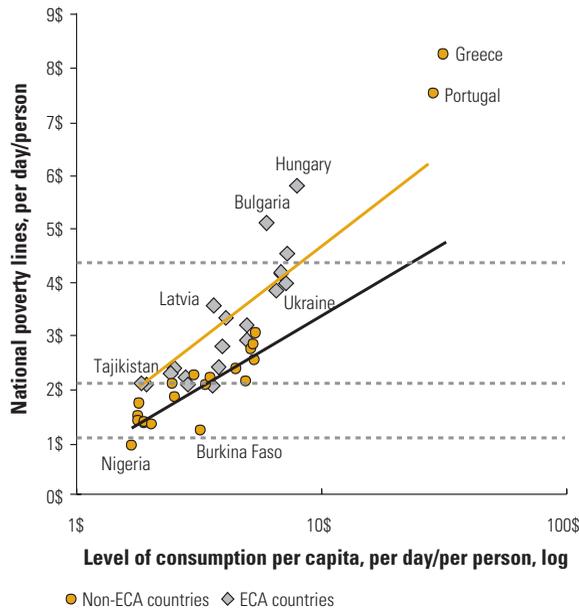
The total poverty headcount for the Region does not change much whether one uses the 1993 PPP or the 2000 PPP, although individual country assessments are affected. However, the 1996 PPP (with few exceptions: Bulgaria, Estonia, and Lithuania) produces a lower poverty count than the 2000 PPP does. It is important to note that only the ongoing global International Comparison Program ([www.worldbank.org/data/icp/](http://www.worldbank.org/data/icp/)), expected to produce results by 2007, will address fundamental problems of all existing sets of PPP in their application to poverty comparisons. Internationally comparable poverty data produced for this study need to be interpreted with due caution.

Sources: World Bank staff; World Bank 2000a; Chen and Ravallion 2001; Kakwani and Sajaia 2004; and OECD 2003.

absolutely deprived are typically reflected in national poverty lines.<sup>9</sup> As might be expected, standards of income required to ensure against material deprivation in richer countries are higher, so national poverty lines are positively related to income levels. National poverty lines in the Region suggest that a poverty line around \$2 per capita per day might indeed be a relevant absolute floor (figure 3). When compared with national poverty lines from a random selection of non-Region countries, the Region's poverty lines are found to be higher on average, perhaps reflecting the higher cost of basic needs due to the extremely cold climate in certain countries. However, high though they may seem, even the highest national poverty lines in the Region are substantially lower than poverty lines of two of the poorest EU-15 countries,<sup>10</sup> Greece

FIGURE 3

### The Lowest National Poverty Line in the Region Is around Two Dollars a Day



Sources: Region: World Bank staff estimates; non-Region: Kakwani and Sajaia 2004 and OECD 2003; EU: Dennis and Guio 2004.

Note: Latest years of available data used, all values expressed in 2000 PPP \$.

and Portugal. Using measures of absolute deprivation that are more consistent with national poverty lines but still modest (such as \$4.30 per capita per day), it is evident that absolute deprivation continues to exist even in relatively well-off countries such as EU-member-state Hungary (figure 2).

How has poverty risk evolved in the past five years? Looking below the national averages on population subgroups, four characteristics stand out for raising poverty risk (that is, poverty incidence) above average: being young, living in a rural area or (in some cases) a secondary city, being unemployed, and having low levels of education.<sup>11</sup> Although not equally important in all subregions, these were the same groups identified as having a higher-than-average poverty incidence five years ago (World Bank 2000a).

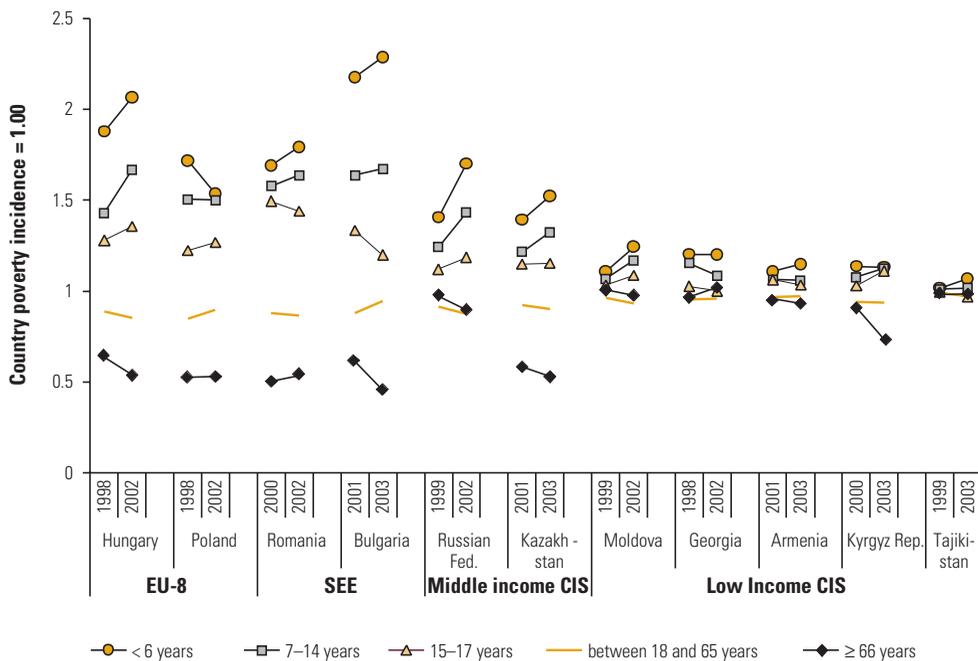
Outside the low income CIS countries, children face a substantially higher risk of poverty than other population groups do. Relative poverty risk for children has actually increased in the past five years because poverty incidence has fallen less rapidly among families with children than for other groups (figure 4a).

Residents of rural areas face a higher risk of poverty than those in cities do (figure 4b). Among the rural dwellers, children usually face the highest poverty risk, often multiple times the national average. But in some countries of the CIS, poverty risks are as high in secondary cities as in rural areas. Indeed, lumping capital cities together with other urban areas can be misleading because of the contrast between their positions. Over the past five years, with few exceptions, poverty has declined far more rapidly in capital cities than elsewhere. As a result, residents of rural areas and secondary cities face a far greater risk of poverty relative to capital city dwellers than previously.

Outside the low income CIS countries, the unemployed face significantly higher risks of poverty than the employed do (figure 4c). With the resumption of sustained growth in the CIS and an improvement in the position of the employed, the relative risk of poverty faced by the unemployed has increased significantly.

The risk of poverty falls with educational attainment. As shown in the report, over time, the risk of poverty of those with basic education

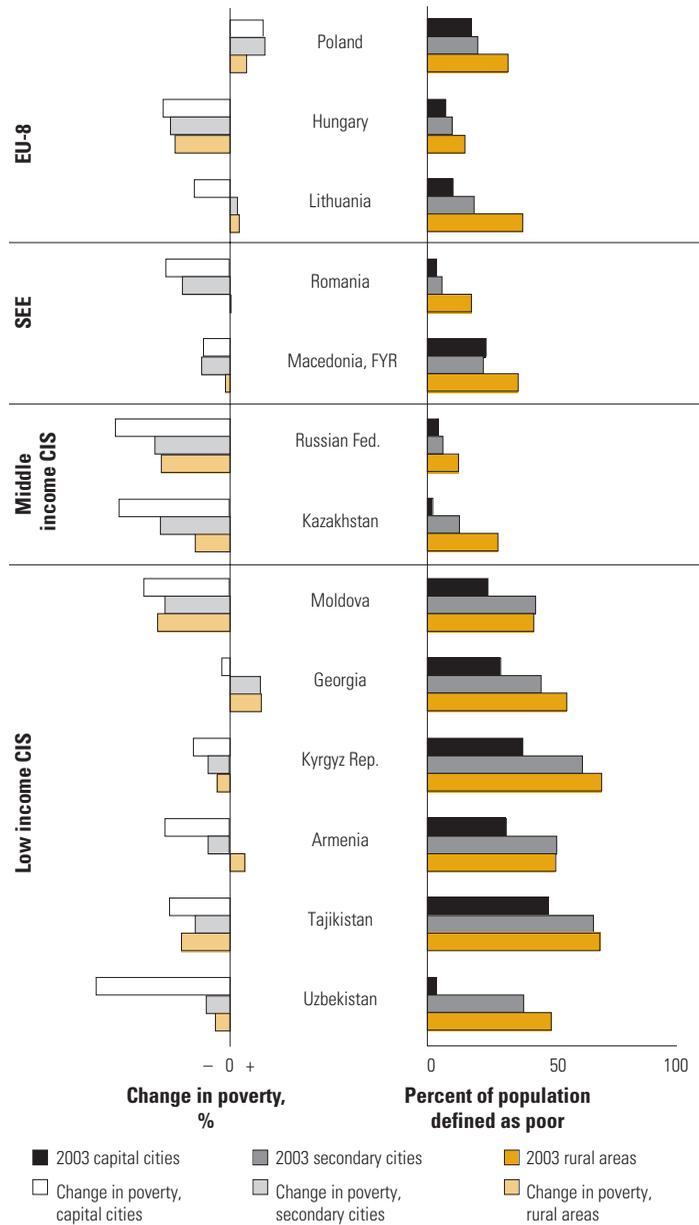
**FIGURE 4a**  
**Children Face a Greater Risk of Poverty than Other Population Groups; in Most Cases, This Risk Has Increased over Time**



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: 2000 PPP. Poverty line for the EU-8 and Bulgaria is \$4.30 per day. Risk of 1 indicates that an age group is no more or less likely than the average to fall into poverty.

**FIGURE 4b**  
**Poverty Reduction in Secondary Cities and Rural Areas Has Lagged behind Capital Cities**



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: 2002 data used instead of 2003 in Russia, Poland, and Hungary. The benchmark year to measure change is 1998, except in Kazakhstan, where it is 2001, Kyrgyz Republic and Uzbekistan (2000), and Tajikistan (1999). Poverty line for the EU-8 and FYR Macedonia is \$4.30 per day; everywhere else it is \$2.15 per day in 2000 PPP.

or less, relative to other groups, has increased, reflecting their handicap in benefiting from new economic opportunities.

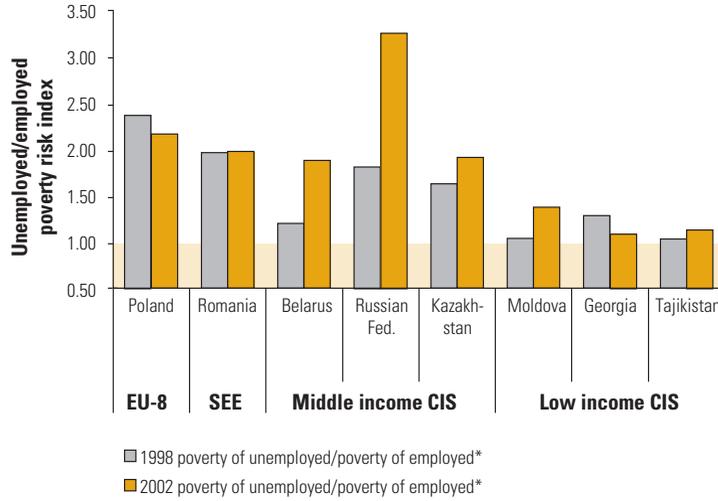
Ethnicity is also associated with higher-than-average poverty incidence in some cases. Data on ethnicity are sometimes not covered in surveys, and even where they are, sample size may preclude any robust conclusions. While the data do not allow trends to be inferred, relatively strong evidence exists that in more than one country, groups such as the Roma of Central and Eastern Europe (CEE) face a substantially higher incidence of poverty than the general population does (World Bank 2001c; World Bank 2002g; and World Bank 2005e). Available evidence on other minorities is mixed, with some faring worse than average, such as the Turkish minority in Bulgaria or the Russian minority in Latvia, while others do better, such as the Russian minority in the Kyrgyz Republic or the Hungarian minority in Romania (World Bank 2003i; World Bank 2003k; World Bank 2004g). The relative position of minorities is a function of human capital and other endowments relative to the population as a whole and of their position in relations of power, which may vary from group to group.

Within countries, poverty incidence shows marked variation, and there is evidence that regional differences are growing over time in some countries (figure 4d). This is because poverty rates have typically declined more sharply in capital cities and other prosperous areas of trade and tourism than in rural areas or secondary towns. In a related vein, many countries outside the low income CIS group (where information is more limited) show high and highly persistent differences in unemployment rates across regions.

*Composition of the poor.* Most of the poor in the Region comprise working adults and children, who between them account for 60–75 percent of the poor (figure 5). In most instances, poor children are children of working parents. This structure of poverty, with the predominance of working families (that is, households with working adults), is no different from that of the past, although the share of working families has declined. The next largest group comprises those out of the labor force, followed by the unemployed and the elderly.

With regard to location, urban and rural residents are evenly split, each constituting around 50 percent of the poor in the Region as a whole. This split is influenced by an interaction of higher-than-average poverty risk for rural residents and their relatively low share in the population. In relation to subregions, rural residents form the bulk of the poor in the low income CIS group (70 percent of the poor), SEE (62 percent), and the EU-8 (51 percent). The only subregion that

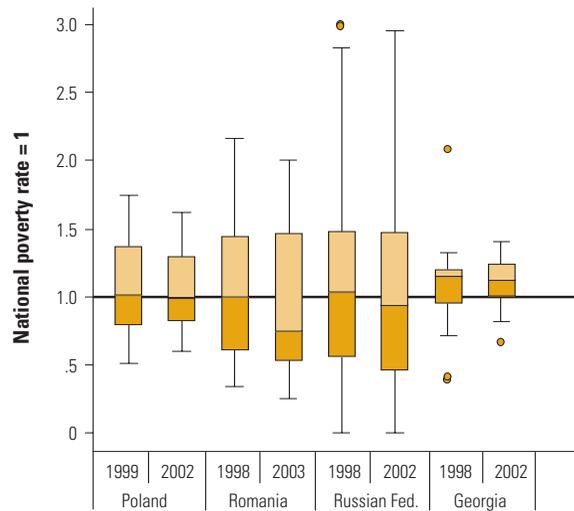
**FIGURE 4c**  
**The Unemployed Face Higher Risks of Poverty than the Employed;**  
**This Risk Has Grown over Time in the CIS**



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: For Kazakhstan, 2001 is used instead of 1998, and 2003 instead of 2002; for Tajikistan, 1999 instead of 1998 and 2003 instead of 2002. For Romania and Moldova, 2003 is used instead of 2002. For the EU-8 and Belarus, the poverty line is \$4.30; everywhere else it is \$2.15 a day in 2000 PPP.

**FIGURE 4d**  
**There Are Marked, and in Some Cases Increasing, Differences in**  
**Poverty across Regions**



Source: World Bank staff estimates using ECA Household Surveys Archive.

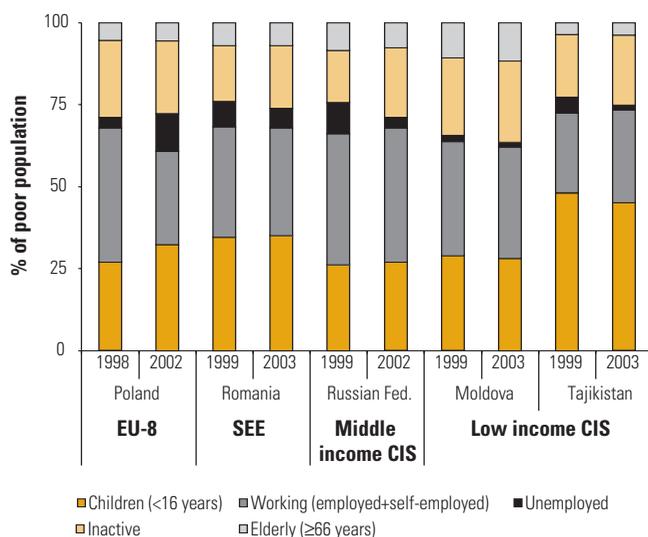
Note: The box depicts the spread in regional poverty rates (boxes plot upper and lower boundaries, called interquartile range, of the interval where most of the regional poverty rates would fall, and the whiskers the extremes). Dots represent outlying regions in a statistical sense.

is dominated by urban poor is the middle income CIS group (only 41 percent rural poor).

*Trends in poverty depth.* At the end of the 1990s, the general understanding was that poverty in the Region, while widespread, was relatively shallow. The pattern five years later appears more varied, with the Region’s countries now spanning a wide range (figure 6). Using Turkey, Vietnam, and Colombia as the benchmarks shows that poverty in the low income CIS group is fairly deep, but in the middle income CIS countries and SEE, it is fairly shallow. In the EU-8, the picture (relative to a \$4.30 poverty line) is mixed, with examples of both shallow and deep poverty.

*Trends in inequality.* While there is no clear trend in the EU-8 and SEE, consumption inequality in the CIS declined (with few exceptions) between 1998 and 2003 (figure 7).<sup>12</sup> By 2003, consumption inequality in the Region as a whole looked broadly comparable to that in OECD countries and East Asia. While inequality in consumption does not appear egregiously high, subjective data suggest that people in the Region continue to find inequality to be excessive. This may be

**FIGURE 5**  
**Working Adults and Children Continue to Form the Bulk of the Poor in the Region**



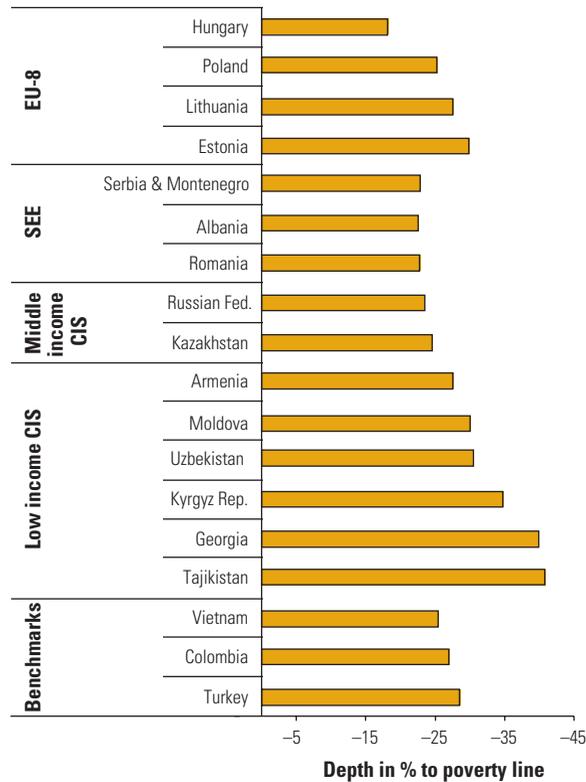
Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: For the EU-8 and Bulgaria, the poverty line is \$4.30.

**FIGURE 6**

**In Some Countries, Poverty Is Shallow; in Others, Deep**

Deficit in Consumption of an Average Poor Person as Percentage of Poverty Line



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: For the EU-8, the poverty line is \$4.30; everywhere else it is \$2.15 per day per capita in 2000 PPP, latest year of available data used.

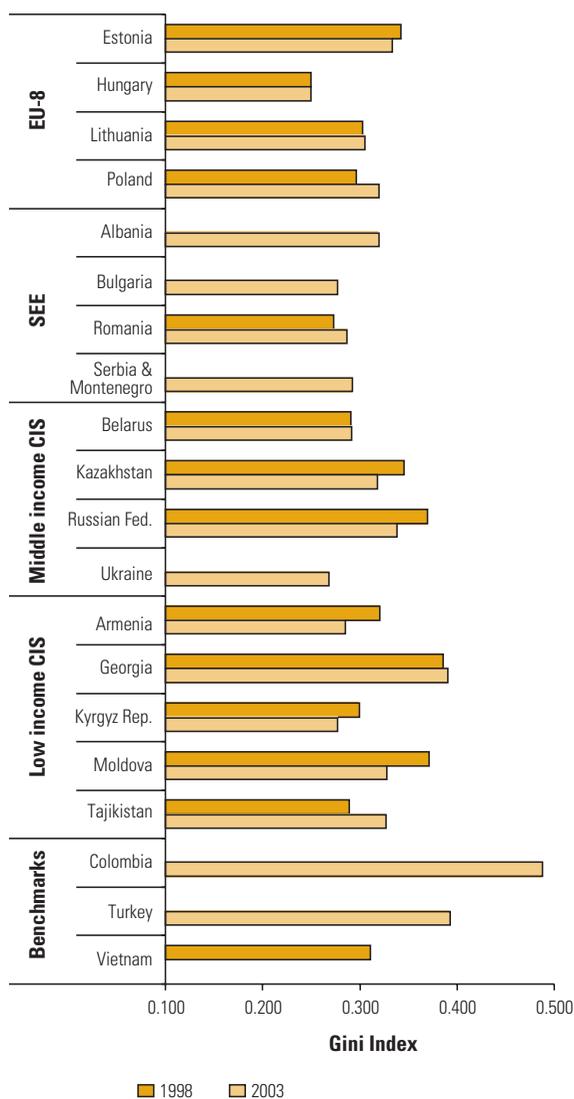
related in part to the fact that, despite recent falls in the CIS, inequality remains significantly higher than at the outset of the transition.

The decline in inequality in most of the CIS (with the notable exceptions of Georgia and Tajikistan) also runs counter to widely held perceptions that the “bounce-back” in growth has gone hand in hand with widening income differentials. There are at least three reasons why subjective and objective measures may suggest different trends.

First, changing relative positions of different population subgroups may leave overall inequality unchanged, but may lead to the impression of growing inequality. For example, the rise in the position of capital city dwellers relative to residents of secondary cities may leave overall inequality unchanged (as, for example, would be the case if the two groups simply switched positions in the income distribution), but may contribute to the perception of a growing divide.

**FIGURE 7**

**While Changes in Distribution Have Gone Either Way in the EU-8 and SEE, They Have Moved in Favor of the Poor in the CIS (Georgia and Tajikistan Excepted)**



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Gini index for per capita consumption.

Second, measures of inequality typically employed in the literature (including in this report) are measures of relative inequality; however, subjective perceptions often relate to absolute differences in income, not relative ones. For example, if everyone’s income increases by 10 percent, measures of inequality (such as the Gini

coefficient employed in this report) would show no change in the distribution of income.<sup>13</sup> However, the absolute difference in the incomes of the rich and the poor would have increased (for example, 10 percent growth means a larger absolute increase in income for the rich than for the poor), contributing to a perception of growing inequality.<sup>14</sup>

Third, sampling and nonsampling errors mean that survey data may do a poor job of measuring income growth at the top of the distribution and thus may end up underestimating upward drift in inequality. This is a worldwide problem; however, if there is confidence in the quality of the data at the lower end of the distribution, one can be reasonably confident of trends in poverty and inequality in the vicinity of the poverty line. In the Region, because of data improvements in all but a handful of countries, the measured trends in poverty and inequality are robust.

### **Factors Contributing to Poverty Reduction, 1998–2003**

*Growth in output and wages.* Since 1999, the growth of the gross domestic product (GDP) in the Region has been impressive (higher than the world average), with the CIS the most rapidly growing subregion. For the CIS, the recovery of growth in Russia has been an important factor. The devaluation that accompanied the financial crisis in Russia was important for restoring the exchange rate to a more competitive level and spurring the recovery of exports and growth. Combined with high prices for oil and other natural resources, this gave a huge boost to the Russian economy, which has in turn become a regional locomotive for many neighboring countries. Structural reforms that had been undertaken by many of the CIS countries enabled an improved supply response when the opportunity presented itself. For the EU-8, the prospect of accession provided a strong impetus for both reforms and growth, while the restoration of peace and stability in SEE was an important factor in sustaining recovery (figure 8).

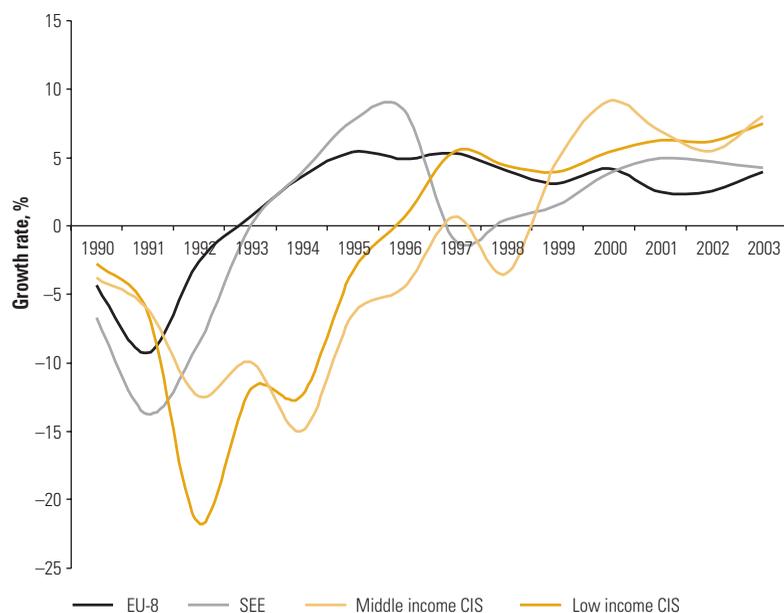
Mirroring the growth in output, there has been a sharp upswing in average wages in all economies in the Region. For example, in the low income CIS group, real wages have almost doubled since 1997. Data on wages by profession or by position in the income distribution suggest that this upswing has been shared alike by unskilled and skilled, poor and nonpoor. In most cases, wage increases have been larger than increases in productivity, reflecting in part the bounce-back of wages from the very low levels observed in the late 1990s in the CIS and parts of SEE.

While growth has resulted in the creation of new and more productive jobs, only the fast-growing economies of the CIS have been able to create jobs at a sufficient pace to replace ones that were lost. Employment-to-population ratios have therefore stayed steady or declined almost everywhere outside the CIS (figure 9).<sup>15</sup> Because of the failure to engender sufficient job creation, the EU-8 and SEE are well below the Lisbon targets of 70 percent of the labor force in employment.<sup>16</sup> The position is somewhat different in the CIS, where employment levels tend to be higher and, in many cases, are trending upward (with some notable exceptions such as Georgia and Tajikistan). While some fast-growing countries have succeeded in increasing wage employment (for example, Russia), in many low-income countries the main source of employment growth has been through the expansion in self-employment (for example, Moldova).

Even where employment ratios are stable, there has been a continuing reallocation of labor across sectors. In most of the EU-8, agriculture employment fell, and its relative share of employment is now close to the EU benchmark. In contrast, agriculture employment increased in most SEE and low income CIS countries. Expansion of employment in services was observed in almost all countries in the Region.

**FIGURE 8**

**Since 1999, Growth Rates in the Region Have Been High, with the CIS the Most Rapidly Growing Subregion**

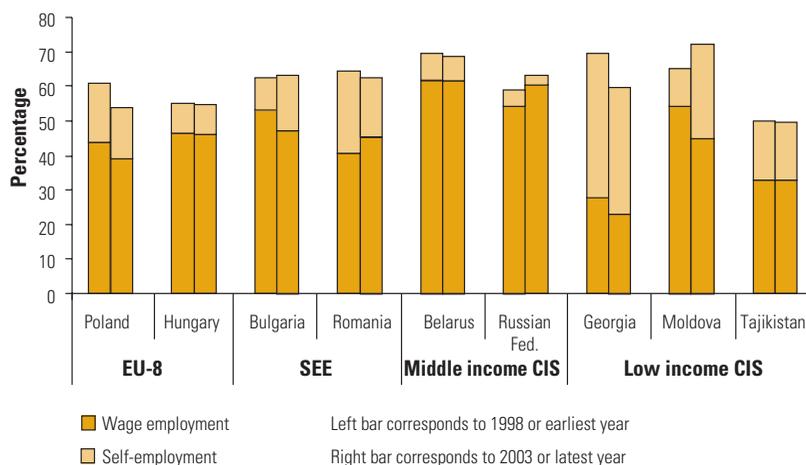


Source: World Development Indicators (World Bank 2005i).

What have these developments in the labor market meant for the poor? Growth incidence curves, which plot the increase in household income (consumption) by percentile, show that in most—but not all—cases, the poor saw a substantial increase in incomes during this period (figure 10). This is not surprising, given that at the start of this period, most of the poor consisted of households with working adults (World Bank 2000a) who would no doubt have benefited from the growth in wages across a range of sectors and professions. Little information exists on trends in earnings of the self-employed. One country where the income of the poor declined rather than increased, leading to an increase in poverty, is Poland.<sup>17</sup> Interestingly, this reduction in incomes for the poor coincided with significant employment reduction in the economy as a whole and for the poor.

*Decline in inequality.* As the growth incidence curves suggest, growth in incomes was proportionately higher for the poor than the rich in the CIS. This fact underlies the fall in inequality discussed previously. In contrast, in the EU-8 and SEE, growth was either pro-rich or pro-poor, depending on the country; therefore, trends in inequality are mixed. In the CIS, poverty reduction was aided by the fact that incomes of the poor grew more rapidly than those of the rich (that is,

**FIGURE 9**  
**Employment-to-Population Ratios Are Well below Lisbon Targets (70 percent) in the EU-8 and SEE and Often Trending in the Wrong Direction**



Source: World Bank staff estimates using ECA Household Surveys Archive.

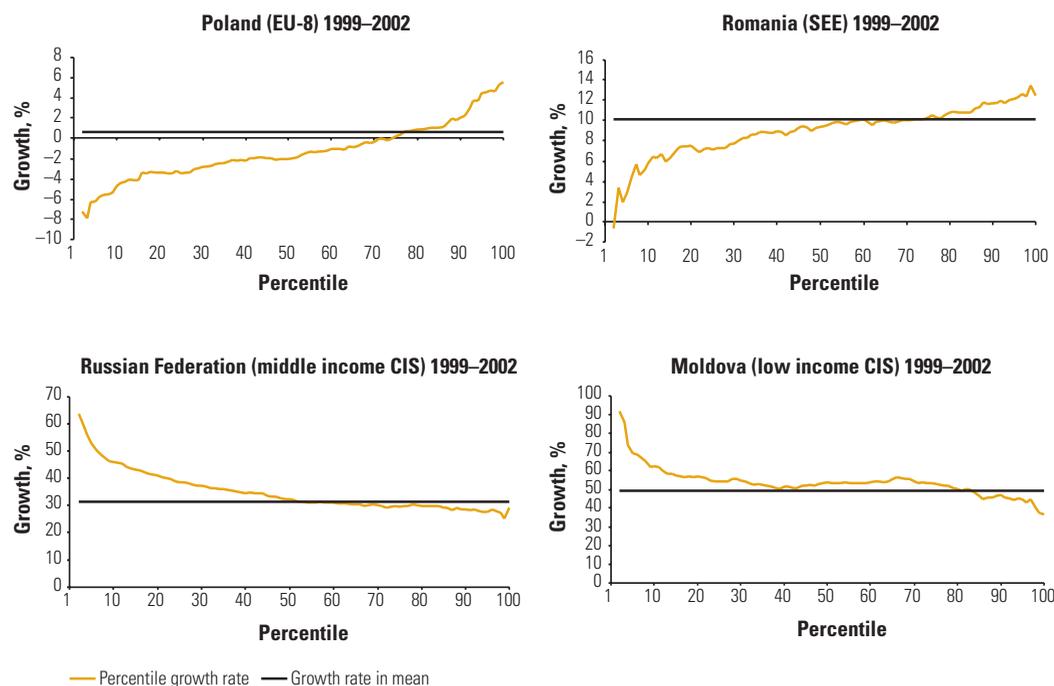
Note: Employment and self-employment levels are derived from household survey data and may differ from official statistics in some respects. Employment population ratio is a percentage of employed among the population of working age (16–64 years old).

the distribution of income changed in favor of the poor). In contrast, in countries such as Poland or Romania, poverty reduction was hampered by the fact that the incomes of the poor grew more slowly than those of the rich.

What factors account for these changes in distribution? While there is no common pattern, there are some common trends across countries in the Region. In the CIS, declining wage arrears have been a feature of the economic recovery. Wage arrears were regressive in impact, driving up inequality among wage recipients (Lehmann and Wadsworth 2001); therefore, arrears reduction has likely been beneficial to equality. In contrast, in Poland and Romania, upward pressure on inequality from falling participation rates has been reinforced by rising inequality among wage earners. The latter is no doubt related to the further decompression in wages in these countries (World Bank 2003k; World Bank 2004h; World Bank 2005g).<sup>18</sup>

What were the roles of growth and changes in distribution in poverty reduction? Figure 11 plots the shares of growth and changes

**FIGURE 10**  
**The Poor Have Benefited More than the Rich from the Growth Rebound in the CIS**



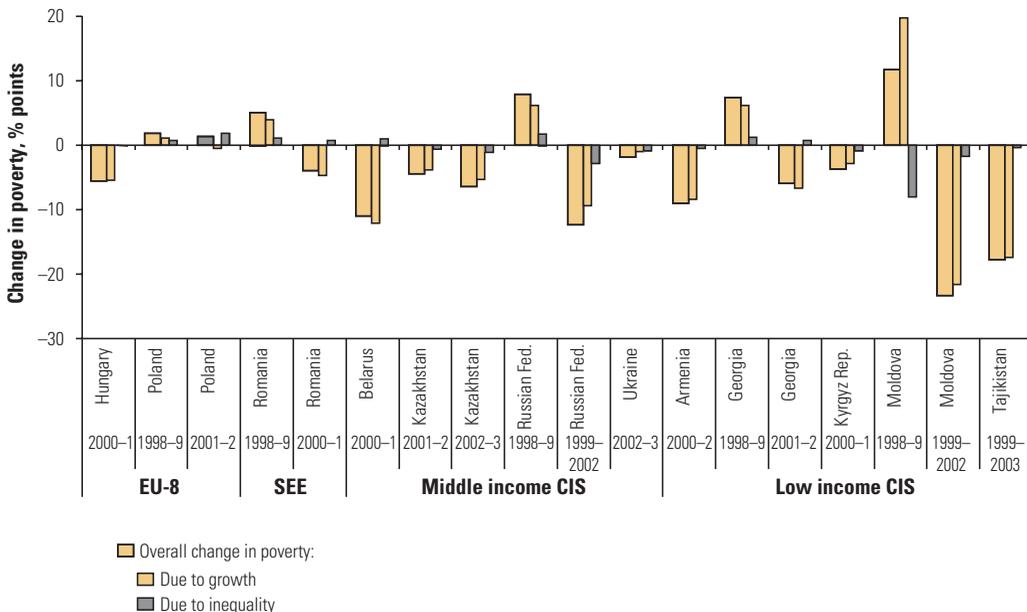
Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Percentiles measure position in the distribution of per capita consumption from the poorest to the richest (100th percentile).

in distribution in poverty reduction for selected growth periods since 1998. The “growth share” measures how much poverty reduction can be attributed to growth in mean incomes on its own (that is, assuming no changes in the distribution), while the “distribution share” measures how much can be attributed to changes in the distribution of incomes alone, assuming no change in mean income. Figure 11 highlights the overwhelming importance of growth to poverty reduction over the period in question. Relative to growth, the contribution of changes in distribution to poverty reduction has been relatively small. But as small on average as they appear, changes in distribution have clearly been quite important in some countries. For example, in Poland in 1998–99, 40 percent of the increase in poverty is attributable to the increase in inequality, while 60 percent is attributable to the decline in income. In a number of countries in the CIS, the share of changes in distribution to poverty reduction in the period since the end of the financial crisis is more than 20 percent.

*Role of public transfers.* In addition to wages, public transfers are an important component of household income and play an important role in poverty reduction. In most countries, social protection benefits

**FIGURE 11**  
**The Share of Growth in Poverty Reduction Is Dominant across All Regional Subgroups**



Source: World Bank staff estimates using ECA Household Surveys Archive.

have increased in the past five years in real per capita terms, along with the growth of fiscal revenues. Where data are available, they suggest that benefits have also improved in both coverage and adequacy. The reduction in arrears, particularly in pensions but also in other benefits, has no doubt contributed to these improvements. As a result, social protection transfers have come to play an important role in reducing poverty. Indeed, poverty would have been significantly higher in a hypothetical “no-transfers” situation (overview table 1). While somewhat simplistic, particularly in assuming no behavioral response in the no-transfer scenario (except in a few instances), the data are nonetheless illustrative of the importance of public transfers to poverty reduction, especially outside the low income CIS group.

*Private transfers.* In the low income CIS countries and parts of SEE, remittances and other private transfers by far exceed publicly provided resources. In some cases, remittances accounted for more than 10 percent of GDP and boosted consumption levels, including among the poor, helping to reduce poverty; however, the size of the impact is difficult to estimate because of various data limitations (Chernetsky Forthcoming).

### OVERVIEW TABLE 1

#### Transfer Payments for Social Protection Have Had an Important Role to Play in Reducing Poverty outside of the Low Income CIS Countries

Country	Year	Increase in poverty without all social transfers, %
EU-8		
Poland	2001	141
SEE		
Bosnia & Herzegovina	2001	68
Bulgaria	2001	156
Romania	2002	49
Serbia	2003	41
Montenegro	2002	34
Middle income CIS		
Belarus	2002	143
Kazakhstan	2002	100
Russian Fed.	2002	68
Low income CIS		
Armenia	2001	12
Kyrgyz Rep.	2001	10
Benchmark Countries		
Vietnam	1998	5

*Sources:* For ECA, World Bank, various poverty assessments; for Vietnam, Van De Walle (2002).

*Note:* Simulations use national poverty lines. Some behavioral response is assumed in Romania (50 percent of transfer income is replaced) and Serbia (72 percent of transfer income is replaced in rural areas, 87 percent in urban areas).

The impact of public and private transfers on inequality is mixed. Parts of the public transfer system, such as well-targeted social assistance programs, can be fairly progressive. Others may be regressive. The largest program in most countries, however, is the public pension program, which tends to be distributionally either neutral or regressive. The overall impact thus varies from country to country, with examples of both fairly progressive and fairly regressive systems in the Region. Unfortunately, there has been little systematic study of the contribution of public and private transfers to changes in inequality over this period.

### **Nonincome Dimensions of Well-Being, 1998–2003**

What are the trends in the nonincome dimensions of well-being? Although there has been a reduction in poverty, trends in the nonincome dimensions of well-being, such as access to education, health care, safe water, and heating, are markedly variable. Inequalities in access, whether to good schooling or health care or reliable water and electricity, persist and in some cases have increased, particularly in the CIS. In these countries, many people have thus come to have more income in their pockets, but in access to services and quality of services they may be no better off.

*Education.* The most acute form of education deprivation is illiteracy. Average literacy among the transition countries of the Region is high (more than 98 percent), and in the transition country with the lowest level of literacy (Tajikistan), 96 percent of adults are literate. In a benchmark country, Turkey, literacy was much lower to start with and, despite increases, stood at just 87.5 percent in 2002. Thus, the extreme form of education deprivation does not appear to be a major issue in the Region.

Since 1998, many countries in the Region have maintained or improved their high levels of school enrollment. Most countries entered the 1990s with a widespread network of education services that enabled them to achieve almost universal coverage in compulsory education. However, some of these achievements were eroded during the 1990s, particularly among the low income CIS group and some countries in SEE, although, even with the decline in coverage, enrollment in the compulsory cycle was typically higher than in comparator countries. Since 1998, enrollment in the compulsory cycle has been maintained or improved, except for some poor countries such as Georgia, the Kyrgyz Republic, and Tajikistan, which have still not managed

to arrest the decline (figure 12). While there is evidence of some income gradient in enrollment, with children from better-off households having better coverage, the gradient is not large. Continuing high coverage in most countries of the Region suggests that the prospects for meeting the MDG of universal primary enrollment are fairly good (World Bank 2005c). Gender inequality in compulsory education has not been an issue, except in Tajikistan, where it continues to warrant attention.

Compared with the primary level, enrollments at the secondary level have increased throughout the Region. This increase has generally been accompanied by a reduction in enrollment gaps across income groups, except in a few low income CIS countries. Urban-rural gaps have also been reduced in virtually all countries. Interestingly, gender inequalities at this stage of education favor girls. The exceptions to this are Bulgaria and Tajikistan. Although the ratio of female to male enrollments in Tajikistan has increased over the past five years, it continues to be low by the standards of the Region.

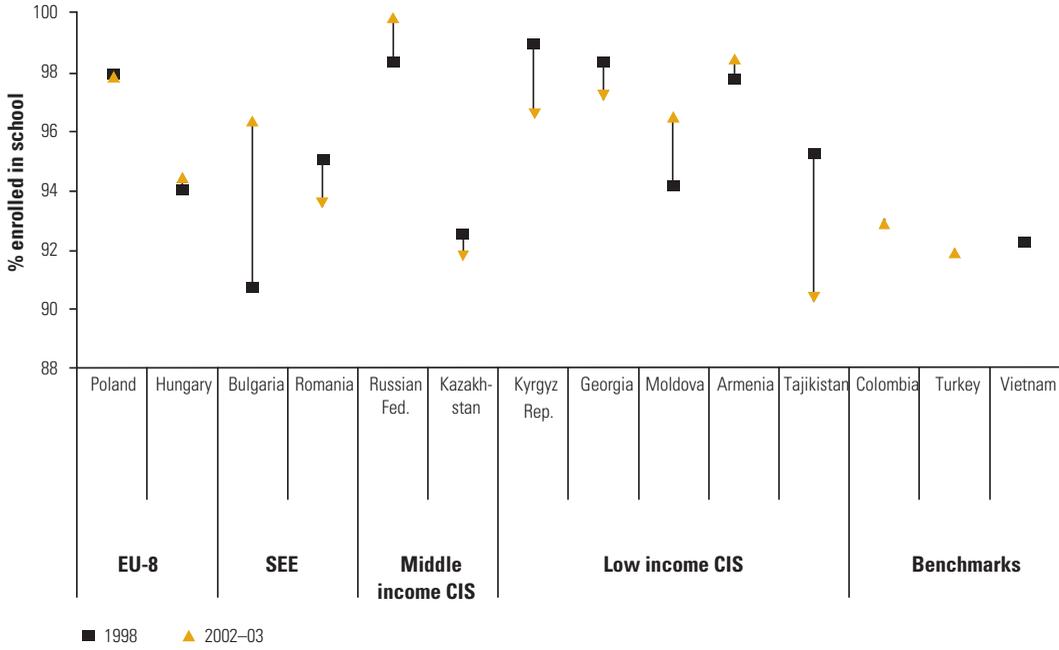
Returns to education, which were highly variable during the 1990s, particularly in the CIS, have now stabilized at levels similar to those of market economies. This underlines the value of investment in education, not only for its own sake but also as a means for ensuring adequate standards of living, particularly for the poor. However, returns are a function not simply of access but also of quality of education. Compared with enrollments, trends in quality of education are less sanguine. Despite increases in spending on a real per capita basis almost everywhere in the Region, the failure to invest sufficiently in the quality of infrastructure or staff means that quality is not being maintained. For example, Trends in International Mathematics and Science Study (TIMSS) data suggest that although performance of eighth graders continues to remain good relative to those in other countries, including those in OECD countries at higher levels of income, scores are declining in all but a handful of countries in the EU-8. Where the analysis is available, it suggests that the declines are in large part due to a sharp increase in the share of students who are seriously underperforming. Often, these students tend to be in schools where the quality of service provision is marginal, such as rural schools. Reading scores of 15-year-olds from the Programme for International Student Assessment (PISA) present no different a picture. Apart from a small handful of countries in the EU-8, scores are declining or low.

*Health care.* Trends in health status and health care utilization are mixed. Declines in male life expectancy (particularly in the successors of the Former Soviet Union), which had become one of the most

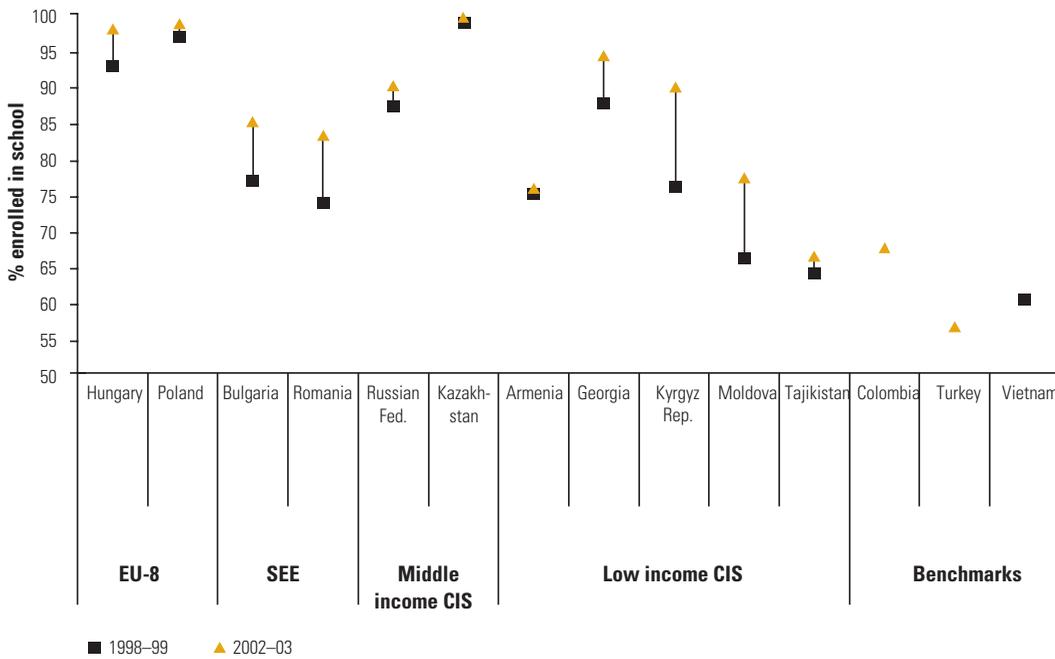
**FIGURE 12**

**Access to Secondary Education Has Gone Up Virtually throughout the Region, but Some Countries Continue to Struggle to Arrest the Decline in Primary Enrollment Rates**

Enrollment in Primary Education (7–14 years)



Enrollment in Secondary Education (15–17 years)



Source: World Bank staff estimates using ECA Household Surveys Archive.

widely documented negative health outcomes of the transition, have generally been arrested. However, many of the proximate causes of high male mortality, notably the high incidence of cardiovascular and circulatory disease and death from accidents and acts of violence, remain. As with male life expectancy, child and maternal mortality are also trending in the right direction. However, the very slow progress in achieving reductions in mortality and concerns about the delivery and quality of critical medical services imply that many countries in the CIS appear unlikely to meet the child and maternal mortality-related Millennium Development Goals (MDGs) (World Bank 2005c).<sup>19</sup>

There is a growing threat to the health of the Region's population from HIV/AIDS and tuberculosis (TB), particularly in the CIS, but also to some extent in SEE and the EU-8 (the Baltic countries). The Region as a whole currently has one of the most rapidly growing infection rates of HIV/AIDS in the world, due to problems related to the increase in injecting drugs and commercial sex work, a concurrent increase in the incidence of sexually transmitted infections (STIs), high migration rates, limited capacity of governments and civil society to implement effective preventive responses, and low levels of awareness of HIV and STIs. Drug transit through the CIS and growth of local consumer markets for drugs are also contributing to the problem. At current rates of infection and treatment, the HIV/AIDS MDG is unlikely to be attained by a broad swath of countries in the Region (World Bank 2005c).

Countries in the Region have a large network of public health providers that distributed generous services and that suffered major fiscal restrictions during the 1990s. Between 1994 and 1999, countries in the Region spent on average 4 percent of GDP on health, ranging from 1 percent in Georgia (low income CIS group) to 9 percent in Croatia (SEE). After 1999, some countries in the low income CIS group continued to experience reductions in public spending on health. Other poor countries were able to stem the decline in spending, but only at very low levels of spending (for example, Armenia). Even where funding may be on the upswing, outside the EU-8 it is not close to levels experienced at the outset of the transition.

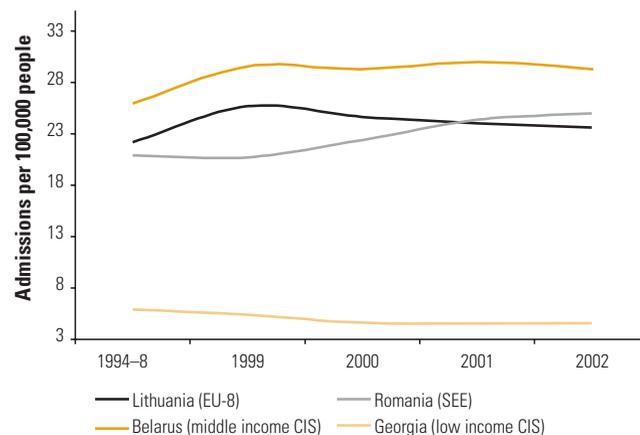
While funding levels may have stabilized or even increased, this is not reflected in improving quality, particularly for the poor, because of three factors. First, the very large network of providers has largely been retained, resulting in an underfunded, and hence ineffective, network in many countries. Second, the lack of resources for basic interventions like public health activities has resulted in a repeated failure to stem communicable diseases. Third, the changing demographic composition

of the population (which is becoming older) has altered the morbidity profile and increased the costs of health provision. Vulnerable population groups (such as rural or small-town dwellers or the poor) are expected to have borne the brunt of not only the misallocation but also the failure of resources to keep pace with needs.

The lack of public resources increased the use of fee-for-services in a mostly unregulated setting, reducing the demand for health care. Official statistics show the decline in utilization of health care during the 1990s, but after 1999, this remained stable or even recovered (figure 13). Inpatient care in the low income CIS group declined more than 20 percent between the mid-1990s and 2000, only to stop after 2001. Countries in the middle income CIS group continue to have very high hospital utilization rates, higher than the EU average. Survey data on utilization, which control for need, suggest a similar picture, but point in many cases to persistent differentials across rural and urban areas, particularly in the CIS.

*Infrastructure.* Turning to infrastructure, here too the picture is very mixed. Data problems make this a particularly difficult area to analyze. However, what is clear is that countries of the Region began transition reasonably well covered with basic utility services, but the economic shocks of the early reform years left providers strapped for funds, which meant that utilities deteriorated Regionwide for much of the 1990s. Since then, the decline in utility performance (as measured by access and quality) has been reversed or slowed. Electricity has shown

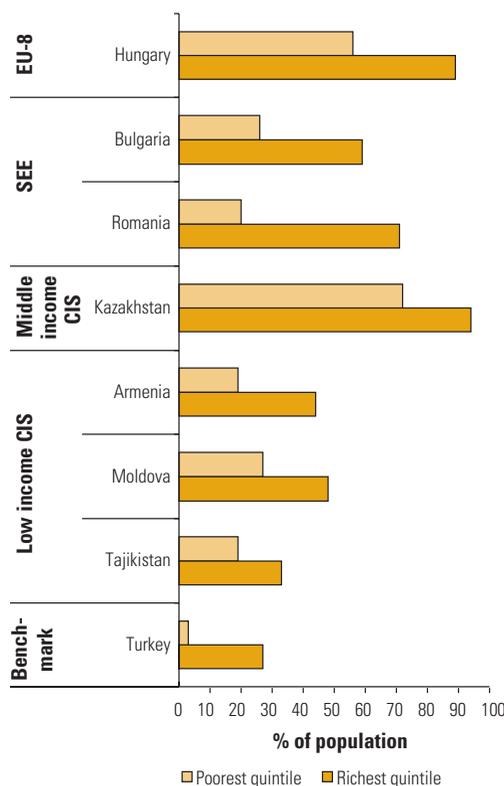
**FIGURE 13**  
**Hospital Utilization Rates Have Recovered, but Remain at Low Levels in Parts of the Low Income CIS Group**



Source: World Health Organization (WHO), based on official statistics of hospital admissions.

the greatest improvement: providers have maintained near universal coverage while improving reliability in subregions where it was particularly poor, such as in the low income CIS countries. Other recent gains include the expansion of gas supply networks to many households affected by the collapse in district heating, and the improvement of water reliability in some countries. Despite these improvements, many households, including many urban households in the CIS and in some parts of SEE, continue to use dirty fuels such as coal, wood, and oil for heating because they lack access to gas and cannot afford, or are not reliably provided with, electricity. Available survey evidence suggests that the reliance on solid fuels for heating affects the poor more than the rich (figure 14). This could have a long-term impact on the health of the poor due to the negative impact of increased indoor pollution. Over the past five years, access to clean heat has become less

**FIGURE 14**  
**The Poor Make Greater Use of So-Called Dirty Fuels for Heating**  
 Percentage of Population Using Clean Sources of Heating in the Poorest and the Richest Quintiles (Latest Available Year)



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Clean fuels are all sources of heating for a household except solid fuels such as wood and coal, which are classified as “dirty.”

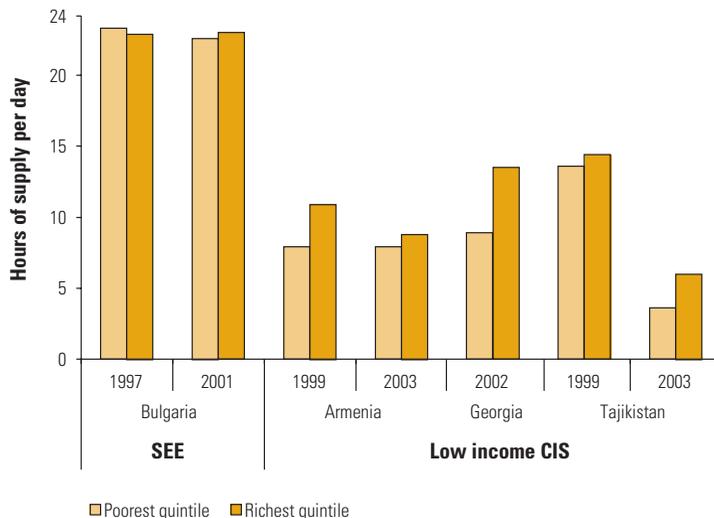
equal in some countries of the low income CIS group (for example, Armenia), although in others (such as Tajikistan), the revival of district heating has improved equity.

Although time-series data tracking water availability are available for only a few countries, the evidence from the low income CIS countries shows the influence of years of little maintenance and no investment in water provision (figure 15). Although households officially still have water connections, little water flows through the pipes. On average, Tajik households receive water for less than six hours each day, and although not depicted here, households in smaller cities and rural areas have the least water.

*Are key public services affordable?* Both catastrophic health spending and the additional cost of utilities pose the challenge of affordability for the poor. Household expenditure shares for utilities have continued to increase from the late 1990s to the present (figure 16). They are typically higher for poor households than for rich ones. On average, however, expenditure shares are highest in the EU-8, followed by SEE, the middle income CIS countries, and the low income CIS group, as shown in the figure. The increase in utility expenditure shares is largely driven by the increasing cost of electricity and, in the EU-8, the price of water.

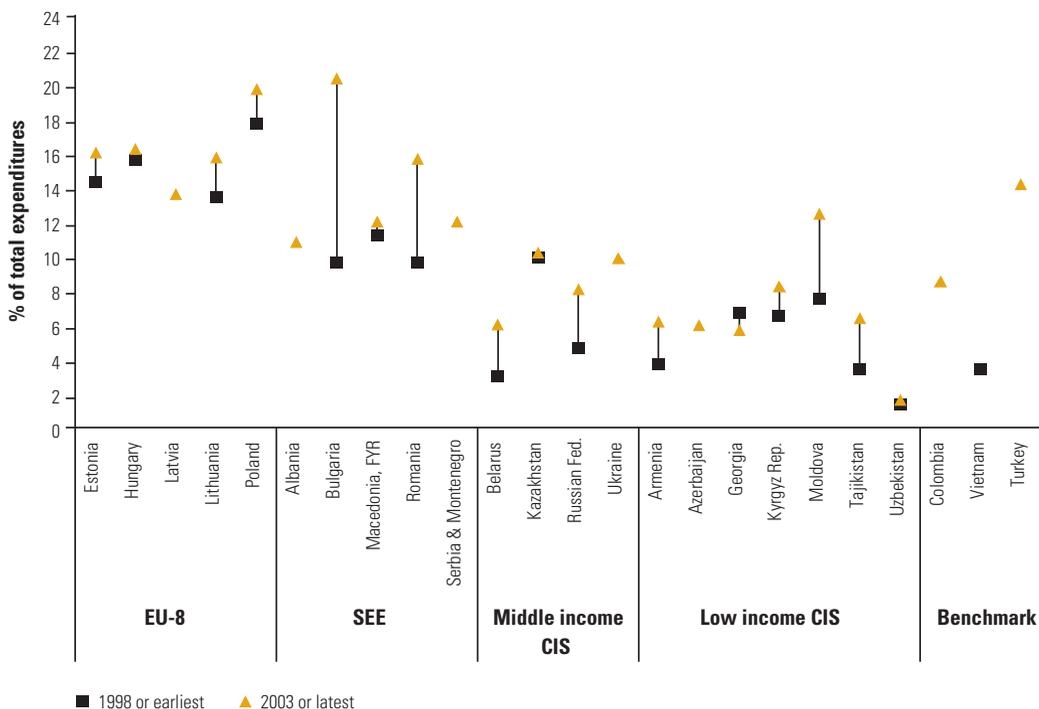
**FIGURE 15**  
**In the Low Income CIS Countries, the Reliability of Water Supply Is Low and Shows Little Improvement**

Access to Uninterrupted Water Supply



Source: World Bank staff estimates using ECA Household Surveys Archive.

**FIGURE 16**  
**Household Expenditures on Utilities Have Increased**  
 Expenditure Shares on Electricity, Heating, Water, and Sewerage



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: For Albania, Latvia, Ukraine, Serbia and Montenegro, Azerbaijan, Turkey, and Colombia, data before 2002 are not available. For Estonia, Armenia, Kyrgyz Republic, and Uzbekistan, 2000 is used instead of 1998; for Tajikistan, 1999; and for Kazakhstan, 2001.

Catastrophic health expenditures run the danger of impoverishing households in parts of the Region such as the low income CIS countries, where the health system relies heavily on household contributions and households are relatively poor. Outside the EU-8, where the impact is more limited because of higher incomes, simulations undertaken for the purposes of this report suggest that catastrophic health spending can increase the fraction of the poor population by 3–9 percent.

### Prospects for Poverty Reduction

Given what has been achieved, what are the prospects for poverty reduction? In drawing lessons, it is worth reminding ourselves of the main concerns five years ago when *Making Transition Work for Everyone* (World Bank 2000a) was published. Then, although growth had

recovered in the EU-8 and parts of SEE, recovery was slow at best in the CIS, where most countries suffered an additional blow because of the financial crisis in Russia. The collapse in output, particularly in the CIS, combined with the increase in inequality, meant a sharp increase in poverty. Prospects for poverty reduction were felt to be unclear even in the event of the resumption of growth because a core group of the very poor—the long-term unemployed and socially excluded—were likely to be bypassed by growth. Despite notable achievement in the pretransition period, education and health sectors were under strain and working to the detriment of poor families and the economic mobility of their children. And to top it all, data issues clouded researchers' understanding of poverty.

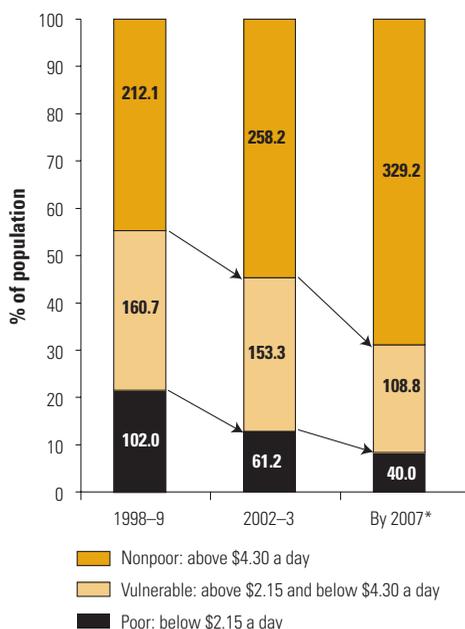
The picture looks different five years later, and one's understanding of the challenge of poverty needs to be suitably nuanced. Economic growth has firmly returned to the Region, and all countries are experiencing positive growth. In addition, changes in inequality have been modest over this period. Moreover, in the CIS, which had previously seen the sharpest increases, inequality has (with the few exceptions noted previously) abated. The rise in output and the moderation in inequality have together meant a substantial reduction in poverty.<sup>20</sup> The long-term unemployed and the socially excluded remain a concern, particularly because very few countries outside of the rapidly growing economies of the CIS have succeeded in raising the share of the population that is employed. However, the failure to raise overall employment levels has not acted as a brake on poverty reduction to date (except perhaps in a few countries such as Poland) because, in most countries, the bulk of the poor retain some attachment to the labor market and have benefited from the bounce-back in real wages. The health and education sectors in most countries have benefited from increased levels of funding, but because of remaining inefficiencies in delivery, this has not translated into uniform improvements in quality. Access is possibly less of a concern, with poor quality and high cost (or reduced affordability) becoming key dimensions of deprivation. The quality of data has improved, encouraging more confidence about observed trends. At the same time, shortcomings remain, especially with regard to data on the quality dimension of public services.

However, while the picture looks somewhat different, and notwithstanding the impressive reduction in poverty in the Region over the past five years, it is clear that there is a long road ahead, not just for the low income CIS countries but also for many middle-income countries in the Region (where poverty rates are lower, but where most of the poor live). This is for a number of reasons. First, despite the recovery, poverty rates remain significant: for many countries, it will be some

time before absolute poverty is eradicated (on this, see further below). Second, the recovery is still recent for many, if not most, countries, and large numbers remain vulnerable to poverty in the event of an economic downturn. Third, despite recent improvements, morale (as revealed in self-reported assessments of well-being) remains low compared with that of countries at similar levels of income. This may be related to uncertain prospects for the future. Low morale may also be related to greater inequality and erosion in access and quality of public services compared with the past.

Projecting poverty rates over the medium term, using available economic growth forecasts from the World Bank’s *Global Economic Prospects 2005*, indicates that poverty will not disappear altogether and, together with economic vulnerability, will affect 30 percent of the population by 2007. This is not to say that there will be little poverty reduction. In fact, poverty will fall by 7 percent a year, or 21 million fewer people will be in poverty in the five years covered by the forecast period (figure 17). Impressive though this reduction may

**FIGURE 17**  
**Growth Will Move an Additional 21 Million People out of Poverty by 2007, but 40 Million Will Remain Absolutely Poor and More Than 100 Million Vulnerable to Poverty**



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Growth rates for 2002-2007 are from the World Bank’s *Global Economic Prospects*. \* = simulations.

## OVERVIEW BOX 2

### Nonincome Dimensions of Poverty and Millennium Development Goals in the Region

**Of the Region's subregions, the EU-8 is perhaps the least challenged by the nonincome dimensions of poverty.** Most countries have met, or are likely to meet, all of the nonincome MDGs. However, for the Baltics, current trends suggest that the spread of HIV/AIDS may not be effectively combated.

**The nonincome dimensions of poverty are likely to challenge some countries in SEE.** It is not clear that countries such as Bulgaria and Romania will be able to combat the spread of HIV/AIDS. Romania may also struggle to meet the water access MDG because only 16 percent of the sizable rural population is assessed to have access to an improved water source.

**The nonincome dimensions of poverty, particularly related to health, are likely to challenge the middle income CIS countries.** None of these countries is assessed as likely to be able to combat the spread of HIV/AIDS. The targets for reductions in child mortality and maternal mortality may also not be achieved in some countries. It should be pointed out, however, that because of the age and epidemiological profile of these countries, proportionately higher gains in life expectancy would accrue from reducing adult mortality through the control of noncommunicable diseases than from achieving targets related to the MDGs.

**The low income CIS countries are most severely challenged on nonincome dimensions of poverty.** Most MDGs are unlikely to be met in the low income CIS group. Indeed, only the MDG regarding attaining gender equity in schooling is on track.

**In benchmark Turkey, the nonincome dimensions also represent a challenge.** In particular, even though the gender gap has been closing, girls are significantly underrepresented in primary and secondary schools. The MDG for maternal mortality also appears unlikely to be achieved, with maternal mortality rates unusually high for a middle-income country.

*Source:* World Bank 2005c.

be, some 40 million people are projected to remain absolutely poor in the Region by 2007. Naturally, faster growth could lead to faster reduction of poverty rates. Sustained economic growth is hence a crucial component of any poverty alleviation strategy. These projections do not incorporate any worsening of the income distribution, which would undermine the impact of growth. Given that inequality levels in the Region are, broadly speaking, at the low end by world standards, some worsening of inequality over the medium term would not be surprising. These projections should therefore be understood as a best-case scenario.

Looking behind the regional aggregates and using subgroups' specific targets indicate that all country subgroups face challenges in poverty reduction over the longer term. A forward-looking agenda could, for example, aim to meet the MDG on poverty—halving absolute poverty by 2015 compared with 1990 levels—which is most relevant for the low income CIS countries. For the middle income CIS group and SEE, which have moderate poverty, the MDG is not sufficiently ambitious. Eliminating economic vulnerability, which this report takes as having income (consumption) levels that are above twice the poverty line, is an appropriate “modified” MDG for this group. For the EU-8, who have minimal absolute poverty but are significantly poorer than the 15 EU member states they have joined, a modified MDG could be to reduce poverty by half, assuming the poverty line to be the lowest among the EU-15.<sup>21</sup> Overview table 2 shows that, despite recent progress, all subgroups face a real challenge in poverty reduction. The required growth rates are significantly higher than the rates at which these countries are expected to grow. Moreover, as was the case in figure 17, no change in income distribution is assumed. With worsening inequality, either the goals would not be achieved, or the required growth rates would be even higher.

As with income, countries in the Region will continue to face challenges on nonincome dimensions of well-being. This is most simply characterized through the prospects of attaining the MDGs on education, health, and the environment, which in many ways represent a subset of aspirations on the nonincome side. The World Bank (2005) projects the likelihood that countries will attain the MDGs, based on recent trends in the indicators. It concludes that the

## OVERVIEW TABLE 2

### Achieving Subgroup-Appropriate Poverty Reduction Targets over the Long Term (2015) Will Require Significantly Higher GDP Growth Rates

Groupings	Long-term growth rates required to meet targets *	Medium-term growth forecast (2002–7)**	Specific target	Baseline poverty rate (2002)***
Low income CIS	5.6%	3.9%	Reduce poverty by half relative to 1990 (at \$2.15 a day)	52.3%
Middle income CIS	9.7%	6.8%	Eliminate economic vulnerability ( at \$4.30 a day)	39.6%
SEE	10.8%	5.4%	Eliminate economic vulnerability (at \$4.30 a day)	55.3%
EU-8	6.6%	4.3%	Reduce poverty by half, taking as poverty line the lowest line in EU-15 today	36.6%

Source: World Bank staff estimates; growth rates are from GEP.

Note: \* Subregional country averages weighted by GDP. \*\* GEP, *Global Economic Prospects* (World Bank 2005b). \*\*\* Population weighted.

attainment of the nonincome MDGs in the Region is not assured. The health MDGs, which require reductions in child and maternal mortality and effectively combating the spread of communicable diseases such as HIV/AIDS, represent a challenge in many, if not most, parts of the Region (see overview box 2). For the low income CIS group, most MDGs—including improvements not only in health but also in education and water supply—remain a challenge. Thus, taking both the income and nonincome dimensions into account, the picture is one of a recovering Region, but one where much still remains to be done.

### **The Role for Public Policy**

It is clear from the above that accelerated and shared growth, along with reform of public service delivery and better targeting of social programs, will be key to making progress on both income and nonincome dimensions of poverty. It is also important to be able to monitor progress in poverty reduction. Within these four areas, what are the priority actions for public policy?

#### **Accelerating Shared Growth**

It is difficult—based on the experience of the past five years—to overemphasize the importance of raising and sustaining high rates of growth for poverty reduction. As the simulations in overview table 1 suggest, accelerated growth is essential for poverty reduction. The EU-8 is already well placed to take advantage of the new economic opportunities and market integration provided by EU accession. Enhanced competition and the mobility of both products and factors of production that EU accession provides will likely become a dynamic source of growth in the future. This is also true, but perhaps to a more limited extent, for countries with the prospect of accession. But for low and middle income CIS countries that do not yet have such an external driver for change, domestic catalysts remain crucial. Good economic governance and responsible leadership must take advantage of the relatively good economic times to put into place policies and institutions that would enhance growth.

Understanding the policies and institutions that lead to strong and sustained rates of growth is therefore a first step in reducing poverty. While this report has less to say on factors that drive growth—which is not the focus of this study—the pursuit of sound economic policies is a necessary precondition. These include sound monetary and fiscal

policies (reflected in, for example, moderate-size government and low inflation), a climate conducive for investment, a relatively well-developed financial system, and trade openness. Countries of the Region are, with few exceptions, relatively well integrated in world markets, although more can be done (World Bank 2005 Forthcoming c).

However, beyond these broad issues around promoting growth, the diagnosis in this report points to a number of areas where more could be done either to increase the assets of the poor or to create greater returns to their assets. These relate to (a) promoting enterprise reform, (b) boosting growth and productivity in agriculture, and (c) promoting opportunities for those in lagging towns and regions. The report considers each in turn.

*Promoting enterprise sector reform.* Encouraging the growth of new, more productive firms and strengthening the financial discipline for existing enterprises continue to be important for both poverty reduction and accelerated GDP growth. The typical economy of former socialist countries continues to face significant productivity differences across old, restructured, and new firms *within* the same sector (World Bank 2002h). New firms are typically the most productive, reflecting not just the more efficient use of resources but also the relative dynamics of different kinds of firms and the very different policy environment in which they function. This historic legacy of transition is reflected in the large earnings gap between the poor and the nonpoor as many of the workers belonging to poor households are trapped in the old, unrestructured, low-productivity firms. Accelerating reform of the enterprise sector and of the business climate as a whole to create a level playing field across all firms and—in particular—to encourage the entry and growth of new firms is thus an important factor for equalizing the returns to labor and reducing poverty. This is particularly important for CIS countries, which despite recent progress continue to lag behind other countries in ease of doing business (World Bank Forthcoming d).

*Boosting growth and productivity in agriculture.* Many of the poor in the Region are in rural areas, where poverty is proving more resistant to growth than in urban areas. Agriculture is the main activity in rural areas; thus, stimulating agricultural growth is crucial for poverty reduction. Where land reforms have been implemented, especially where initial conditions favor labor-intensive cultivation (low income CIS), land distribution resulted in significant productivity and income gains to rural households. Where land reforms are incomplete (for example, some middle income CIS) or where land market operations

need to be improved to facilitate land restructuring (for example, in SEE), significant income gains can be attained from accelerated reforms. In all countries, future gains in reducing poverty in rural areas would hinge on eliminating key market imperfections in input and output markets essential for enabling self-employed farmers to lift themselves out of poverty. In particular, the integration of rural areas into national credit markets is critical for further investments and productivity growth in agriculture. More broadly, improving the investment climate in rural areas is very important. Increasing evidence shows that investments in food processing, agribusiness, trade, and retail companies play a crucial role in helping small farmers overcome input and output market imperfections, in helping them upgrade the quality of their products, and in accessing markets (World Bank 2005a). Beyond measures related to agriculture, integration of the rural poor into national labor markets—either through rural off-farm employment or by improving access to urban labor markets—and adequate social safety nets will be crucial for sustained income growth and poverty reduction, particularly in the middle income CIS and SEE countries. Emphasis on rural service delivery and infrastructure is also critical, especially in the low income CIS, not only for its instrumental role in raising rural incomes, but also as an aspect of poverty that warrants attention in its own right.

*Promoting opportunities in lagging regions.* Countries in the Region face substantial differences in poverty rates between urban and rural areas and between capital cities and smaller towns that, if severe, risk perpetuating intergenerational poverty and inequality traps and act as a drag on economic growth. Most countries seek to address regional inequalities through the maintenance of a stable macroeconomic environment, the creation of a level playing field for businesses, and fiscal transfers for targeted programs in lagging regions. But more can be done. First, countries need to enhance labor mobility. When people move to economic nodes that promise a higher expected income, it helps to reduce spatial income disparities. Adoption of appropriate policies to encourage movement, supported by the development of urban housing markets and policies, credit markets, and entitlement reform can provide a strong stimulus to inter- and intraregional mobility and help improve income levels in relatively poorer areas while also boosting competition, productivity, and growth in destination areas. Second, in countries with decentralized fiscal systems, there is a strong role for equalizing resource transfers to address regional inequalities. In particular, social and economic reforms in the lagging regions can be encouraged through market-based incentives, including the use of competitive

allocation mechanisms for fiscal transfers. Third, education and health service delivery should be strengthened in lagging regions to ensure adequate human capital formation as a route out of poverty. In particular, existing inequalities in access to public services and quality of services provided need to be addressed as a priority.

### **Strengthening Public Service Delivery**

Ensuring access and improving quality of education and health care require strengthened accountability arrangements. Although low levels of spending are an issue, more so in education than in health care, only a few countries spend less than is warranted, given levels of income. Thus, going forward, most countries will need to operate within the available resource envelope. Reforms will therefore have to focus on improving the quality and efficiency of public spending.

*Enhancing quality and equity of education services.* In education, the low income CIS group needs to stem the decline in primary enrollments and quality of education, in particular by ending the situation in which staff are underpaid and complementary expenditures (on textbooks, heating, and repairs) are underfinanced, while at the same time employment and, in some cases, facilities remain well above standards common in much richer countries. In addition, some countries may need to ensure greater equity in education spending across subnational regions (for example, the Kyrgyz Republic). Ensuring access to primary education is much less of an issue outside the low income CIS countries. Here the main issue is secondary education, where quality and relevance to market demand are often in question. Governance reforms that both strengthen government accountability for outcomes as well as increase participation and voice will be essential to improving outcomes. Lessons from the experience of the EU-8 in raising quality certainly point in this direction. In particular, decentralization of services to allow for a greater role for both school administrators and parents has an important role to play in stemming declines in quality.

*Strengthening access to, and quality of, health care.* In health care, low-income countries suffer from having to provide for a range of services when budget resources are limited, but even the available allocations are not spent wisely. This is reflected in the large share of household contributions in total health spending. Improving utilization among the poor is closely linked to financing and quality issues. Tough decisions are required on the size of the basic package and a major reallocation of expenditure—and greater accountability for its

use—implemented to improve access to, and quality of, care (World Bank 2005d). To improve matters, accountability relationships between politicians and citizens need to become more effective (through such means as more organized voice power of citizens, citizens' report cards, and informed voting), and the accountability relationships between politicians and providers need to be strengthened (through such means as clarifying responsibility, aligning incentives between policy maker as principal and provider as agent, and better enforcement of contracts between organizational and front-line providers). Countries such as Armenia have shown that, even with limited resources and high poverty rates, improvements in key dimensions such as affordability can be made, albeit on a moderate scale. At the other end of the spectrum, the EU-8 is struggling to maintain the easy access to a wide range of health services in a context of rising costs. Clearly, further efficiency-enhancing mechanisms as well as private financing will need to be found to control expenditures.

*Managing reform of utilities.* Service quality in many of the infrastructure services is extremely poor in the low income CIS countries, and even in richer countries there are large disparities between service quality for the poor and the nonpoor. The infrastructure needs of the poor are unlikely to be met without reform of the utilities sector to bring it to a financially self-sustaining basis, which would encourage much-needed upkeep and maintenance of viable infrastructure and improvements in service quality. Improving financial performance will involve raising tariffs, which—except for power, where there has been some movement toward cost recovery, and possibly water in the EU-8—are well below cost recovery levels. Further movement toward full cost recovery in power is expected to have a limited impact on poverty, except in the poorest countries. However, across-the-board increases in the full range of utilities is expected to have a more serious impact on poverty (World Bank 2005 Forthcoming b). The social impact of tariff increases will need to be factored into the sequencing and pace of reforms in the event of across-the-board reforms in a range of utilities. Where the social safety net is adequate, it can be expected to mitigate the impact on the poor. However, where social safety nets are relatively thin, as for example in the low income CIS group, other options are worthy of consideration. For utilities that can be metered, lifeline tariffs can serve as a useful temporary cushion; however, where lifelines are not practical (as, for example, in sectors where consumption cannot be measured), reforms would need to be calibrated to affordability.

## Enhancing Social Protection

*Strengthening the social safety net.* Given their importance for poverty reduction and the broad improvements over time, it should be clear that countries need to maintain ongoing social insurance and social assistance reforms, which are largely designed to improve sustainability, and to enhance coverage and targeting of the poor within the available resource envelope. In the low income CIS group, the main constraint will continue to be the fiscal means to cover the population adequately. In the middle income CIS group and SEE, although there is more fiscal space for social protection, there is also greater resistance to reforms, as suggested (for example) by the difficulties with the monetization of privileges in Russia. While the objective of the reforms is not in question, the difficulties in implementation serve as a useful reminder of the importance of sequencing with other social and economic reforms, the need to protect the most vulnerable groups, and an appropriate communications strategy to explain the benefits of reforms. Where systems are more generous, as for example in parts of SEE and the EU-8, a balance will need to be struck between the need for social protection and labor market incentives.

*Strengthening targeted interventions for marginalized groups and minorities.* This may be in the form of assistance in cash or in-kind (such as education, health, or housing), depending on the nature of the group. For the long-term unemployed or nonparticipants, active labor market programs can be particularly relevant. But evidence from successful training programs suggests that these should be targeted, offered on a selective basis, with clear links to potential employers, and in collaboration with the private sector. It is important to bear in mind that there is limited evidence of successful retraining programs from the low income CIS group. In some cases, interventions may need to be integrated across many fronts. For example, for the Roma minority of the EU-8 and SEE, governments are taking a holistic approach to ending persistent exclusion by setting goals in four areas—education, employment, health, and housing. Other minorities may require a different approach. The elderly, especially those who are very old or living alone, may also require special interventions such as supplementary cash benefits or provision of assisted living services. For most marginalized groups, however, additional assistance, whether in cash or kind, need not be provided by the public sector alone. Civil society organizations, community-based groups, and other organizations could also be encouraged to come into the sector under the overall direction of the government.

*Ensuring adequate minimum wages.* Minimum wages are an important policy instrument for enhancing the income security of the poor. These can help provide a floor to income, but need to be kept at a reasonable level. In this context, the large real increases in the CIS in recent years have brought minimum wages closer to subsistence levels. However, future increases in minimum wages need to be considered carefully, so as not to become so high that they have negative effects on growth and employment, with adverse impacts on poverty. Where variations in regional income and labor market profiles are large, governments may need to consider setting region-specific minimum wages, which may help improve the employability of certain groups of workers (such as younger workers and those in lagging regions). This is an issue particularly in the EU-8 and SEE, where minimum wages represent a relatively high proportion of the average wage and the adverse impact of common minimum wages is particularly noticeable. For example, the relatively high minimum wage is found to constrain employment opportunities for the low-skilled in countries such as Lithuania and Poland.

### **Monitoring Progress on Poverty Reduction**

Huge progress has been made in recent years in improving the quality and accessibility of poverty data. Countries need good survey data to monitor changes in poverty and to evaluate the impact of specific policy actions on the poor. This report documents significant progress in collecting up-to-date high-quality data across the Region. The previous report on poverty (World Bank 2000a) relied on a single survey for many countries and could produce an estimate of poverty over time for only three countries. With full data sets closed to users outside statistical offices, the report also had to rely on partial data. Since then, many countries have started implementing regular surveys that periodically collect representative data on income and nonincome dimensions of living standards. In addition, data are provided openly to researchers for the purposes of study and policy evaluation. These improvements are not only confined to EU-8 countries (for example, Hungary) but also cover SEE (for example, Romania), middle income CIS countries (for example, Kazakhstan), and low income CIS countries (for example, Georgia and Moldova).

But many challenges remain. First, improvements to data quality and availability are very recent, and for many countries in the Region reliable data on poverty changes can be obtained for only a few recent years. The efforts in collecting data need to be maintained. Second, survey coverage and response rates have fallen over time in all coun-

tries, and there is a need to strengthen the technical capacity of statistical offices to curb this trend and deal with it appropriately. Third, wide gaps exist in data collection on the nonincome dimensions of poverty: there are practically no attempts to gauge trends in the quality of health care and infrastructure services, and even indicators of access are not consistently collected. Given the changing nature of poverty with the increasing role of nonincome components, this gap is the most worrying. Fourth, not all countries have opened their data sets to researchers, undermining the effective use of public funds spent on data collection and monitoring. These areas—keeping up with periodic surveys to provide comparable data, collecting information on nonincome dimensions, and opening up access to survey data—are priorities for action to ensure adequate information support for poverty reduction efforts. (See overview box 3 for a discussion of the data used for this report.)

## Conclusions

The countries in the Region have made significant progress in reducing poverty. More than 40 million people moved out of poverty during 1998–2003. Much of this poverty reduction derives from the growth rebound in the CIS countries. But poverty and vulnerability still remain a significant problem: more than 60 million are poor, and more than 150 million are vulnerable. Most of the poor are the working poor. Many others face deprivations in access and quality of public services. Regional inequalities both between and within countries are large. The highest levels of absolute poverty are found in poor countries of Central Asia and the South Caucasus, but most of the Region's poor and vulnerable are in middle-income countries.

Notwithstanding the tremendous heterogeneity among countries in the Region, reducing poverty and vulnerability requires an acceleration of shared growth, strengthening of public service delivery, better targeting of social protection, and regular monitoring of progress in poverty reduction across the Region. In promoting accelerated shared growth, the report emphasizes (a) further reform of the enterprise sector to encourage the release of resources from the old, less productive sectors to the new, more productive sectors; (b) further reforms to promote agriculture and rural growth by integrating rural areas into the rest of the economy with regard to labor and capital markets, access to credit, trade and services; and (c) policies to promote greater opportunity in lagging regions. Public service delivery needs to be improved through increasing the accountability of

### OVERVIEW BOX 3

#### **Data for This Report: The World Bank's ECA Household Survey Archive**

To arrive at the internationally comparable assessment of poverty, this report uses primary unit record data from recent household surveys to construct a comparable indicator of living standards across all countries in the Region. Income data, an alternative to consumption for measuring living standards, remain particularly difficult to collect in transition countries. In contrast, practice has shown that consumption data can be gathered with a great degree of precision. Survey consumption modules have become more detailed over time and better capture various dimensions of consumption.

In relying on consumption of goods and services by a household as the measure of living standards, a number of conceptual and practical issues needed to be addressed. First, unlike food, consumer durables and housing are consumed over a long time. It is customary, therefore, to include the imputed value of the consumption flow associated with the possession of consumer durables (including housing), but exclude the expenditure on the purchase of these goods. However, for the Region, data availability limits the application of this approach to all countries. This report does not, therefore, include estimates of flow of services of durables, nor have researchers added in durable purchases or rents. Second, when consumption is used as a measure of well-being, higher consumption should indicate a higher level of well-being. For most consumption items, this correspondence is reasonable; however, for some categories, such as health expenditures, this correspondence is questionable. As a result, health expenditures were not included as a part of consumption (Deaton and Zaidi 2002). Third, given the significance of spatial differences, the authors adjusted for spatial price differences, using the same set of information in all countries. In the cases where data

government and the voice and participation of citizens. This is essential to improving access and quality of social services, which are not only important in their own right but also of instrumental value in helping the poor move out of poverty. The report emphasizes the need to further strengthen the social safety net to meet the challenges of restructuring economies. Finally, monitoring progress on poverty reduction on a regular basis needs good-quality household survey data sets that are publicly available for research and analysis.

#### **Endnotes**

1. All monetary amounts are in U.S. dollars (\$) unless otherwise indicated.
2. The new member states of the European Union are the Czech Republic,

were collected over a long time, it was also necessary to adjust for changes in prices over time. Fourth, households in the Region cope with poverty by relying on an array of nonmarket strategies, including producing their own food and engaging in reciprocal exchange with other households and institutions. A consistent approach was used in assigning a monetary value to these components of consumption. Fifth, to adjust for differences in household composition, researchers took the simplest approach and used the per capita scale. Sixth, the procedure, which conforms to methods used in other international household survey data depositories (such as the Luxembourg Income Study; see Gottschalk and Smeeding [1997] and [www.lisproject.org](http://www.lisproject.org)) was used to clean the data of outliers across all data sets.

Following a consistent approach across all data sets gives reasonable confidence that differences across countries in the final consumption measure are due to differences in the primary data and are not due to the method of aggregation. This is the first time (to the authors' knowledge) that comparable consumption aggregates have been constructed for countries in the Region. (Full details are provided in appendix A, Data and Methodology.)

The constructed estimate of real per capita consumption has several shortcomings that reflect some persistent data problems in the Region. First, it ignores the differential impact of price increases on the poor and nonpoor. No price indices for low-income groups that would allow this issue to be addressed are routinely available in the Region. Second, over time, there has been considerable deterioration in response rates in many countries. Countries deal with this problem in different ways, which may have (as yet unknown) implications for survey-based poverty and inequality measures. Notwithstanding these limitations, consumption indicators constructed for this report produce a reasonably reliable anchor to assess changes in poverty and distribution during 1998–2003.

*Sources:* Deaton and Zaidi 2002, Gottschalk and Smeeding 1997, and [www.lisproject.org](http://www.lisproject.org).

Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia.

3. Countries in SEE consist of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the former Yugoslav Republic (FYR) of Macedonia, Romania, and Serbia and Montenegro; the subregion also includes a territory of Kosovo, now UNMIK.
4. Middle-income countries in the CIS are Belarus, Kazakhstan, Russia, and Ukraine.
5. Low-income countries in the CIS are Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, and Uzbekistan.
6. The Commonwealth of Independent States includes all countries that were part of the Former Soviet Union, except for the three Baltic republics, Estonia, Latvia, and Lithuania, which acceded to the European Union in May 2004.
7. The analysis of poverty trends uses data from 15 countries in the Region for which comparable representative surveys are available over the entire

- 1998–2003 period or its significant part: Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Kazakhstan, the Kyrgyz Republic, Lithuania, Moldova, Poland, Romania, Russia, Tajikistan, and Uzbekistan. The appendix to the study discusses country coverage in detail.
8. Aggregate poverty figures include Turkey in addition to the Region's poverty headcount, and thus refer to the ECA Region as defined by the World Bank.
  9. Many of these poverty lines have been drawn in-country from household survey data and represent a level of consumption that would allow a typical household to meet international minimum caloric requirements, with an additional allowance for nonfood basic needs. They are a far cry from the outdated and questionable poverty lines used in many countries in the early years of the transition.
  10. The first 15 member states of the European Union are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.
  11. For the purposes of discussing poverty risks in the EU-8 countries and selected countries in SEE and the middle income CIS group, we use a higher poverty line of \$4.30. The \$2.15 line catches a fairly small proportion of the population in these countries and thus may not provide robust results.
  12. For the reasons explained in the appendix, we use *consumption* as an indicator of welfare at the household level. The other often applied measure—*income*—tends to show much higher levels of inequality, but it suffers from severe problems of underreporting in many transition economies; it is unclear whether high levels of income inequality are driven by the noisy data. To deal with this problem while comparing levels of inequality in the Region with other countries, we consistently rely on consumption-based indices.
  13. The Gini coefficient is a standard measure of inequality: it takes values between 0 (complete equality) to 1 (extreme inequality, when all income is appropriated by the richest person) (see details in the appendix).
  14. The point here is not whether relative or absolute notions of inequality are “right,” but simply that people's perceptions of inequality are different from how economists have chosen to measure it.
  15. Employment rates among women do not compare unfavorably with those of men, except in a few countries such as Bosnia and Herzegovina and Tajikistan.
  16. Targets agreed to at the Lisbon Summit in March 2000, where heads of state and governments of the European Union decided that the EU should adopt the strategic goals for the next decade of becoming “the most competitive and dynamic knowledge-based economy [with] greater social cohesion.” The 70 percent employment rate for the working-age population is one of such targets.
  17. Georgia (not depicted here) is another country where the incomes of the poor have declined in real terms.
  18. Thus, trends in wage inequality are mixed, with inequality falling in some countries and rising in others.
  19. The MDGs represent an international effort to promote poverty reduction and human development by establishing measurable yardsticks for

eight goals to be achieved by 2015. To achieve the child and maternal mortality MDGs, countries would have to reduce child mortality by two-thirds and maternal mortality by three-quarters by 2015. The 1990 benchmark against which progress is assessed is often not suitable for the Region's countries because many social indicators reached their nadir in the mid-1990s or later. The projections made by the World Bank are based on recent trends in the indicators (see World Bank 2005c for further details).

20. In technical terms, the elasticity of poverty reduction to growth has proved to be high for the most part.
21. Portugal has the lowest poverty line: around PPP \$7.50 per capita per day.



## Nature and Evolution of Poverty, 1998–2003

Poverty has declined significantly in Eastern Europe and the Former Soviet Union (the Region) since the financial crisis in Russia (1998–99). Then, one in five people (or 20 percent of the population) were living in poverty. Five years on, this figure is close to one in eight people (or 12 percent).<sup>1</sup> This report documents the substantial reduction in poverty that has been achieved since 1998 and discusses why poverty has been more responsive to growth in some countries than in others. It explores the main channel—the labor market—through which resurgent growth has contributed to poverty reduction. It examines whether, and to what extent, nonincome dimensions of welfare have improved alongside improvements in household income. Finally, it discusses prospects for the reduction of both poverty and overall economic vulnerability and what role public policy can play. This chapter discusses the nature and evolution of poverty in the period since 1998.

### Introduction

How many people are living in absolute deprivation in Eastern Europe and the Former Soviet Union? To answer this question, one needs to measure material well-being and establish a poverty line.

Data on well-being for this report are derived directly from representative household surveys to ensure comparability across countries and over time (see overview box 3 and the appendix, A. Data and Methodology). Survey data are available for 23 countries from the Region, although the data do not span the entire period 1998–2003 in all countries.<sup>2</sup> To deal with the diversity of the Region, these countries are grouped into four subregional clusters:

- EU-8, the group of countries that recently acceded the European Union (EU) (and have the lowest poverty)
- Southeastern Europe (SEE), the group of countries in Europe that are either formal candidates or have some prospect of acceding to the EU—Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Romania, and Serbia and Montenegro (moderate poverty)
- Middle income CIS countries, consisting of Belarus, Kazakhstan, Russia, and Ukraine (moderate poverty)
- Low income CIS countries, comprising Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, and Uzbekistan (high poverty)<sup>3</sup>

Turkey, included in the Europe and Central Asia (ECA) Region in the World Bank classification, but which does not have the same historical legacy as the other countries, is treated as a benchmark or comparator country to reveal differences between poverty in a transition economy context in the Region and poverty in a developing country. Two other benchmarks from outside the Region are also used: Colombia (survey covers 2003) and Vietnam (latest available survey is 1998).

One dollar a day is not enough in the Region. In many parts of the world, the \$1-a-day line is used to measure absolute deprivation. However, because of the cold climate and other features of countries in the Region, this line is too low (see box 1.1). As a result, this report uses the \$2-a-day line (or, more accurately, \$2.15 per person per day) to measure the extent of the absolute material poverty. A higher poverty line, the \$4-a-day line (or, \$4.30 per person per day) is used to measure “economic vulnerability,” by which is meant those who are not absolutely poor, but are nonetheless vulnerable to poverty (see box 1.1 and box 1.2).

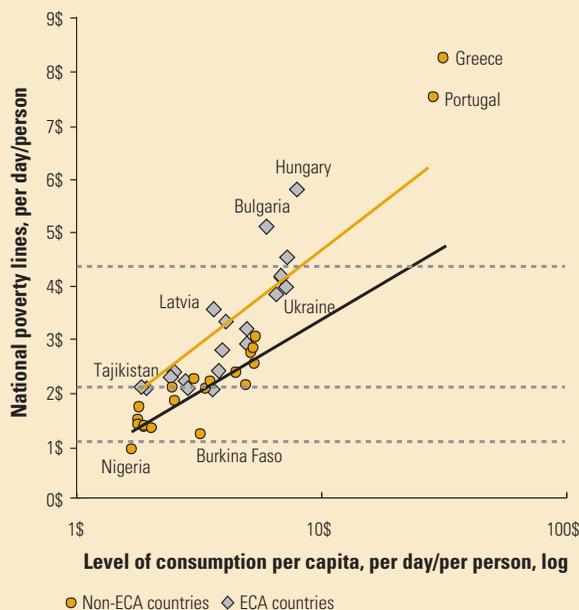
These lines are converted into local currencies, using 2000 purchasing power parity (PPPs) (see overview box 1 and the appendix for comparison of PPPs used in this report to other PPP revisions of 1993 and 1996) and country-specific consumer price indexes (CPIs).<sup>4</sup>

## BOX 1.1

**What Is an Appropriate Poverty Line for the Region?**

This report uses an *absolute* concept of poverty, which is consistent with a large body of literature in which poverty is seen as the inability to meet basic material needs (Ravallion 1994). Although the notion of basic needs differs across countries, it can be reasonably well defined as the current cost of the subsistence consumption basket (see box 1.2). In practically all countries in the Region, one finds groups of the population unable to meet such basic needs. This group and the group who is “nearby” in income terms are the focus of this report. The alternative measure of deprivation—*relative* poverty—has also been used in the literature (Atkinson, Marlier, and Nolan 2004). However, the difficulties that it creates for monitoring differences across countries and changes over time within countries make the authors favor the absolute poverty approach.

What would be an appropriate absolute poverty line for countries in the Region? The World Bank often uses \$1 a day for cross-country comparisons, which has since 1990 come to be regarded as providing the absolute minimum standard of living. The \$1-a-day poverty line (in 1985 PPPs) was chosen because it was the most typical poverty line among the low-income countries (later updated, using 1993 PPPs, to \$1.075 a day). None of the countries in the Region was considered when coming up with this estimate.

**National Poverty Lines and Consumption in 2000 PPPs**

Sources: ECA: World Bank staff estimates; non-ECA: Kakwani and Sajaia (2004) and OECD (2003) for 2000 PPP; EU: Eurostat (2003) recalculated from per equivalent to per capita, using formula by Deaton and Zaidi (1999); and Dennis and Guio (2004).

Note: Dashed gridlines correspond to \$1.075, \$2.15, and \$4.30 a day per capita.

(Box continues on the following page.)

### BOX 1.1 (continued)

Comparing national poverty lines for groups of countries (see figure) reveals that, as elsewhere in the world, there is a close correlation in the Region between the average standard of living and the national minimum needs definition. However, no country in the Region has a poverty line close to \$1 a day. On the contrary, the lowest poverty lines cluster around the \$2 mark, which fortuitously is twice the \$1-a-day line. The vertical distance between fitted lines for countries in the Region and those outside the Region, which translates into a higher national poverty line for the same level of consumption, is suggestive of higher costs of basic needs in the Region. This is not surprising in a part of the world where climatic conditions mean that warm clothing and heating, both of which can be expensive, are essential for survival. Two dollars a day (or, more accurately, \$2.15, which is exactly double \$1.075) is therefore used as an absolute poverty line. A higher poverty line (\$4.30 a day) is also used as a proximate vulnerability threshold to identify households who are not suffering absolute material deprivation, but are vulnerable to poverty. Although it seems somewhat arbitrary, it does bear some relation to empirically observed vulnerability to poverty. Analysis of panel data suggests that households with per capita consumption at least twice the poverty line face considerably reduced risk of becoming poor (World Bank 2002c).

*Sources:* World Bank staff estimates; Ravallion 1994, Atkinson, Marlier, and Nolan 2004; Kakwani and Sajaia 2004; OECD 2003; and World Bank 2002c.

Material and nonmaterial poverty are closely linked. Poor people in the Region have much in common with people in other parts of the world; namely, an inability to buy basic material needs. However, the socialist legacy of high access to social services (for example, health care) and infrastructure (for example, heating), which have since been eroded, means that people feel an acute sense of deprivation relative to the past. For this reason, both income and nonincome dimensions of well-being are considered when trying to understand the evolution of living standards in the period since 1998. Material poverty remains in the center, because many of its nonmaterial aspects—such as the psychological pain of being poor, low achievements in education and health, vulnerability to shocks, and a sense of powerlessness—are in fact closely linked to material poverty. At the same time, nonmaterial poverty does not entirely overlap with material poverty and deserves distinct consideration.

The rest of this chapter is organized as follows: the first section presents the profile of material poverty and its changes over time, the second section discusses the nonincome dimensions of well-being, and the third section presents conclusions.

## Consumption Poverty

More than 40 million people moved out of poverty in the Region between 1998 and 2003. The resurgence of growth in the Region during 1998–2003—particularly in Russia and other CIS countries—has substantially reduced the number of people in poverty. Poverty incidence fell from around 20 percent at the start of the period to around 12 percent by the end (figure 1.1). In addition to 60 million poor in 2003, more than 150 million remained “vulnerable” to poverty (between \$2.15 and \$4.30 per day).<sup>5</sup> Thus, close to half of the population is either poor or under threat of poverty. Although some countries in the Region are among the poorest in the world—Tajikistan has a poverty headcount comparable to Cameroon, Côte d’Ivoire, the Republic of Yemen, and Honduras (see World Bank 2005i)—two-thirds of the poor in the Region live in middle-income countries, with Kazakhstan, Poland, Romania, Russia, and Ukraine jointly accounting for more than half of all poor.<sup>6</sup>

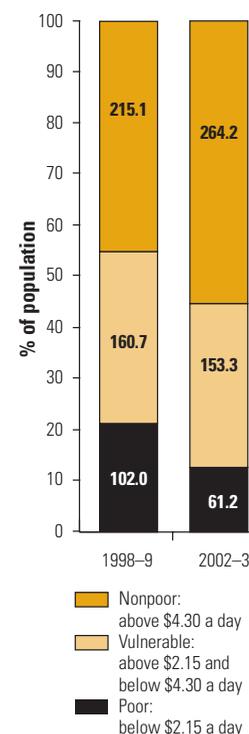
### Country-Level Trends in Incidence and Depth of Poverty

Poverty reduction varied across countries: some countries did not experience any poverty reduction, while poverty fell significantly in others. Although most countries in the Region have seen a reduction in poverty from 1998–99 to 2002–3, the degree to which countries have succeeded in reducing poverty has varied a great deal (see overview figure 2 and appendix table 2 for country-level data on poverty over time). The largest reduction in poverty was achieved in Moldova, where 22 percent of the population moved out of absolute poverty.<sup>7</sup> Poverty reduction in Tajikistan was equally impressive, with more than 15 percent of the population moving out of absolute poverty. In contrast, neither Georgia nor Poland experienced any poverty reduction—in fact, poverty increased in both countries—while poverty incidence in Lithuania was unchanged. The trends in poverty derived from the comparable consumption measure produced for this study correspond closely to poverty changes monitored with national definitions of poverty (see box 1.3).

In relation to country groupings, the most rapid poverty reduction occurred in the middle income CIS group, followed by the low income CIS group and SEE. There was no change in poverty in the EU-8. It is important to note here, however, that EU-8 countries had already grown out of poverty in its absolute sense by 1998, and further progress in poverty reduction for this group is more appropriately assessed using the concept of economic vulnerability.

**FIGURE 1.1**  
**More Than 40 Million People Moved out of Poverty during 1998–2003**

Distribution of Population by Poverty Status



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: In million persons and in percent to population. Poverty lines converted to local currencies using 2000 PPP. Data refer to ECA Region as defined by the World Bank, and Turkey is included in the aggregate figures.

**BOX 1.2****What Would Someone in the Region Living on Two Dollars a Day Consume?**

Based on prevailing market prices, the average food expenditure needed to meet basic caloric requirements with the cheapest products available on the market is around \$1.18 a day at 2000 PPP (selected countries in CIS, population-weighted). Interestingly, it is found to be in a relatively narrow range from the cheapest basket of \$1.15 a day in Tajikistan to around \$1.22 in Kazakhstan. National data show that such allowances cover only very meager baskets (composed predominantly of wheat, beans, milk, and oil). Based on this evidence, taking an international line of \$1.075 a day would simply violate the presumption of measuring basic needs, even in the poorest countries of the Region.

A person living at the poverty line of \$2.15 a day would have been able to spend about \$1 a day toward other needs. Such needs in the Region primarily consist of heating and lighting. The approximate monthly electricity needed to light an apartment with 3 bulbs and run basic appliances (for example, a refrigerator) is 150 kilowatt-hours. At prevailing prices of around 2–5 cents per kilowatt-hour, when converted into PPP (PPP exchange rates are typically 3–4 times market levels), and adjusting for family size (3–4 people per household), this amounts to \$0.07–\$0.17 per day. Heating would require significantly more. For example, Euroelectric's (2003) "typical consumer" on average requires an additional 350 kilowatt-hours per month around the year, or an additional \$0.17–\$0.42 per day in PPP. Wood and gas are cheaper sources of heating, but estimates from poor countries in the Region suggest wood for heating and cooking would cost at a minimum \$80–\$100 per year at the current exchange rate, which amounts to around \$0.30 per day. Thus, essential energy can eat up a quarter to a half of the dollar that remains after the purchase of the minimum food basket.

After purchasing food and energy, the person would have little to put toward miscellaneous essential nonfood items, such as clothing and transport. These needs are not negligible and do not represent a luxury. Warm clothing is essential in cold climates and, in groups such as children, requires replacement on an annual basis as children grow. In the Balkans, households are known to enter into complex reciprocal exchange arrangements to economize on children's clothing. Expenditure on warm clothing could easily amount to a minimum of \$50 per child per year. Transport costs are also important because maintaining access to the labor market and basic social capital requires some minimum mobility.

A sizable share of the population in the Region cannot afford even this frugal bundle.

*Sources:* World Bank staff; Kakwani and Sajaia 2003; Wu, Lampietti, and Meyer 2004; and Euroelectric (2003).

Countries varied even more with regard to changes in economic vulnerability or the number of near poor. Often the reduction in the number of people below the absolute poverty line was accompanied by mixed outcomes in economic vulnerability (between \$2.15 and

**BOX 1.3****National Poverty Assessments Confirm Poverty Trends Based on International Poverty Lines**

The World Bank carried out a number of Poverty Assessments in the countries of the Region over the recent years. These reports focused on the evolution of poverty using national (official) definitions of poverty and living standards suited to the circumstances of each country. Although *levels* of poverty as defined in this study according to international poverty lines may well differ from national assessments of poverty, *trends* in poverty universally point in the same direction.

**In Moldova**, the report entitled *Recession, Recovery, and Poverty in Moldova* (World Bank 2004i) shows that growth and income poverty are closely tied—poverty rose sharply and became deeper and more severe during the recession that followed the Russian crisis, but the rate, depth, and severity of poverty began to recede with the subsequent recovery. By 1999, 71 percent of the Moldovan population was poor according to national definition of poverty, but by 2002, the poverty rate had receded to 48 percent.

**In Russia**, the *Reducing Poverty through Growth and Social Policy Reform* (World Bank 2005g) documents that by 1999, because of the collapse in incomes and jump in inequality, poverty levels reached an all-time high for the transition period. Luckily, economic rebound after the crisis was both impressive and broad based—albeit uneven—across both sectors and regions. All this led to a dramatic reduction in poverty. Russia succeeded in cutting poverty in half between 1999 and 2002, from about 42 percent in 1999 to 20 percent in 2002, using a consistent national poverty standard.

**In Belarus**, the *Poverty Assessment* (World Bank 2004b) reports that according to national measures of poverty, the headcount ratio has fallen from 39 percent of population in 1996 to 27 percent in 2002, and further to 18 percent in 2004, implying that about 2 million people moved out of poverty. This can be fully accounted for by broad-based economic growth beneficial to labor. Strong growth in labor-intensive sectors (such as services, food processing, and machinery), backed by government wage and income policies, helped to ensure that the growth benefits were broadly shared by the population. The poverty reduction of Belarus is impressive but vulnerable because Belarus's significant comparative advantages at its main export markets, the main source of its impressive growth, are eroding quickly.

**In the Kyrgyz Republic**, as argued in *Enhancing Pro-Poor Growth* (World Bank 2003i), major strides in the past few years toward macroeconomic stability and economic growth started paying off in poverty reduction. With increased productivity and a shift toward higher-valued products, the agricultural sector has led economic growth since 1996, although gold and trade have also contributed to the recovery. Based on the full nationally representative survey (only comparable since 2000), the number of poor people was reduced by an estimated 300,000 individuals between 2000 and 2001 (poverty declined from 63 percent to 56 percent, using the national definition of poverty). Analysis of a panel subset of the survey shows that out of every 100 poor people in 1998, 23 people are estimated to have escaped poverty by 2001.

(Box continues on the following page.)

### BOX 1.3 (continued)

**In Poland**, the trends point in the opposite direction. The report *Growth, Employment and Living Standards in Pre-Accession Poland* (World Bank 2004h) shows that the growth slowdown during 1998–2002 led to a reversal of the previous trend toward poverty reduction. Low growth rates and growing inequalities combined to increase poverty after 1998—from around 13 percent in 1998 to 15 percent in 2001, according to national definition. Moreover, poverty has become increasingly a “permanent” phenomenon associated with lack of skills, long-term unemployment, and residence in small towns or in particular regions.

**In Georgia**, the *Poverty Update* (World Bank 2002c) and subsequent analysis focused on a key puzzle: why, despite positive growth, was there no poverty reduction in the country? The extreme poverty incidence edged up during 1998–2003 from around 14 percent to 17 percent of the population. Poverty (officially defined) stood at around 50 percent. The report argued that growing poverty between 1997 and 2000 was due to increased inequality in the distribution. Rural poverty worsened considerably. Growth was too weak and too concentrated in a narrow set of sectors, and there were no effective mechanisms to redistribute its benefits.

*Sources:* World Bank 2002c; World Bank 2003i; World Bank 2004b; World Bank 2004h; World Bank 2004i; and World Bank 2005g.

\$4.30 per day). In some cases, the number of vulnerable increased (for example, Armenia, Kazakhstan, the Kyrgyz Republic, and Moldova). In others, such as Russia, there was little change. By contrast, Hungary and Romania reduced economic vulnerability significantly.

In underlying poverty incidence by country, countries form three distinct clusters: low, moderate, and high poverty (figure 1.2). At one end of the spectrum, Armenia, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan are characterized by high incidence of poverty. At the other end, countries such as Belarus, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, and Ukraine have negligible poverty at \$2.15 a day. A much higher poverty (or vulnerability) line of \$4.30 a day still yields relatively limited poverty in these countries. Countries in the middle—Kazakhstan, Romania, and Russia—have moderate poverty (in the range of 10–20 percent) at \$2.15 a day, but very sizable poverty at \$4.30 a day. High prevalence of poverty at \$4.30 in these countries is a reflection of high vulnerability to economic downturns, which, as the financial crisis in Russia has shown, could easily lead to doubling of absolute poverty counts in a space of a year. Comparing poverty in the Region to benchmarks shows that each of these comparator countries fits in a particular cluster mentioned above: Colombia in the low-poverty

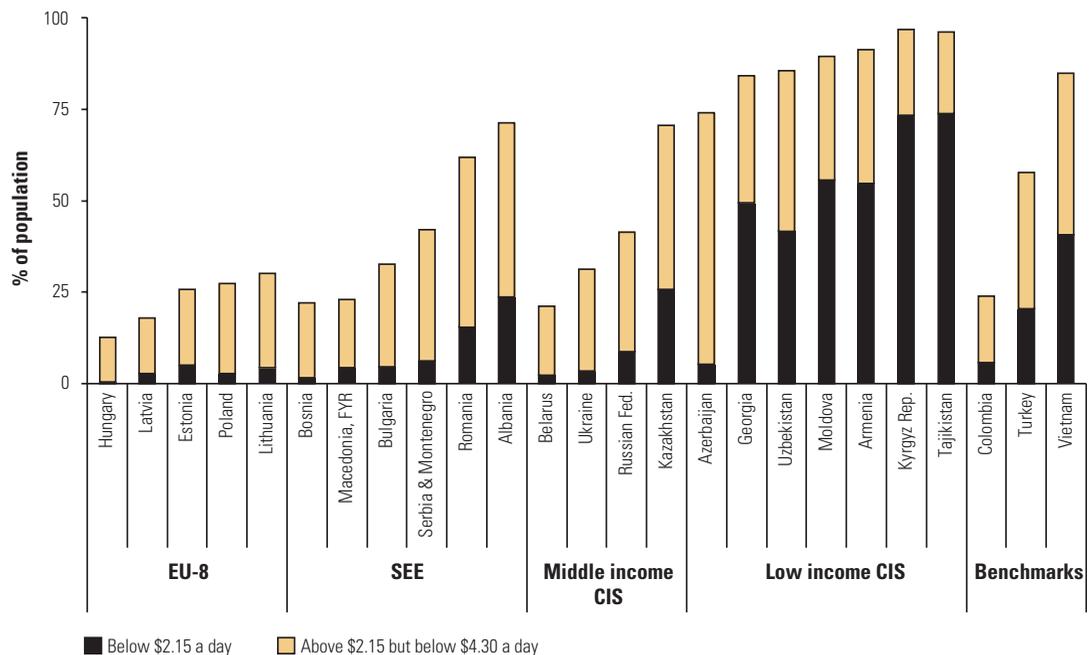
cluster, Turkey in the moderate-poverty cluster, and Vietnam in the high-poverty cluster.

In some countries in the Region, poverty remains shallow, while in others, it is deep, and deepening. For countries for which data are available over time, poverty has become deeper in some countries with initially low depth, such as Poland and Romania. On the contrary, poverty depth fell in some poorest countries and approached more moderate levels, for example, in Armenia, Moldova, and Tajikistan. In other countries, it remained stable or increased. Despite some convergence, differences between countries in poverty depth remain very large (figure 1.3) and warrant different approaches to poverty reduction.

### Profile of the Poor

Looking beneath national aggregates, which groups face a higher-than-average risk of poverty, and which groups constitute most of the poor? The two are not the same. Certain subgroups can have an

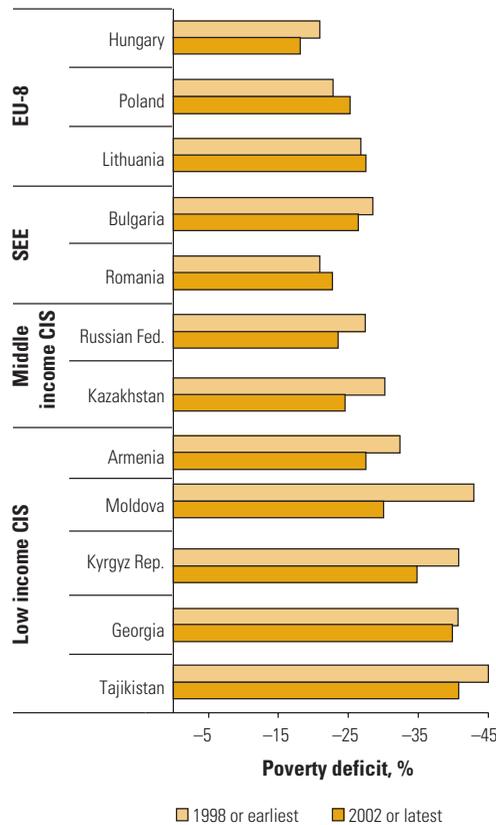
**FIGURE 1.2**  
**Poverty Incidence Varies across Countries in the Region, around 2003**



Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 2 for latest year.

Note: In 2000 PPPs.

**FIGURE 1.3**  
**Poverty Depth in the Region, 1998–2003**



Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 2 for data and years used by country.

Note: Poverty depth is the distance between consumption per capita of an average poor and poverty line, expressed as percent of poverty line. For the EU-8 poverty depth is assessed using \$ 4.30 a day, for other countries, \$ 2.15 a day.

extremely high incidence of poverty, but may not form most of the poor because of their small share in the population. The discussion focuses first on groups with high risk of poverty and then on groups that constitute a large share of the poor.

Although the poverty profile is changing, the same groups are found to be at high risk of poverty as in 1998. Five years ago, the World Bank identified four subgroups of the population as having a higher incidence of poverty than others: in particular, the unemployed, the less well educated, the rural population, and children (or large families). However, because these groups made up a relatively small share of the total population, they rarely constituted the largest group among the poor, except in a few countries. In most of the

Region's countries, the largest group of the poor was found to be employed, with a secondary education, often living in urban areas, and of working age. Children formed the second largest group. Taken together, working adults and their dependent children (or, working families) accounted for an overwhelmingly large proportion of the poor. Five years later, this picture remains largely true.

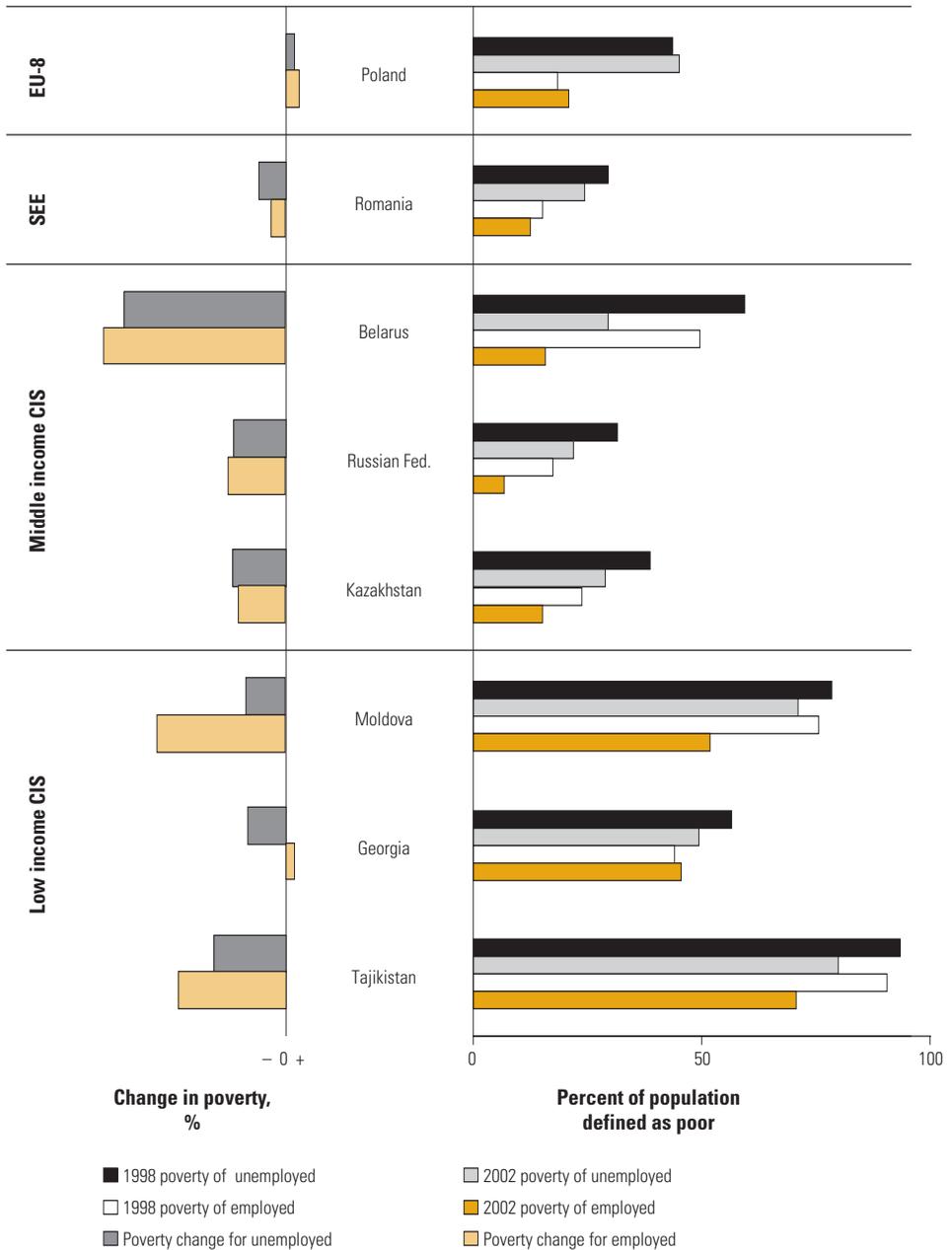
The unemployed face high and increasing poverty risk. As might be expected, the unemployed face a higher-than-average incidence of poverty (right panel in figure 1.4). Moreover, there has been an ongoing deterioration in their position relative to the employed (left panel in figure 1.4). Indeed, in the middle- and low-income countries in the CIS, such as Belarus, Moldova, Russia, and Tajikistan, there has been a sharp increase in relative poverty risk of the unemployed (that is, poverty risk relative to the employed), basically reflecting the substantial improvement in the living standards of those in employment. By contrast, five years ago, the difference between the poverty risks of the two groups (that is, employed and unemployed) was relatively small. In the poorer CIS group, Georgia represents the case of the differences that remain as subdued as they were five years ago.

Low education is strongly associated with poverty. As reported previously, in the Region, poverty incidence falls with level of schooling. Figure 1.5 shows absolute poverty risk by levels of education for four representative countries and its evolution during 1998–2003. It shows that in countries with significant poverty reduction (mostly in the CIS), all educational categories shared equally. A different outcome emerges in countries with slow poverty reduction (mostly in EU-8 and SEE). In these countries, those with the lowest and the highest educational attainment experienced no change, while poverty incidence for the middle groups changed in parallel. Clearly, the low-growth environment has done little to reduce poverty among the least educated.

Capital cities gained the most from growth and rural areas the least. Rural areas face the highest poverty risk, followed by secondary cities. Rural poverty is typically higher than urban poverty (except for Armenia and Belarus), but the gap has increased in the past five years. This is because economic growth has resulted in more rapid poverty reduction in urban than in rural areas and, in a few instances (Armenia, Georgia, and Poland), rural poverty has actually increased (left panel in figure 1.6). Capital cities, and the poor residing in capital cities, gained most, to the point that in some countries, poverty in capital cities has been practically eliminated. Barring some exceptions driven by peculiar historic circumstances (for example, FYR Macedonia), capitals have much lower poverty than other cities, sometimes strikingly so (Kazakhstan, Russia, and Uzbekistan).

FIGURE 1.4

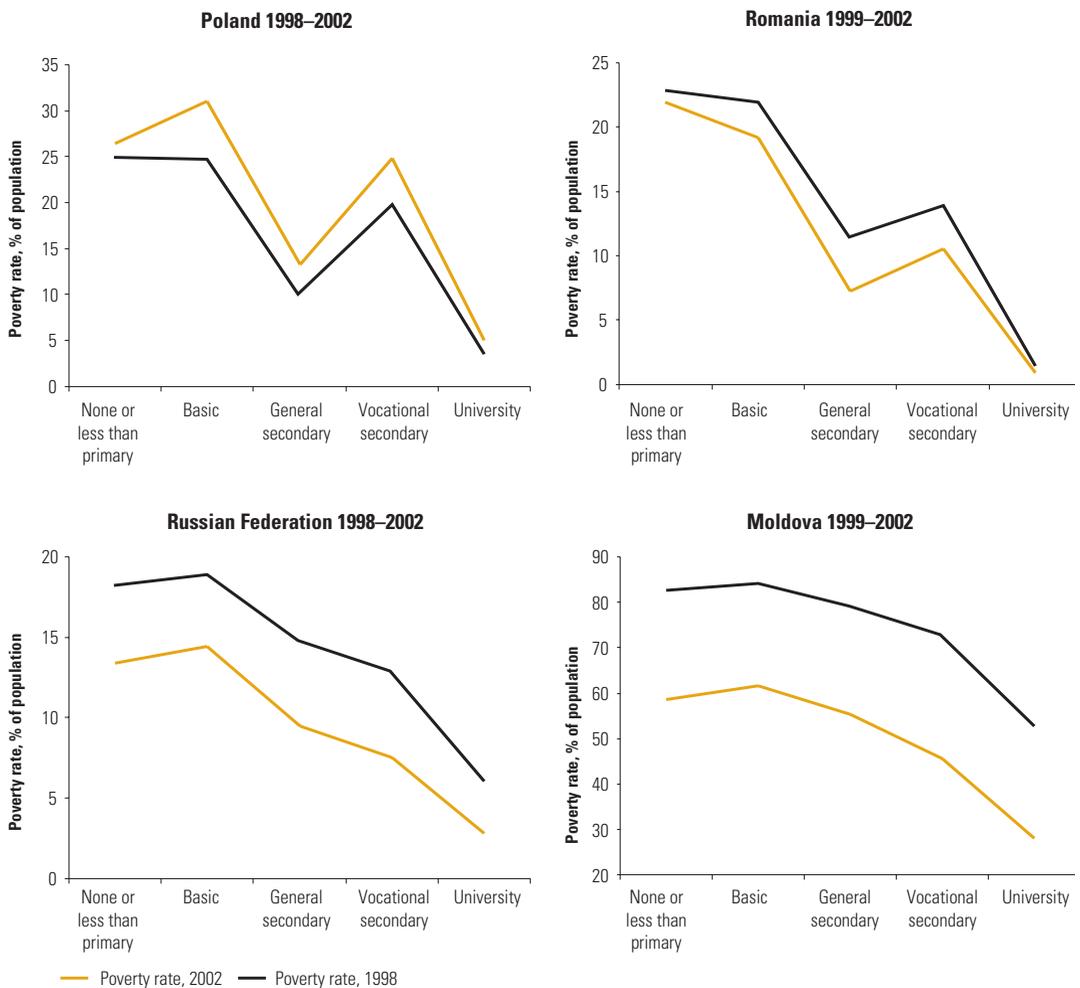
Levels and Changes in Poverty by Employment Status, 1998 to 2003



Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 6 for country-level data and years used.

Note: 1998 or earliest available year is used as starting point and 2002 or latest available as end point; for Poland and Belarus, poverty line is \$ 4.30 a day, for other countries, \$ 2.15; in 2000 PPPs.

**FIGURE 1.5**  
**Change in Poverty by Education for Representative Countries**



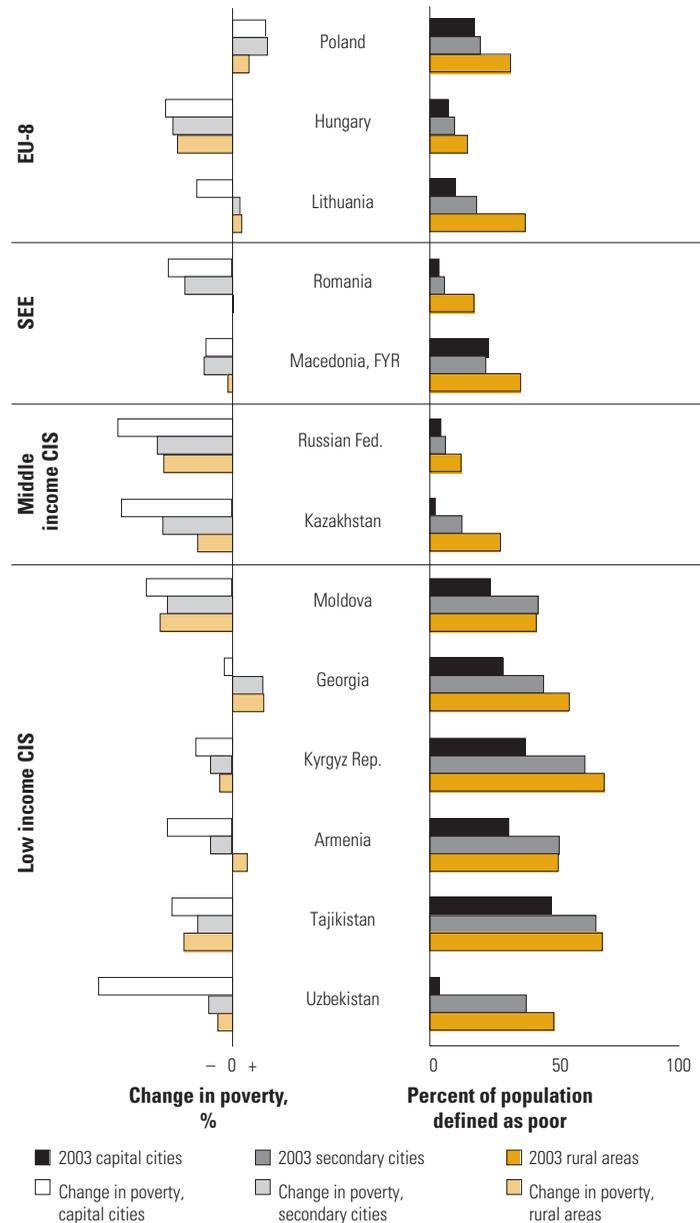
Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 5 for country data and years used.

Note: For Poland, poverty line is \$ 4.30 a day, for other countries, \$ 2.15, in 2000 PPPs.

Changes over time show that because of concentration of economic opportunities, capital cities have reduced poverty faster than any other areas have, and often secondary cities did no better on average than rural areas. As a result, a large gap is now observed in rural and urban poverty rates in middle income CIS countries, the EU-8, and SEE (right panel in figure 1.6). In countries where rural populations are large or the rural-urban gap is particularly high, the rural poor are in a majority. Thus, rural poor represent only between 25 and 40 percent of all poor in Bulgaria, Estonia, and Russia, but close to 70 percent of all poor in Kazakhstan, the Kyrgyz Republic, Moldova, Romania, and Tajik-

istan. Because of the rising relative incidence of rural poverty, the Region as a whole has seen an increase in the share of poor living in rural areas. At the end of the past decade, 45 percent of all poor in the Region lived in rural areas. This share has since risen to 50 percent.

**FIGURE 1.6**  
**Capital Cities Gained More than Other Cities and Rural Areas, 1998–2003**

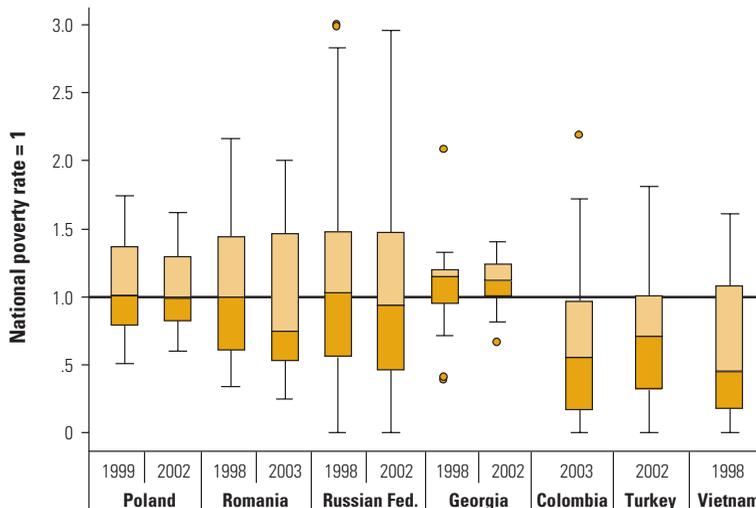


Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 3 for country data and years used.

Note: For the EU-8 and FYR Macedonia poverty line is \$ 4.30 a day, for other countries, \$ 2.15; in 2000PPPs.

Poor regions are noticeably lagging behind, and there is increasing differentiation between regions with regard to poverty. With further disaggregation of poverty rates by subregions within countries, a similar picture of increasing concentration of poverty in relatively disadvantaged areas emerges. Figure 1.7 shows that the gap between poorer and richer regions has increased in the past five years. In part, this is due to rising relative poverty in rural areas. It is also because poverty reduction in secondary cities has lagged behind the progress in capital cities and large population centers, where most of the new economic opportunities are concentrated. The trend toward rising regional disparities in poverty rate for the Czech Republic, Hungary, and Poland is also documented by Förster, Jesuit, and Smeeding (2005), using different data sources and different definitions of poverty. The comparison with benchmark countries presented in figure 1.7 offers interesting insights into the specifics of poverty in the Region. The extent of variation in poverty risks within countries of the Region spans the whole range from relatively moderate to extreme. But the location of box diagrams in figure 1.7 suggests that concentration of poverty within countries of the Region remains quite distinct from that of other world

**FIGURE 1.7**  
**Variation of Poverty Risks by Regions, 1998/9–2002/3**



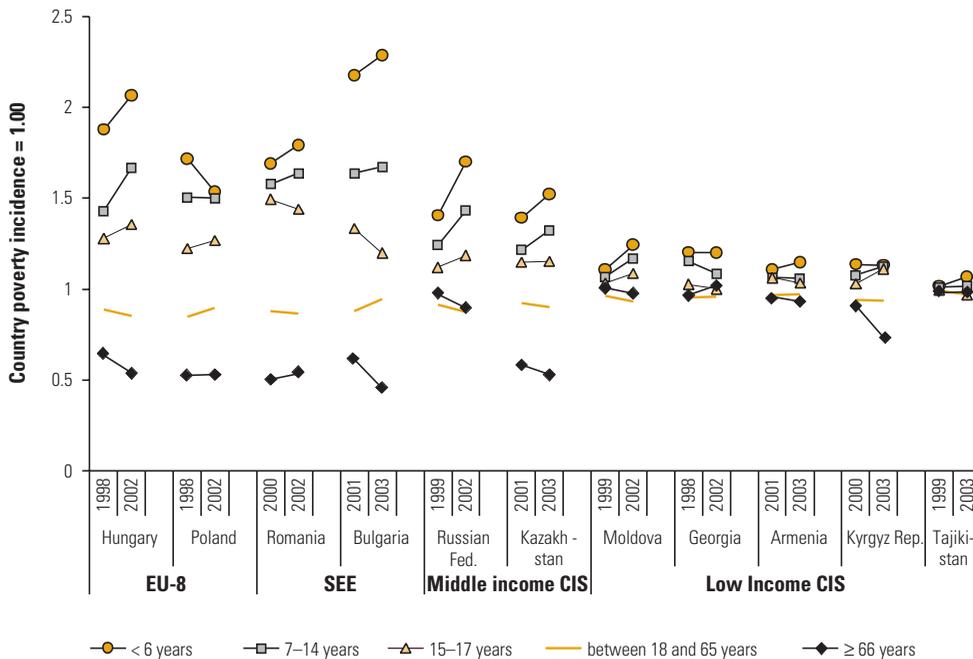
Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 3 for data used.

Note: The boxes represent range for variation of the poverty rates. The line in the middle of the box represents the ratio of the median to the national poverty rate. The box extends from the 25th percentile to the 75th percentile of the distribution of regional poverty rates, the so-called interquartile range (IQR). Whiskers extend the box by 50 percent. Regional-level poverty rates are for the level at which surveys are representative, and rural and urban areas for each region were treated separately—samples were designed to provide urban-rural breakdown within each region; the number of regions varies between 176 in Russia and 16 in Georgia. Dots refer to outlying regions with poverty rates (relative to the median) more than 1.5 times the interquartile range.

regions. The poor in the Region are still spread evenly throughout the countries, while in benchmark countries representing the developing world, they are concentrated in a few poor regions.

Children face much higher poverty risk than the elderly, which is increasing over time relative to the average. Figure 1.8 shows poverty risks by age and its evolution over time (relative risks to fall below the \$2.15 poverty line, where a risk of 1 indicates that an age group is no more or less likely than the average to fall into poverty). High poverty risk, by which is meant higher-than-average incidence of poverty, among families with children remains a major concern in all countries of the Region. This figure provides evidence that small children (under 6 years) face elevated poverty risks. The same applies to older children (under 17 years). The elderly, in contrast, are characterized by somewhat lower poverty risk (except for Georgia), especially in the EU-8 and Kazakhstan. Indeed, in contrast to the situation five years ago, no country has the elderly as the group facing the highest risk—a possible reflection of the regularization of pension payments and reduction of pension arrears.

**FIGURE 1.8**  
**Changes in Poverty by Age, Relative to National Average**



Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 4 for data used.

Note: For the EU-8 and Bulgaria poverty line is \$ 4.30 a day, for other countries, \$ 2.15.

The diagnosis of a worsening situation for families with children does not hinge on using a per capita scale to assess welfare. A key question when considering relative risks of different demographic groups is whether findings are sensitive to assumptions about economies of scale. The per capita standard used to construct the poverty profile in this study assumes no economies of scale. Children tend to live in large families—where there may well be scale economies—while the elderly tend to live in small families. With sufficiently large economies of scale, it is possible for relative risk rankings for children and elderly to be reversed. However, in countries where one would expect economies of scale to be significant (for example, middle-income countries), the disadvantage of families with children is so pronounced that the ranking does not change with changing values of the economies-of-scale parameter. So, for example, children are consistently poorer than the elderly in Bulgaria, Hungary, Poland, and Romania. In low-income countries, this is not always the case (especially in Moldova, as documented in Mencini and Redmond [2005]), but given the dominance of food consumption in the household consumption basket (see appendix, part A, chart 2), it is not clear that other than per capita scales are particularly relevant. On balance, children tended to be the poorest group in the Region during 1998–2003.

The changes in the poverty profile by age have been most pronounced in countries with moderate poverty. In most countries, in addition to facing higher-than-average risk of poverty, children, especially small children, have seen noticeable increase in their poverty risk relative to other groups. This is particularly evident in middle-income countries such as Hungary, Kazakhstan, and Russia. In Poland, the poverty risk of small children has improved somewhat, but it is undone by the increasing poverty of youth. The poorest countries, in contrast, again with the notable exception of Moldova, have not seen major shifts in poverty risks faced by children. The elderly as a group has, in general, held a steady position vis-à-vis the rest of the population or has improved its well-being. One important exception is Georgia, where poverty risk increased somewhat for the elderly.

*Vulnerable groups.* Certain social groups (internally displaced persons [IDPs], Roma, and other socially excluded groups) suffer extremely high poverty, even controlling for their individual demographic and labor market characteristics (see box 1.4); however, these groups often account for only a minority among the poor.

Which groups constitute most of the poor? Looking at the composition of the poor by labor market status (figure 1.9), children and working adults together constitute most of the poor. Because most

**BOX 1.4****Vulnerable Groups and Poverty: Roma, IDPs, and Institutionalized Populations**

A number of studies carried out in the past five years in countries of the Region document extremely high poverty risks for some social groups: ethnic minorities, refugees, institutionalized persons, and disabled. These risks persist even when one controls for household and individual characteristics. The combination of income poverty and low social capital for these groups often reflects a “totality of exclusion” (Szalai 2002).

*Roma minority.* Poverty rates among Roma are a multiple of poverty rates of the general population and other vulnerable groups. For example, a staggering 60.5 percent of the Roma are poor in Serbia, compared with 6 percent among the general population (World Bank 2005e). As a minority that has experienced centuries of discrimination, the Roma have high intragroup interactions, but their networks do not extend beyond their ethnic group. A cross-country comparison found that the bulk of poor Roma households were headed by someone with primary or less than primary education, a factor that in turn limited employment opportunities and increased dependence on social assistance (Revenge, Ringold, and Tracy 2002; World Bank 2004d). Roma frequently live in settlements where unclear property ownership and inadequate documentation prevent them from claiming social assistance or enrolling their children in school. Their high prevalence in informal sector employment further limits their access to health care and unemployment benefits. Social and cultural factors also affect access and interactions with service providers. Exclusion has been furthered by overrepresentation of Roma children in “special schools” for disabled children, and language barriers create difficulties in communicating with teachers, doctors, and local welfare officials (Ringold, Orenstein, and Wilkens 2003).

poor children are in families with at least one working adult, working families form the largest group of the poor. The next largest group, which could be the elderly, the unemployed, or the inactive, depends on the country in question. The poverty profile in the countries of the Region is strikingly different from the composition of the poor in benchmark countries.

Working poor are the majority among the poor in the Region. It is worth pointing out that in the EU-15, exclusion from employment is a typical correlate of poverty; and the share of the working families, or working poor, is typically small, while the share of jobless among the poor is large. In contrast, in the Region, except for Hungary, there are more *working* adults among the poor than there are *nonworking* adults. Thus nonemployment—while closely associated with

*Internally displaced persons (IDPs).* In all countries where data are available, IDPs consistently are found among the poorest group (see, for example, World Bank 2003l). Migrants lose social capital through displacement, where the activities and structures that supported social relationships in their previous environment are missing. This is particularly true for people displaced by war. A study of displacement in the Region shows that poverty from loss of assets and unemployment of IDPs leads to the “hollowing out” of communities of displaced persons because potential entrepreneurs and leaders migrate to more fertile environments (Holtzman and Nezam 2004).

*Formerly institutionalized populations* (such as young people leaving residential facilities) start life with a combination of poor skills and very low social capital that puts them at risk of poverty and exploitation. Many lack functioning family ties, and their remaining social networks consist of people as isolated and disadvantaged as themselves. Throughout the Region, many children are still excluded from mainstream schools because of restricted mobility, sensory impairment, learning difficulties, or minority ethnicity. They spend their school years in institutions that isolate them and drastically reduce opportunities for mainstream social engagement (Grammenos 2003; Clert and Gomart 2004).

*The disabled*, especially the severely disabled, is a group that often faces discrimination and severe constraints in engaging with society. The sheltered workshops that once provided incomes, a place in society, and regular social contact outside the home no longer function. Often, disability pensions effectively exclude disabled people from the labor market. Current Kyrgyz legislation, for example, prohibits some disabled people from earning a living. At the same time, disability benefits are insufficient (Toraliyeva and Maslova 2004).

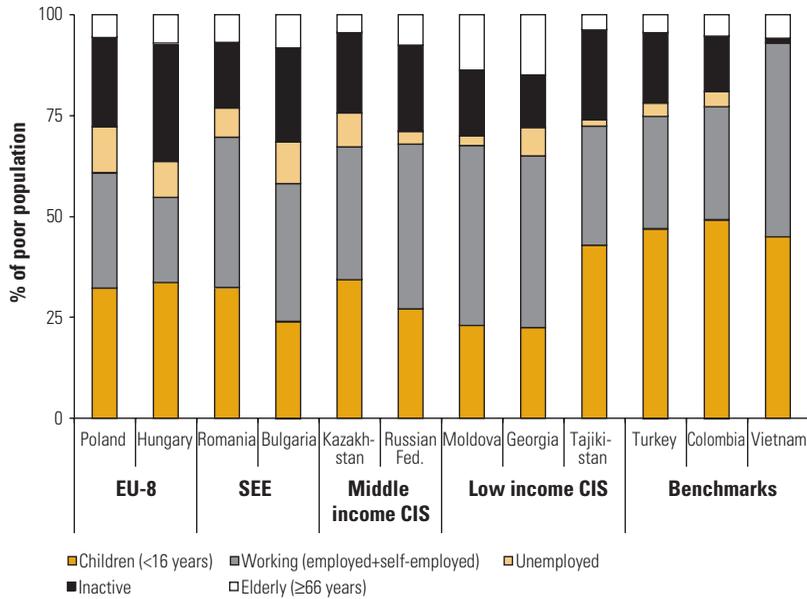
*Sources:* Grammenos 2003; Clert and Gomart 2004; Holtzman and Nezam 2004; Szalai 2002; Toraliyeva and Maslova 2004; Ringold, Orenstein, and Wilkens 2003; Revenga, Ringold, and Tracy 2002; and World Bank 2003l, World Bank 2004d, and 2005e.

poverty—does not represent in itself a major poverty dimension. Some countries in the EU-8 such as Hungary seem to have moved closer to the EU-15 typical pattern, but still harbor significant numbers of working poor. This point is brought home by figure 1.10, which shows for four representative countries the distribution of poor between households where someone is employed (working families) and households where no one is employed (jobless families). Hungary has the largest share of poor without any connection to employment (approximately 37 percent of the poor live in households where no one has a job), but such households account for less than one quarter of all poor elsewhere. The predominance of working poor in the Region remains in stark contrast with the rest of Europe, where poverty is concentrated among the jobless.

**FIGURE 1.9**

**The Poor in the Region around 2003**

Composition of the Poor by Age and Employment in Selected Countries in the Region and Benchmarks



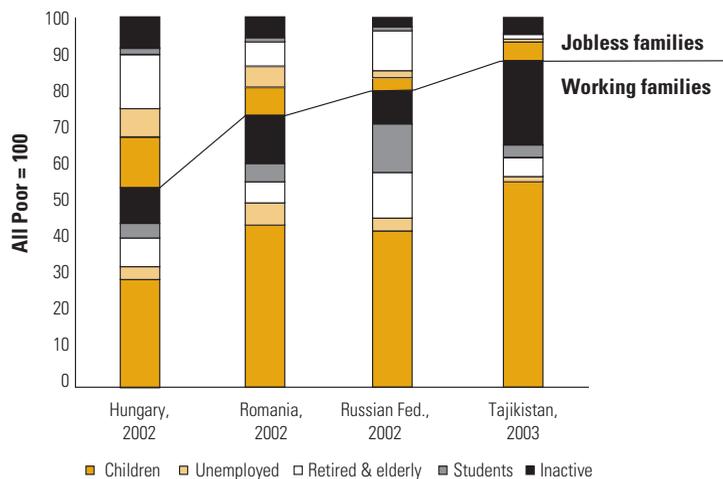
Source: World Bank staff estimates using ECA Household Surveys Archive; see appendix tables 4 and 6 for data and years used.

Note: For the EU-8 and Bulgaria \$ 4.30 a day used as a poverty line; other countries, \$2.15.

**FIGURE 1.10**

**Most Nonworking Poor Live in Households Where Someone Works**

Share of All Poor Accounted for by Nonworking Individuals Differentiated between Those Living with Someone Who Works (Working Families) and Jobless Families



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Hungary \$4.30, other countries \$2.15, at 2000 PPP used as poverty line; jobless families are defined as household where no one is working for wage or is self-employed.

## Poverty in Nonincome Dimensions

Although poverty may no longer be a growing problem in most countries in the Region, deprivation in nonincome dimensions remains a source of concern. Across nonincome dimensions, *health* status in most countries of the Region is a major factor of deprivation and, in many respects, is deteriorating. Progress in other nonincome dimensions is also mixed: better financing of public services has helped to maintain access, but erosion of quality, combined with deterioration of affordability, has excluded many poor households. The relative worsening of service quality—both in access (poor versus nonpoor, urban versus rural) and with regard to historical parameters (where subsidized services were universally available)—affect subjective perceptions of poverty.

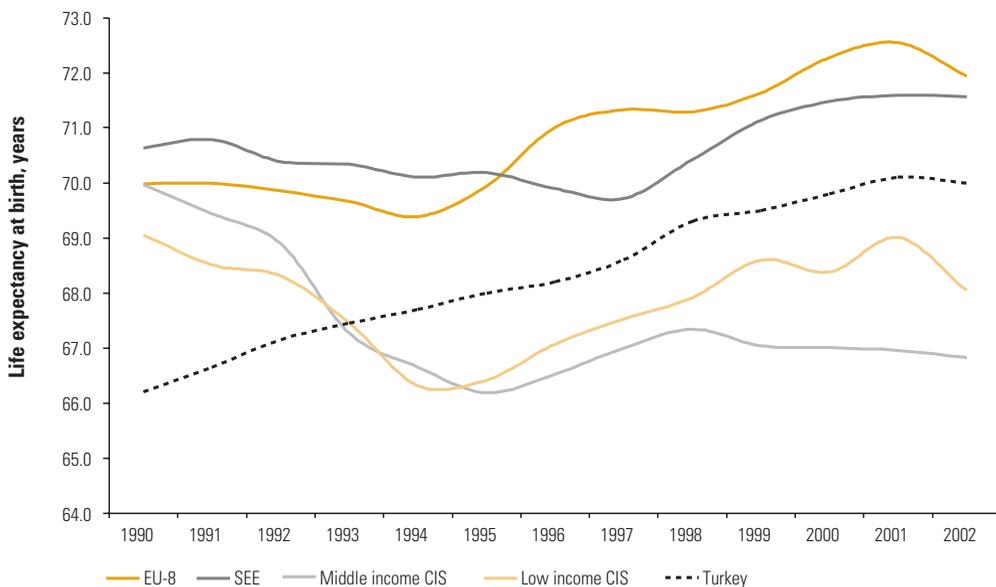
### Health

Life expectancy losses have been difficult to reverse. All countries in the Region suffered declines in life expectancy during the 1990s. For some countries, this decline was brief, for others fairly protracted. In the latter group—although the declines have bottomed out or have begun to be reversed—many countries have not recovered to pre-transition levels (figure 1.11). For example, in Russia and Ukraine, life expectancy is five years below pretransition levels. Most of the decline in life expectancy is accounted for by premature (or avoidable) deaths in the most productive age groups, and it affected males particularly strongly. In Russia alone, the total number of male premature deaths was 2 million during 1992–2000, which, when compared with all deaths, suggests that one out of five deaths during the period was preventable (Nolte, McKee, and Gilmore 2004). Interpreting premature death as an extreme manifestation of health poverty, the risk for Russian males to suffer for this form of deprivation was about 3 percent. Although it is recovering, life expectancy in the Baltics, Belarus, Kazakhstan, Russia, and Ukraine is significantly lower than in much poorer Armenia and Georgia.<sup>8</sup>

In transition, premature mortality affects both the poor and non-poor. Evidence on linkages between premature mortality and poverty is more limited. Available evidence from panel surveys suggests that premature mortality is not concentrated among the poor, but affects all groups of the population to the same extent (Brainerd and Cutler 2005). At a more aggregate level, Ivashenko (2005) finds that variation in regional poverty rates accounts for less than one-half of regional excess male mortality.

Maternal and child mortality remain high in some countries. Mortality among children and women is also an issue, although more so in some countries than in others. Infant and under-five mortality rates are declining in most countries of the Region; however, in some parts of the Region, particularly in the low income CIS countries, progress in reducing child mortality is too slow.<sup>9</sup> In addition to the need for better pre- and postnatal care, lagging countries need to develop better case management techniques for the treatment of infant and early childhood diseases, both at home and in the community. Maternal mortality (and maternal health) is also an issue in a number of countries in the Region. A number of low income CIS countries and some middle income CIS countries, as well as benchmark Turkey, may well not achieve the Millennium Development Goal (MDG) targets related to maternal health.<sup>10</sup> Key to reducing maternal mortality is access to emergency obstetric care and a referral system that enables women to reach life-saving treatment in time. Despite the high proportion of births that are attended to by medical professionals, health systems in many parts of the Region are not able to deliver the timely services that are essential to averting maternal death. Related to maternal health more broadly is the issue of exces-

**FIGURE 1.11**  
**Life Expectancy at Birth, 1990–2003**



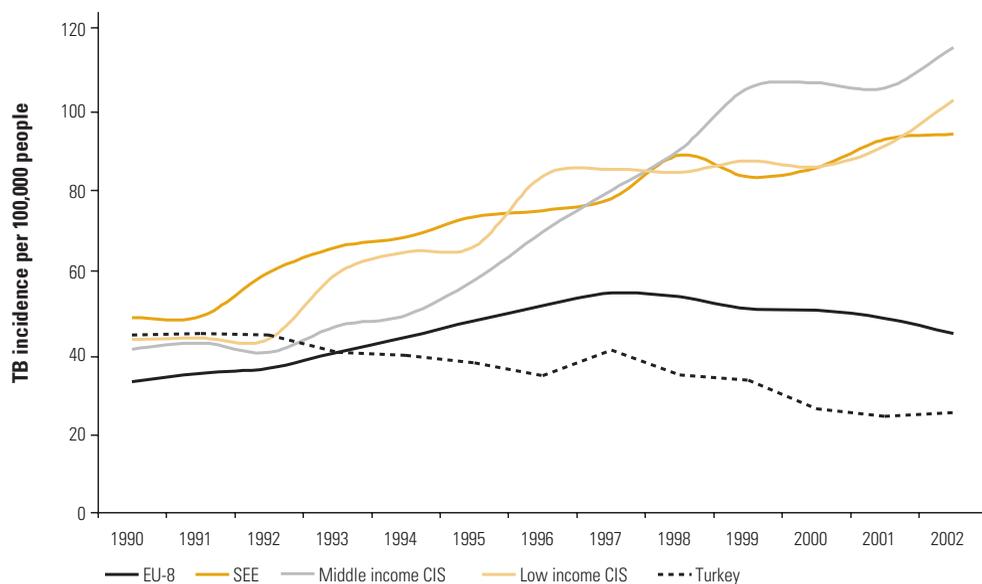
Source: WHO.

Note: EU-8: Hungary, Poland, Estonia, and Latvia; SEE: Romania and Bulgaria; middle income CIS: Belarus, Kazakhstan, Russia, and Ukraine; low income CIS: Armenia, Georgia, the Kyrgyz Republic, Moldova, and Uzbekistan.

sive reliance on abortion for birth control in large parts of the Former Soviet Union. This is thus partly a legacy issue but also a reflection of the fact that contraceptives remain in short supply and are relatively expensive. Despite declines in recent years, abortion rates remain among the highest in the world, with negative consequences for maternal health.

Public health indicators show worrying trends outside the EU-8. Of course, preventable mortality is the most extreme form of health deprivation. Other forms of health deprivation include increased risk of disease and reduced access to medical help when in need. An increase in the incidence of noncommunicable diseases is to some extent to be expected because most countries have completed the epidemiological transition (from communicable diseases as a major source of morbidity to other health risks). However, countries (especially in the CIS) are facing growing epidemics of communicable diseases such as TB and HIV/AIDS (figure 1.12). The increase in injecting drugs and commercial sex work throughout the Region, a concurrent increase in the incidence of sexually transmitted infections (STIs), high migration rates, limited capacity of governments and civil society to implement effective preventive

**FIGURE 1.12**  
**Incidence of Tuberculosis, 1990–2003**



Source: WHO.

Note: EU-8: Hungary, Poland, Estonia, and Latvia; SEE: Romania and Bulgaria; Middle income CIS: Belarus, Kazakhstan, Russia, and Ukraine; low income CIS: Armenia, Georgia, the Kyrgyz Republic, Moldova, and Uzbekistan.

responses, and low levels of awareness of HIV and STIs have all contributed to the growing epidemic. At current rates of infection and treatment, the HIV/AIDS MDG is unlikely to be attained by the Region.

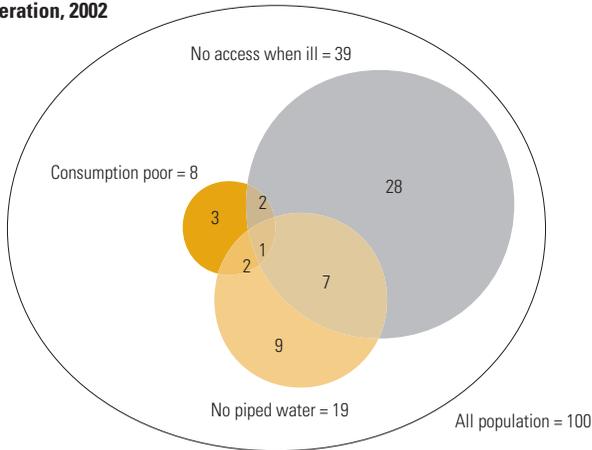
Perceptions of health status show mixed trends. Although suffering from a number of drawbacks, subjective perceptions of health status reflect many of these objective trends. Between 20 and 25 percent of the population in the Region report their health status being “bad” or “very bad”—significantly more than in any country in the EU. As is the typical pattern with these data, the poor report less bad health than the rich (controlling for age), pointing to the influence of income and possibly education in such self-assessments. This difference is reflected at the national level in reported acute morbidity rates that vary from fairly low levels in poor countries (for example, 3 percent of the population per month in Armenia, Tajikistan, and Uzbekistan) to fairly high levels in richer countries (more than 20 percent in Belarus and Russia). Over the past five years, morbidity rates have declined, perhaps reflecting rising incomes.

Chronic health conditions that limit daily activities provide perhaps a better assessment of underlying health conditions. Reported incidence of chronic conditions has been increasing. In the CIS, between 25 and 55 percent of the population report such conditions (with the highest proportion observed in Moldova, the lowest in Georgia and Kazakhstan, and Russia falling in between). The proportion of the population reporting chronic conditions falls to around 10–20 percent in SEE and the EU-8 (with the lowest in Romania and the highest in Hungary), but remains higher than in most EU countries.<sup>11</sup>

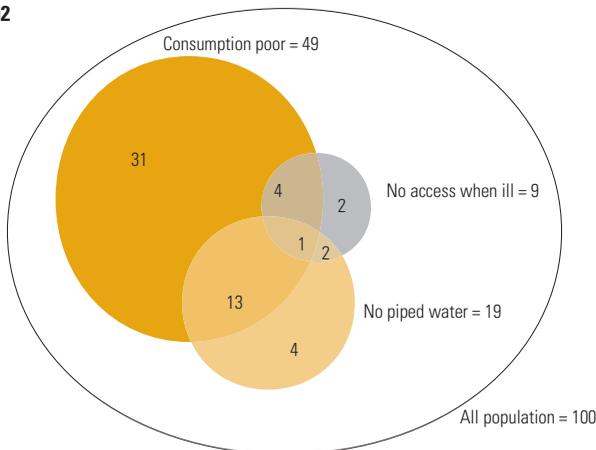
Utilization of health services in low-income countries has declined to very low levels. Utilization of health services, defined as the fraction of sick individuals who use health services, represents another dimension of deprivation, namely deprivation of health care. Here the picture is mixed. Utilization has gone up in most countries, but in a number of poor countries remains at very low levels, reflecting both supply-side (poor quality) and demand-side issues (high cost) in accessing health care. There is clear evidence that the poor experience greater financial barriers to accessing health care than the rich. Figure 1.13 examines the degree of overlap between different notions of poverty as they relate to income and health. There is clearly a degree of overlap, but it is less than complete. This reinforces the need to think of health and other indicators (such as access to education or good-quality housing) as dimensions of well-being *distinct* from income (or poverty).

**FIGURE 1.13**  
**Poverty in the Dimensions of Consumption, Access to Water, and Health**

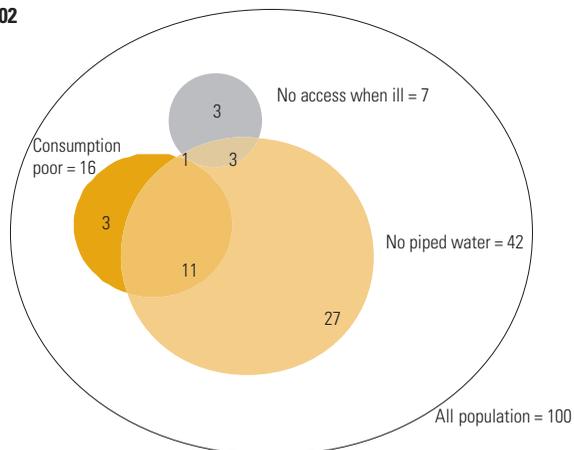
**Russian Federation, 2002**



**Georgia, 2002**



**Romania, 2002**



Source: Staff estimates from survey data.

Note: Percentages to population. Size and overlap exaggerated in some cases for clarity of exposition.

## Education

Inherited literacy rates are high in the Region. The most acute form of education deprivation is illiteracy. Average literacy among the transition economies of the Region is high (more than 98 percent), and in the transition country with the lowest levels of literacy (Tajikistan), 96 percent of adults are literate. Thus, this extreme form of education deprivation does not appear to be a major issue in the Region. Few studies in the Region focus on actual ability to read and understand text (as opposed to self-declared literacy), but the ones that do show that functional illiteracy is not uncommon. However, data deficiencies preclude an examination of whether this is more of an issue than in other parts of the world, or any examination of trends.

The lack of education and poverty are closely correlated, but a majority among the poor in the Region have completed secondary education. Although there is no information on functional literacy and poverty, data on number of years of completed education show that there is a concentration of adults with incomplete primary education among the poor. However, in contrast to most developing countries, including benchmarks, a clear majority among the poor in the Region are those who completed secondary education.<sup>12</sup>

But the quality of education is not improving and is ill suited to the needs of the labor market. Although more extreme forms of education poverty are not an issue, concerns remain about the overall quality of education imparted by inherited systems. With few exceptions, there has been an increase in the proportion of students who underperform at the secondary school level, according to international assessments of educational quality.<sup>13</sup> If this trend is not stemmed, the fraction of children and youth with poor education will continue to grow. The value of the skills imparted by education systems in a large number of countries is also questionable and bears little relation to what may be required by the market (see, for example, Yemtsov, Mete, and Cnoblach 2005).

## Infrastructure and Housing

The steady erosion of infrastructure networks due to neglected maintenance (especially in the CIS countries) has taken a toll on access to, and quality of, infrastructure services. Even though the ability to pay has increased since the resumption of growth in all parts of the Region, the lagged effect of postponed maintenance has resulted in falling access and increased deprivation, particularly in the CIS. However, as with education, the inherited networks still offer access far

greater than in countries at comparable income levels, and deprivation generally does not take extreme forms.

*Water.* Lack of access to safe water is the most acute form of deprivation in this area and is an important proximate cause of poor health from waterborne diseases. Interpreting access to safe water in the very narrow sense of connection to a working tap (or faucet), one does not find significant water access “poverty” in the Region, except for some specific groups (for example, some rural areas) and some poor countries. Connection rates are impressive and, in some instances, have expanded over the past five years (Tajikistan). Connection rates in rural areas are obviously lower than in urban areas and, in some instances, have actually deteriorated in the past five years (for example, the Kyrgyz Republic and Uzbekistan).<sup>14</sup> Connection rates, however, overestimate access to water. Water is often not available for more than few hours a day, particularly in the low income CIS group (see chapter 4 for more evidence). There is growing evidence that tap water is not meeting basic quality requirements in many instances. It is also possibly the case that water supply disruptions take a heavier toll on urban dwellers in apartment buildings with limited alternatives (widespread in the Region) than for rural residents. Although there are concerns about quality both in uninterrupted supply and bacteriological content, there is limited evidence of significant health impacts of limited access to safe water. There have been few significant outbreaks of waterborne diseases in the Region.

*Heating.* The ability to maintain ambient temperature at home through the winter is a basic need in the colder parts of the Region. In contrast to water (where even cost recovery tariffs will not undermine the budgets of the poor), “energy” poverty is a source of widespread concern. Although few studies suggest extreme deprivation—such as death from exposure to cold—there is abundant evidence of less extreme forms of deprivation, such as the increase in the use of so called “dirty” fuels for heating indoors and reduced activity levels due to inadequate heating (see, for example, Wu, Lampietti, and Meyer 2004). Because of high connection rates to electricity (virtually 100 percent in both rural and urban areas) and availability of other fuels on the market, energy “poverty” is more often than not related to the inability of the poor to afford clean sources of fuel and is thus one of the consequences of poverty.

*Sanitation services and housing.* Most countries in the Region are highly urbanized, and provision of safe sewerage and solid waste disposal are

important aspects of household well-being. Among countries of the Region, Uzbekistan has the lowest connection rates to sewerage (50 percent of urban households). In other CIS countries, connection rates vary between 70 and 90 percent for urban areas, while those in the EU-8 and SEE are generally above 90 percent. Connection rates are significantly lower among the poor, again with Uzbekistan having the most acute problem (80 percent of urban poor are not connected to sewerage). In other countries, nonconnection rates among the poor are also high, ranging between 50 percent in the low income CIS countries to 25 percent in the middle income CIS group and SEE. There is little information on other forms of sanitation.

Substandard urban housing in many parts of the Region is concentrated in informal settlements, often parts of large cities where temporary housing is built without permits. Dwellers of slums often belong to poor marginalized groups, such as Roma and IDPs. However, the overall prevalence of slums is low compared with other regions (UN Millennium Project 2005). There is growing anecdotal evidence of the rise in the number of slum dwellers in the Region, but accurate estimates are elusive. Overcrowded housing is a significant problem in the poorest countries of the Region, affecting primarily capital cities.

### **Subjective Poverty**

The effect of the transition shock on people's morale is not over: the Region remains the one with the most pessimistic perceptions and lowest self-rated satisfaction with life (see box 1.5). Subjective perceptions of well-being provide a measure of a population's own assessment of poverty. Although material deprivation is the most important correlate of subjective poverty, nonincome deprivation also plays a role. Despite recent improvements in the self-assessed welfare mirroring income gains, the formerly socialist countries are characterized by lower satisfaction with life for their level of income than any other region of the world.

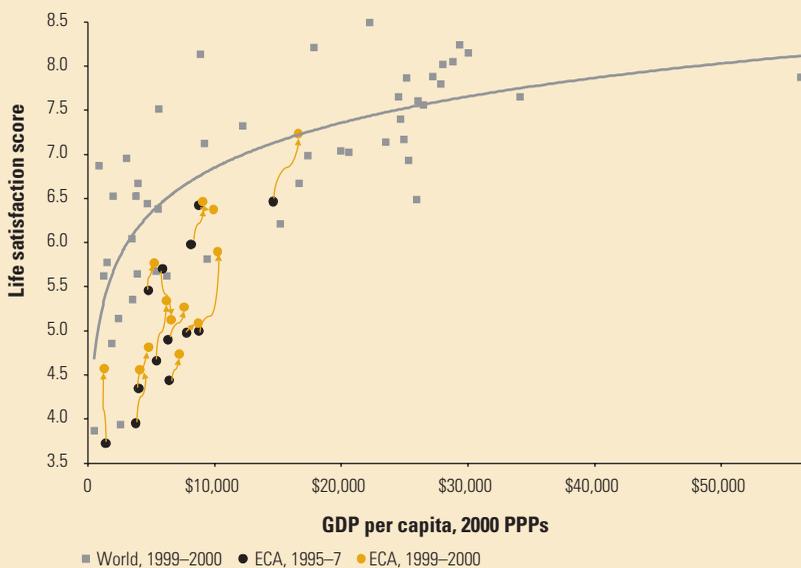
Some authors suggest that inequality aversion is an important factor behind the lower subjective perceptions of well-being in the Region (see Sanfey and Teksoz 2005;<sup>15</sup> also Ravallion and Lokshin 1999). Others, however, find limited evidence of inequality aversion in the CIS relative to other countries (see Murthi and Tiongson forthcoming). Decline in access and quality of public services may also have a role to play in explaining perceptions of well-being, particularly given the legacy of fairly uniform access.

**BOX 1.5**

**Life Satisfaction in the Region Remains Low**

Subjective data from the World Values Survey, spanning 1990–2000, suggest that after declining from the early to the late 1990s, subjective valuations of welfare in the transition economies of the Region improved in the most recent period. In other words, subjective evaluations appear to follow the broad trend in material deprivation. At the same time, these data reveal that, compared with other countries, the formerly socialist countries are characterized by lower satisfaction with life for their level of income (see figure below). Five countries in the Region—Armenia, Belarus, Moldova, Russia, and Ukraine—are in the bottom decile in the world distribution of satisfaction scores and fare much worse than the benchmark countries represented on the graph. Two of the Baltic States—Latvia and Lithuania—are in the next-to-bottom category, along with Albania, FYR Macedonia, and Romania. In general, the new EU members score much better, with Slovenia’s score of 7.23 (above France’s, 7.01, and not far off from Great Britain’s and Germany’s, 7.40 and 7.42, respectively) in life satisfaction.

**Life Satisfaction in the Region, While Improved, Is Low Vis-à-Vis Other Countries, around 2000**



Source: World Values Survey.

Sources: Sanfey and Teksoz 2005; Murthi and Tiongson forthcoming; and World Values Survey (see [www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)).

## Conclusions

Poverty has declined significantly in the Region since 1998 because of the resumption of growth. At the same time, progress in the non-income dimensions of well-being are mixed with improvements recorded in some instances and stagnation or declines in others. All in all, this has resulted in a change in the nature of poverty in the Region. Although the share of population below the poverty threshold has shrunk, the proportion who are “poor” in dimensions such as health, good-quality schooling, or housing has not declined in tandem across all dimensions. This has changed the nature of poverty, with a growing share or “weight” of nonincome dimensions in overall poverty.

What is specific about poverty in the Region? Poor people in the Region have much in common with the poor in other parts of the world; namely, an inability to meet basic material needs. But the Region’s historical legacy, challenges of transition, and unique geographical factors, have clear impact on defining these basic needs. Climatic conditions mean that warm clothing and heating are essential for survival. Demographic factors have their effects too. On the one hand, the rapid aging of the population in many countries means that there are fewer children for the poor to support, boosting the impact of earnings on poverty. But on the other hand, reductions in the family size mean that households in the Region are exposed to shocks that otherwise could be managed within the intrafamily solidarity networks. “Graying” of the population, which brings with it a burden of “rich country” epidemiological patterns, also means additional health care costs.

Transition itself affects the nature of poverty in the Region. The costs of moving large masses of population, which the previous system concentrated around nonviable production units, to new locations and sectors where they can rely on more sustainable livelihoods are enormous, and the process of reallocation has proven to be slow. It is further slowed down by infrastructure bottlenecks (persistent due to neglect of maintenance and low and inefficient investment) and housing market rigidities, which limit population mobility. The inherited production systems also result in persistent differences of productivity across firms with different histories (new, restructured, and old), which in turn result in persistent differences in earnings and pockets of high concentration of poverty among the working population. All of these factors not only determine the nature of poverty in the Region in the present, they are also powerful drivers of future progress in poverty reduction. A discussion of these issues follows in the next chapters.

## Notes

1. Throughout this report, \$2.15 per capita per day (in 2000 PPP) is used as the absolute poverty line.
2. The countries not covered by the poverty data for 1998–2003 are Croatia, the Czech Republic, the Slovak Republic, Slovenia, and Turkmenistan. Data from UNMIK were also not used. Moreover, several countries are represented by a single survey (year) or by surveys that are not sufficiently comparable to assess trends in poverty over time: Albania, Azerbaijan, and Serbia and Montenegro.
3. Though no recent data are available for Turkmenistan, it is classified as part of the low income CIS group, with a high level of poverty, based on the data (LSMS 1996) reported in *Making Transition Work for Everyone* (World Bank 2000a).
4. The World Bank's first regional poverty report, *Making Transition Work for Everyone*, used the 1996 set of PPPs. For differences in poverty rates from using other estimates of PPPs, see overview box 1.
5. Turkey is included in the aggregate figures, thus the referral to the ECA Region in the World Bank classification. Poverty for countries with missing data was extrapolated based on their population size and average subregional poverty incidence.
6. Here the distribution of the Region's poor by countries is assessed without Turkey.
7. Because survey data are used to obtain poverty estimates for the population as a whole, they have only a certain degree of precision, which differs across countries, but normally falls in a  $\pm 2$  percentage-point confidence interval around the point estimate.
8. Several explanations are advanced to rationalize this apparent puzzle, including dietary patterns, social environment (that is, family structure, the educational system, social networks, and so forth), physical environment (for example, exposure to toxic substances, safety at home and work, housing conditions and degree of overcrowding, and urban-rural differences), genetic endowment, and behavior (for example, adherence to treatment regimens, lifestyle choices like smoking).
9. The child mortality MDG calls for a two-thirds reduction in child mortality during 1990–2015. This goal is not meaningful for countries in the Region with low child mortality because a two-thirds reduction would require attaining child mortality levels that are below what is found in high-income countries. For others with higher mortality, the goal is still relevant. One complicating factor in measuring progress is that many countries use the old Soviet concept of infant mortality, which is contrary to WHO best practices and underestimates infant (and child) mortality. Alternative survey- and model-based methods help address this problem, but are not available with the same frequency as official data.
10. As with child mortality, the maternal mortality MDG—which calls for a reduction by three-fourths in maternal mortality rates—is not realistic in a number of countries. In countries where the goal is relevant, significant improvements are needed if the goal is to be met.

11. Data for the Region are staff estimates based on household surveys. EU figures are reported in EC 2002.
12. See appendix table 5. Note that because of a low poverty headcount with the \$2.15-a-day poverty line in EU-8 countries, data on poverty by education level from this subregion should be used with caution.
13. See chapter 4 for the assessments of secondary school students according to the evaluations of PISA and TIMSS.
14. Refer to appendix table 9 for country-level data on water connection.
15. Sanfey and Tukoz find a strong negative association between country-level inequality and overall life satisfaction in the Region's countries, in contrast to a positive association in the nontransition case.

## How Has Poverty Responded to Growth?

Since the end of the financial crisis in the Russian Federation, most countries in the Region have experienced sustained growth. As a result, poverty has declined substantially, although by a greater margin in some countries than in others. This chapter seeks to explain why differences in poverty reduction have been observed across countries in the Region. In part, these variations occurred simply because growth rates have differed. In general, where growth has been stronger, poverty reduction has been greater. However, even when allowing for differences in growth rates, the response of poverty to growth has varied across countries. This difference in responsiveness relates not only to differences in initial conditions but also to changes in the distribution during the period in question. Indeed, a number of fast-growing countries—for example, those in the CIS—have also seen shifts in the distribution of income toward the poor. As a result, poverty has declined more rapidly than might be expected. In contrast, where the distribution was unchanged or moved against the poor, poverty reduction was attenuated. In the extreme, with low growth and adverse movements in inequality—as was the case, for example, in parts of the EU-8—poverty actually increased. These issues are discussed in further detail in this chapter.

## Growth and Poverty Reduction

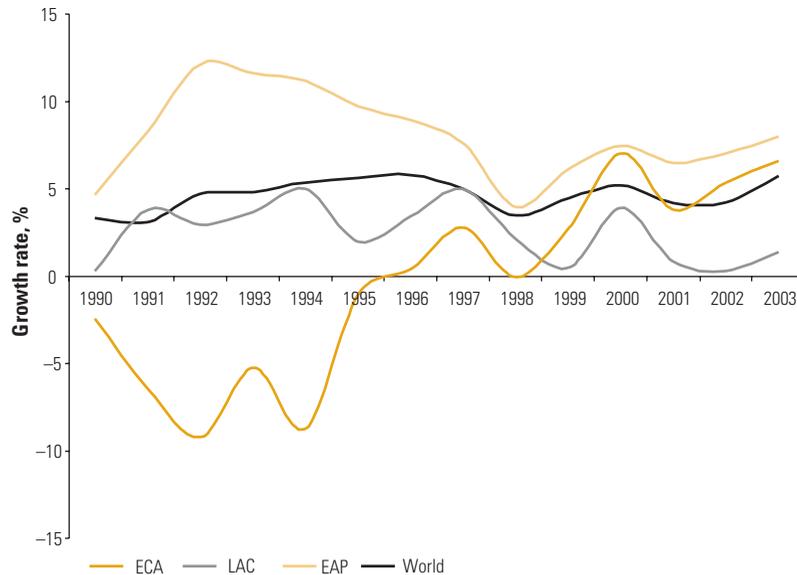
Virtually all countries in the Region experienced positive rates of growth (as measured by GDP) during 1999–2003, some at rates unprecedented in the past quarter of a century.<sup>1</sup> Since 1999, regional output has increased by more than 25 per cent. Not only was growth widespread but it also consistently exceeded the world average (figure 2.1). Growth rates, however, remain below those achieved in East Asia, largely because of the extremely strong performance of China. Within the Region, the highest growth rates were recorded in the middle income CIS countries (where the bulk of the poor reside), followed by the low income CIS countries, then SEE, and finally the EU-8. This strong growth performance resulted from several factors, key among which was the ability to take advantage of a favorable external environment. Countries were helped, in varying degrees, by the strength of the domestic policy environment.

Despite the strong growth performance, it was not until about 2004 that the Region as a whole returned to the level of GDP recorded in 1990 (see Åslund 2001). Also, although the Region as a whole may have resumed earlier levels of output, the GDP in some countries remains significantly below its pretransition level. For example, Georgia and Moldova are struggling to rise above half the level of GDP they recorded in 1990, whereas Ukraine is at 60 per cent of 1990 levels.<sup>2</sup> Moreover, during the 15 years that the Region has taken to recover from the transition shock, world output increased by 43 per cent. Despite the recovery of output, poverty in the Region has more than doubled compared with the late 1980s (see chapter 1), largely because of the rise in inequality since the onset of the transition.

What factors account for the strong growth performance of the Region in the past five years? Factors vary by regional subgroup. For the CIS, the recovery of growth in Russia has been an important factor. The devaluation that accompanied the financial crisis in Russia was important for restoring the exchange rate to a more competitive level and spurring the recovery of exports and growth. Combined with high prices for oil and other natural resources, the devaluation gave a huge boost to the Russian economy, which has, in turn, become a regional locomotive for many neighboring countries.<sup>3</sup> Structural reforms that many of the CIS countries had undertaken enabled an improved supply response when the opportunity presented itself. For the EU-8, the prospect of accession provided a strong impetus for both reforms and growth, while the restoration of peace and stability in SEE was an important factor in sustaining recovery.

FIGURE 2.1

### Since 1999, Growth Rates in the Region Have Been Higher than the World Average



Source: World Bank staff estimates, using World Bank (2005i).

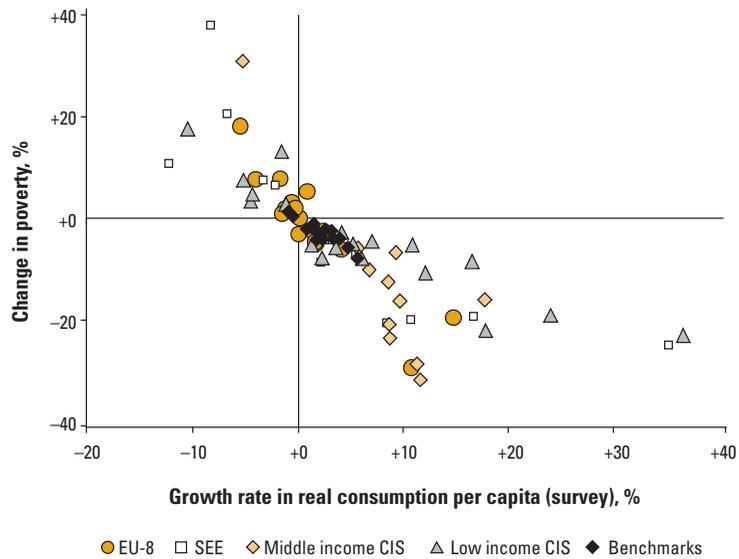
Note: All averages are population weighted.

Poverty has, in general, responded to growth in all subgroups (see figure 2.2).<sup>4</sup> During 1998–99, when a number of countries experienced contraction—in particular in the CIS, because of the impact of the financial crisis in Russia—poverty increased. However, with the resumption of growth, there have been significant declines in poverty throughout the Region, with few exceptions. To illustrate this fact, very few observations appear outside the lower right and upper left quadrants of figure 2.2, showing that where growth has been positive, poverty has declined, and where it has been negative, poverty has increased. The one observation in the upper right quadrant relates to Poland, where positive growth has gone hand in hand with an increase in poverty because of changes in distribution. Comparison with benchmark countries suggests that the amplitude of changes in the Region has been historically remarkable.

### Growth Elasticities, or, How Responsive Is Poverty Reduction to Growth?

Although it has declined, the degree to which poverty has responded to growth varies across countries. As figure 2.2 suggests, even where

FIGURE 2.2

**Growth Has Been Accompanied by Poverty Reduction**

Source: World Bank staff estimates using ECA Household Surveys Archive and “Pro-Poor Growth in the 1990s” (World Bank 2005f).

Note: Selected periods, for countries with comparable data series over time, see appendix for detailed country-level data. For EU-8 \$4.30 a day in 2000 PPP used as a poverty line, \$2.15 otherwise. All data are expressed as annual changes. Benchmark countries include data spanning 1990s and early 2000s from: Vietnam, El Salvador, Uganda, Ghana, India, Tunisia, Bangladesh, Senegal, Brazil, Burkina Faso, Bolivia, Indonesia, and Zambia.

growth (as measured by change in real consumption) is the same, the change in poverty can vary by a substantial margin. The degree to which poverty responds to growth is encapsulated in the notion of elasticity, which measures the change in poverty for 1 percent change in growth. In general, the elasticity would be negative, because growth and poverty tend to move in opposite directions: positive growth typically means a decline in poverty, and negative growth normally indicates an increase.

Table 2.1 presents simple averages of the elasticity of poverty reduction to growth for the four main subregions in the Region. These averages are based on data from countries for which comparable time-series data are available over the period in question. They should be treated as indicative, rather than as fully representative, of the nature of poverty response in the subregion in question. With these caveats, poverty has been the most responsive to growth in the middle income CIS countries and in SEE. Indeed, in these two subregions, an additional 1 percent of growth has lowered poverty by more than 2 percent over the past five years. By contrast, in the low income CIS countries and in the EU-8, every 1 percent of growth has lowered poverty by 1.3–1.4 percent.

TABLE 2.1

**Poverty Has Been More Responsive to Growth in the Middle Income CIS Countries and SEE than Elsewhere**

Subregion	Countries	Average elasticity (total) of poverty to growth in consumption per capita, 1998–2003
EU-8	Hungary, Poland	–1.3
SEE	Romania, Bosnia and Herzegovina	–2.5
Middle income CIS	Belarus, Kazakhstan, Russian Federation, Ukraine	–3.1
Low income CIS	Armenia, Kyrgyz Republic, Moldova, Tajikistan, Uzbekistan	–1.4

Sources: World Bank staff estimates using ECA Household Surveys Archive. Country-level data derived from information reported in table 2 in the Appendix.

Note: Averages are simple cross-country means. They should be treated as indicative, rather than as representative, of typical values found in the subregion. Poverty line is \$4.30 a day per person in 2000 PPP for the EU-8, and \$2.15 elsewhere.

What factors explain why poverty has been more responsive to growth in some countries than in others? Before turning to explanations, it is worth addressing the issue of data quality. The Region was characterized by problematic data, especially in the years of the transition, when statistical systems were suffering from both declining budgets and limited capacity to deal with the changing nature of the economy. Since then, however, data quality has improved, both on the survey side and on the national accounts side, not only because of economic recovery but also because of the investment of growing resources in statistical capacity building. As a result, data quality is broadly comparable to that in other regions, and indeed, with few exceptions, national accounts and survey data give a broadly consistent picture of consumption growth (see annex 1 for further details.) Thus, one can have a reasonable degree of confidence in the patterns indicated by the data.

Now to the factors that explain the diverse response of poverty reduction to growth. Quite obviously, what matters for poverty reduction is not growth per se, but growth in incomes (or consumption) of the poor. The impact of economic growth on household income is most simply represented by *growth incidence* curves, which describe how growth affects income, not just on average but also across the range of the income distribution. Figure 2.3 plots the growth in incomes (consumption) across the percentiles of the income distribution, using survey data from selected countries. The way in which growth affects the incomes of the poor obviously varies by country and by period.

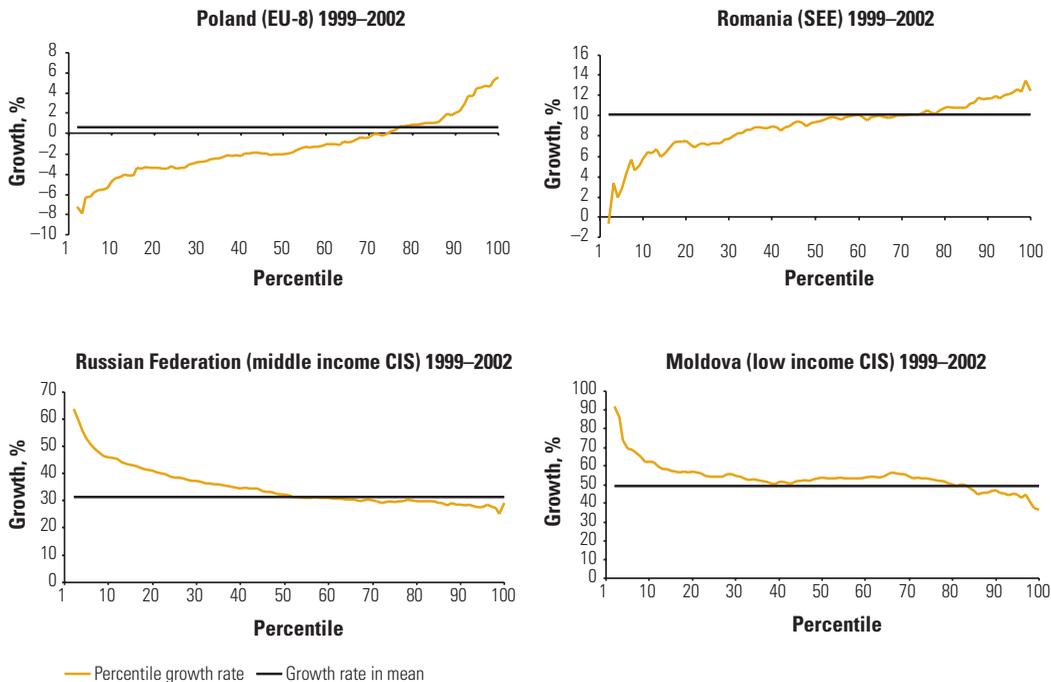
Figure 2.3 highlights the importance of the distribution of growth to the overall responsiveness of poverty to growth. Although there is

considerable diversity within each subregion, the discussion focuses here on one country per subgroup. Starting with Poland in the EU-8, although there was a modest growth in income<sup>5</sup> *on average* since 1999, growth was concentrated in the upper 40 percent of the distribution. The lower 60 percent of individuals experienced a contraction in incomes. As a result, poverty increased. By way of contrast, in Romania in SEE, although the poor benefited less than the rich from growth, there was a positive growth in income for *all* households. As a result, poverty declined. Russia (in the middle income CIS group) and Moldova (in the low income CIS group) represent another interesting contrast to both Poland and Romania. In Russia and Moldova, the poor benefited proportionately more than the rich from the growth rebound. As a result, the decline in poverty was greater than would have been the case had growth been distributed more evenly.<sup>6</sup>

Putting aside changes in distribution, what other factors explain why poverty is more responsive to growth in some countries than in others? The simple arithmetic of poverty reduction shows that the change in poverty can be decomposed into a “growth effect” (defined as the change in poverty in response to changes in average income,

FIGURE 2.3

The Poor Have Benefited More than the Rich from the Growth Rebound in the CIS

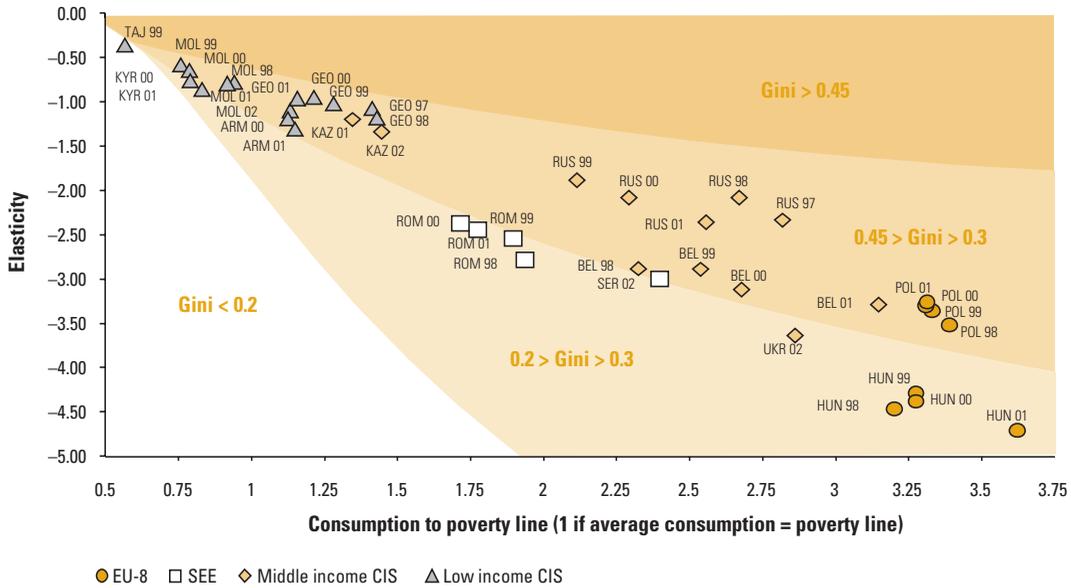


Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix, chart 1, group A for detailed description of the surveys.

holding distribution constant) and a “distribution effect” (defined as the change in poverty in response to changes in distribution, holding average income constant). The growth effect or, in elasticity terms, the growth elasticity, which measures the percentage of change in poverty for a 1 percent change in mean income, holding constant the distribution, gives one measure of the responsiveness of poverty to growth. Note that this measure is different from the measures reported in table 2.1, in which the distribution of income was not being held constant. For this reason, the elasticity with constant distribution is referred to as the *partial* elasticity. The other, reported in table 2.1, is the *total* elasticity. Although it can be estimated empirically, the partial elasticity has no simple analytical form. However, if the distribution of income is assumed to be log normal, then it can be written as an explicit function of the initial level of inequality and the initial level of income (Bourguignon 2003). In particular, the higher the initial level of inequality, the lower the (partial) elasticity of poverty reduction to growth, and the higher the initial level of income, the higher the (partial) elasticity of poverty reduction to growth. The intuition behind the first proposition is simply that the higher the initial level of inequality, the less the poor benefit from any inequality preserving growth in average income. Hence, poverty reduction is lower. The second proposition is less intuitive and is related to the shape of the income distribution.

Figure 2.4 illustrates the relationship between the (partial) elasticity of poverty reduction, the initial level of income (measured relative to the poverty line), and the initial level of inequality, using examples from various countries in the Region.<sup>7</sup> For countries in the low income CIS group, such as the Kyrgyz Republic, Moldova, and Tajikistan, poverty is not very responsive to growth: the (partial) elasticity is below 1 for a range of inequality levels. As incomes increase, the elasticity increases. Thus, for countries in the middle income CIS group, SEE, and the EU-8, elasticities are higher. The elasticity is lower where initial inequality is high: therefore, the higher the initial level of inequality, the more “shallow” the curve. Figure 2.4 also shows that the elasticity is more sensitive to inequality at high incomes. For example, at income levels where average consumption equals the poverty line, lowering inequality from 0.45 (the upper range in the Region) to 0.3 (the median) would increase the (partial) elasticity from around  $-0.75$  to around  $-1.25$  (66 percent). At three times the level of income (consumption to poverty line equals 3), it would raise the (partial) elasticity from around  $-1.5$  to around  $-3.5$  (133 percent). Conversely, an increase in inequality reduces the (partial) elasticity of poverty reduction more sharply at high incomes.

**FIGURE 2.4**  
**Poverty Is More Responsive to Growth, the Higher the Level of Income and the Lower the Level of Inequality**



Source: World Bank staff simulations based on country-level data from ECA Household Surveys Archive.

Note: The same poverty line (\$2.15 a day at 2000 PPP) was applied across all counties.

This framework helps draw attention to the fact that changes in distribution essentially play two roles in poverty reduction. The first is a direct or “one-time” effect on poverty because of an increase or decrease in inequality (the distribution effect discussed previously). The other is indirect and acts through the (partial) elasticity of poverty to growth. A permanent reduction in inequality not only directly reduces poverty in the same period but also contributes to poverty reduction by increasing the (partial) elasticity of poverty reduction to growth.

What explains the differences in the response of poverty reduction to growth, as described in table 2.1? Initial conditions play a large role; however, so do changes in distribution. In the low income CIS countries, low income is an important factor behind the low (total) elasticity reported for this group in table 2.1. Indeed, as figure 2.4 shows, the (partial) elasticities for this group of countries are clustered around the -1 mark. Moreover, as is discussed more closely in the next section, except for Tajikistan, countries in this group experienced a *decline* in inequality over the period in question. This decline resulted in greater poverty reduction than might be expected based on initial conditions alone. As a result, an average (total) elasticity of -1.4 is observed.

In the middle income CIS countries, a wide range of elasticities are observed, from  $-1.5$  in Kazakhstan to more than  $-3.5$  in Ukraine. The average (partial) elasticity for this group is around  $-2.5$ . However, as in the low income CIS group, most countries experienced a *decline* in inequality over the period in question. As a result, poverty was more responsive to growth than initial conditions would suggest, and an average (total) elasticity of  $-3.1$  is observed.

In SEE, (partial) elasticities are comparable to those found in the middle income CIS group, clustering around  $-2.5$ . However, there is no clear trend in inequality for countries in this group for the period studied (see the next section). Average (total) elasticity is thus similar to the average (partial) elasticity.

For the EU-8, the low reported (total) elasticity in table 2.1 seems at odds—at first glance—with the (partial) elasticities in figure 2.4, which are the highest in the Region.<sup>8</sup> However, in countries such as Poland, slow growth and rising inequality means that, in many instances, income growth among the poor was negative, and poverty *increased* despite positive growth. Averaging across periods in which poverty increased (and thus the elasticity was *positive*) and those in which it decreased (and thus the elasticity was *negative*) results in a low (total) elasticity for this group of countries as a whole.

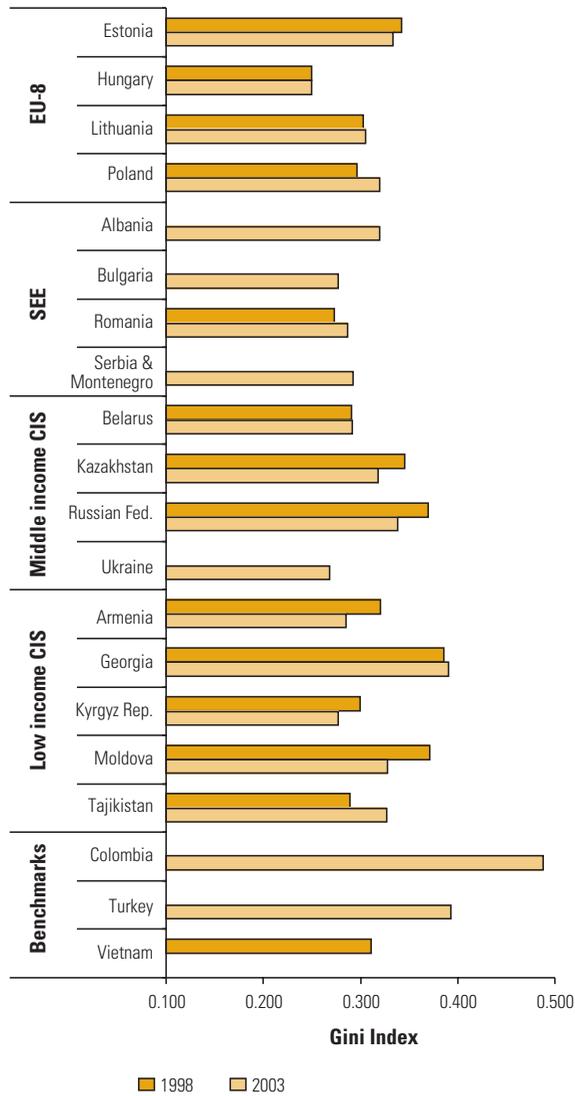
## Changes in Distribution, What Happened and Why

As the previous section suggests, changes in distribution have an important role to play in enhancing or reducing the poverty impact of growth. It is therefore useful to understand what changes have occurred and, to the extent possible, why.

With few exceptions, changes in inequality during 1998–2003 have been relatively modest.<sup>9</sup> At the same time, distinct patterns of change are discernable at the subregional level. In the CIS, the overall impression is of stable or declining Gini coefficients (see appendix A, Poverty Indexes), except for Georgia and Tajikistan. In SEE and the EU-8, the picture is mixed, with both increases and decreases (figure 2.5).

Are there any common factors underlying these trends, particularly in the CIS countries, where there has been a tendency for inequality to fall (again, with the notable exception of Georgia and Tajikistan)? To examine this further, the study decomposes inequality into the contribution of inequality “between” groups and inequality “within” groups. The focus is on the market for labor in which the bulk of incomes are earned, dividing up households into groups characterized by wage employment, entrepreneurial activities, subsis-

**FIGURE 2.5**  
**Distribution Has Moved in Favor of the Poor in Most CIS Countries**



Sources: World Bank staff estimates using ECA Household Surveys Archive; see appendix table 2 for country-level data and years.

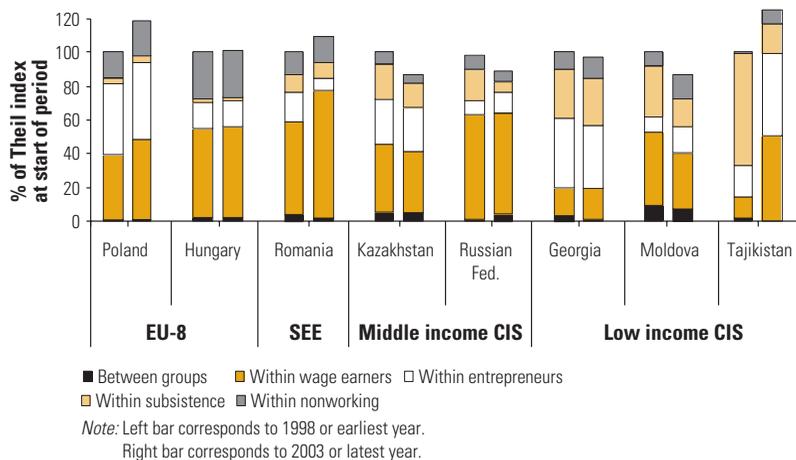
tence activities, and nonemployment (retirement, unemployment, and so on).<sup>10</sup> The study uses the Theil entropy measure of inequality, which can be conveniently decomposed into contributions of inequality within and between groups. The share of within-group inequality is the product of inequality within the group and the share of the group. Thus, the share of a particular group to overall inequality may change either because inequality within the group has changed or because the share of the group in the total population has

changed. The share of between-group inequality is the inequality that remains if all households in a group are given the group’s average income (that is, there is no within-group inequality). The sum of the within-group and between-group contributions equals 1. Figure 2.6 plots the shares of the within-group and between-group elements for eight countries, treating inequality in the initial year as equal to 100.

The changing pattern of inequality in the Region does not offer any simple explanation. A few broad generalizations, however, do emerge. First, between-group inequality has had little, if any, role to play in explaining changes in inequality. Second, the growth of entrepreneurship has been a factor pushing up inequality in most countries. This is because as a group, it is associated with higher inequality in outcomes than wage employment or subsistence activities are, and its share in the total population has been rising. There are, however, exceptions to this finding: notably Georgia and Romania, where a decline in the share of households characterized by entrepreneurial activity has resulted in a falling contribution of this group. Third, the rise in the “contribution” of the nonemployed is an important factor behind rising inequality, particularly in the EU-8 and SEE. The rise is due to growing inequality within this group, accompanied, in some cases, by the rising share of this group. Growing inequality among the nonemployed may be a reflection of the increasingly poor opportuni-

**FIGURE 2.6**  
**“Decomposition” of Inequality Does Not Explain Declines in Most CIS Countries**

Share of Between- and Within-Group Inequality in Theil Index



Source: World Bank staff estimates using ECA Household Surveys Archive.

Note: Theil entropy measure, see World Bank 2005j for detailed technical discussion of decomposition techniques.

ties for those who are unemployed or out of the labor force to sustain their standard of living relative to pensioners and can be related to the failure to raise the share of the employed in the total population. (The issue of jobless growth in the EU-8 and SEE is addressed in chapter 3.)

Beyond these generalizations, how different factors come together is very much a country-specific matter. In Russia, for example, where overall inequality declined, the main factor is the shift from self-employment (whether entrepreneurial or subsistence) to wage employment, accompanied by a decline in inequality among wage earners. One factor explaining this decline is the reduction in arrears, which has been a feature of the economic recovery in the CIS. Wage arrears were regressive in impact, driving up inequality among wage recipients (Lehmann and Wadsworth 2001). It is therefore likely that arrears reduction has been beneficial to equality. In Moldova, too, overall inequality declined, not because of changing shares of different groups, but because of a decline in within-group inequality for all major groups (that is, wage employees, entrepreneurs, and subsistence farmers). The reduction in wage inequality may be because of arrears reduction; however, the changes in inequality among entrepreneurs and those engaged in subsistence farming require further investigation. In contrast, in Poland and Romania, upward pressure from nonworkers has been reinforced by rising inequality among wage earners. This is no doubt related to the further decompression in wages in these countries (World Bank 2003k; World Bank 2004h; World Bank Forthcoming-a).

### **The Relative Shares of Growth and Changes in Distribution in Poverty Reduction**

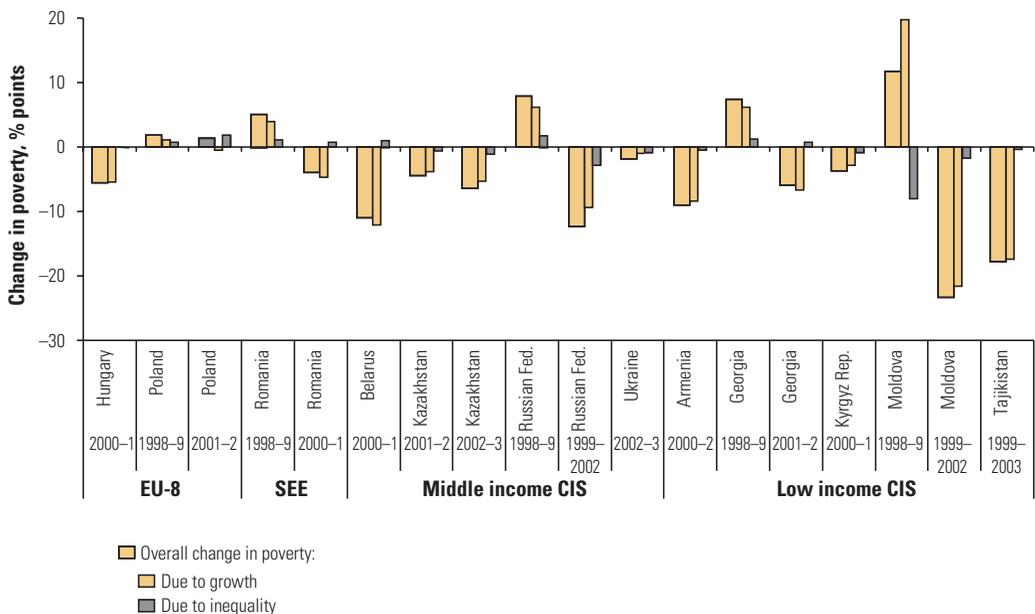
Given the importance of both growth and changes in distribution to poverty reduction, it is useful to understand the relative importance of the two factors. Figure 2.7 plots the shares of growth and changes in distribution to poverty reduction for selected growth periods since 1998. The “growth share” measures how much poverty reduction can be attributed to growth in average incomes alone (that is, assuming no change in the distribution), while the “distribution share” measures how much poverty reduction can be attributed to changes in the distribution of incomes alone, assuming no change in average income. The growth share is a function of not only the rate of growth but also the (partial) elasticity of poverty reduction to growth. Where both growth and changes in distribution have been favorable or unfavorable to poverty reduction, both contributions can be expected to

go the same way. Where poverty has increased despite positive growth (for example, Poland during 2001–2), the share of growth to poverty reduction is negative.

Figure 2.7 highlights the overwhelming importance of growth to poverty reduction over the period in question. With few exceptions, the contribution of growth to poverty reduction is more than 75 percent. Relative to growth, the contribution of changes in distribution to poverty reduction has been relatively small. This is perhaps not that surprising, given the modest changes in inequality over the period. Thus, while inequality is an important part of the story, outside of a few countries and periods, it is the less important partner.

Although small on average, changes in distribution have clearly been quite important in some countries. For example, in Poland during 1998–99, 40 percent of the increase in poverty is attributable to the increase in inequality and 60 percent to the decline in income. In 2000–2001, the impact of changes in inequality is even greater. In fact, it explains all of the increase in poverty. Indeed, as poverty increased, despite growth in household incomes on average, the contribution of growth to poverty reduction is negative. In a number of countries in the CIS, the share of changes in distribution to poverty reduction in the period since the end of the financial crisis is more than 20 percent.

**FIGURE 2.7**  
**Share of Growth in Poverty Reduction Is Dominant across All Regional Subgroups**



Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix, chart 1, group A for detailed description of data sets.

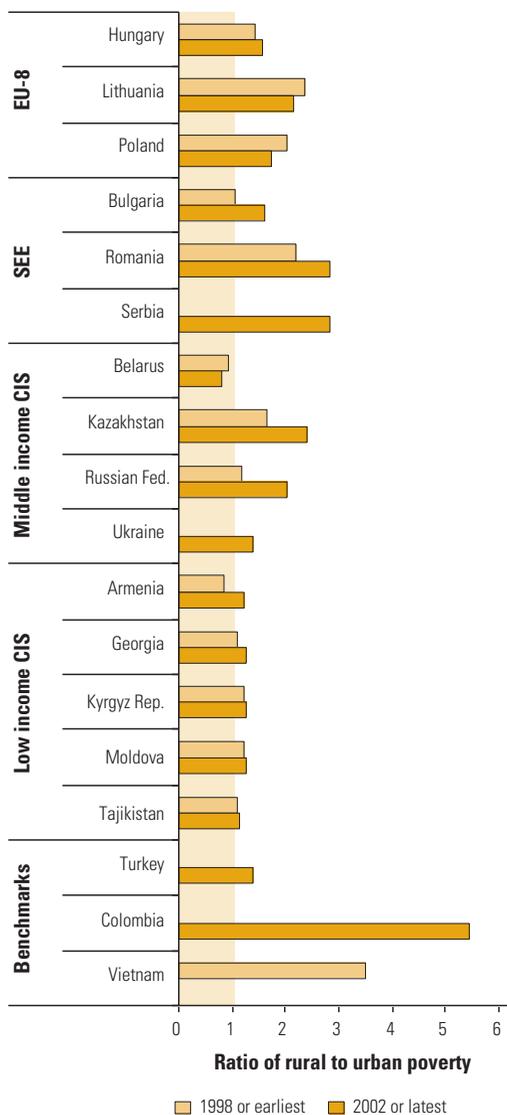
## Rural-Urban and Other Subnational Differences in Poverty Reduction

The discussion now turns from the national aggregates to examine the extent to which the response of poverty to growth varies at the subnational level. Chapter 1 drew attention to the relatively large differentials in rural and urban rates of poverty in the Region outside of the low income CIS countries. With few exceptions, this relativity (by which is meant the risk of poverty in rural areas relative to urban areas) appears to have increased over time in SEE, the middle income CIS countries, and the low income CIS countries, although in the latter group the increase is modest. The gap in poverty between urban and rural areas in the Region remains modest compared with what is observed in developing countries (figure 2.8). The rising relative risk of poverty in rural areas is because poverty headcounts have declined more sharply in urban than in rural areas. By contrast, there is no clear trend in the relative poverty risk in the EU-8.

It is worth trying to understand fully the exact nature of these changing relativities. Figure 2.9 presents the trends in poverty headcounts for one country in each of the four regional groupings. Because poverty rates vary substantially across the four countries, different scales were deliberately chosen to highlight the changes that are relevant for each country. Although the trends in rural and urban poverty broadly track each other, where poverty has declined or increased, it has declined or increased somewhat more rapidly in urban than in rural areas. In other words, poverty has responded more strongly to growth (whether positive or negative) in urban than in rural areas. For countries where poverty has declined, the stronger urban trend is easier to observe in Romania (as representative of SEE) and Russia (as representative of the middle income CIS countries) than in Moldova (as representative of the low income CIS countries), where rural areas experienced a particularly strong decline in poverty between 1999 and 2001. The figure presents only one country, Lithuania (EU-8), where poverty has increased for most of the period, and here the sharper increase in urban poverty is noticeable. It should be clear from the discussion in the previous chapter that if poverty in urban areas were to be broken down further, the contrast between trends in capital cities (which would tend to lead the pack of all urban areas) and rural areas would be even more striking.

What factors underlie the lower responsiveness of rural poverty to growth? The framework developed earlier in this chapter provides some insight into the issue. As discussed previously, the (partial) elasticity of poverty reduction in relation to growth is a function of initial

**FIGURE 2.8**  
**Increase in the Ratio of Rural to Urban Poverty in Most Countries**

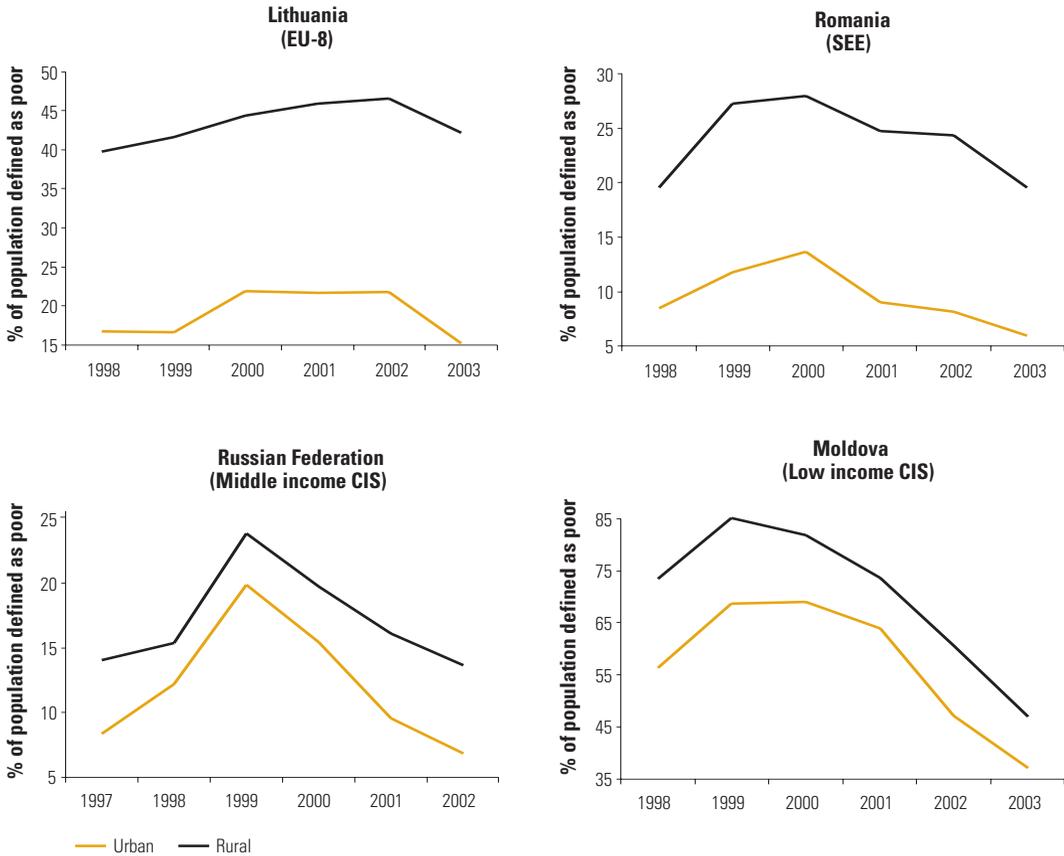


Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix table 3 for country-level data and years used.

Note: For EU-8, Belarus, and Bulgaria \$ 4.30 a day at 2000 PPP is used as poverty line, otherwise \$2.15.

levels of income and initial levels of inequality. In general, income in rural areas is lower than income in urban areas in the Region. Where this is combined with higher inequality, the responsiveness of poverty to growth in rural areas is lowered further, making poverty reduction “doubly” difficult. Capital cities have even higher incomes and thus are expected to have more favorable conditions for poverty reduc-

**FIGURE 2.9**  
**Urban Poverty Is More Responsive to Growth and Falling (or Rising) More Rapidly than Rural Poverty**



Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix table 3 for data.

Note: Poverty line is \$ 4.30 at 2000 PPP used as poverty line for Lithuania, \$2.15 a day in other countries.

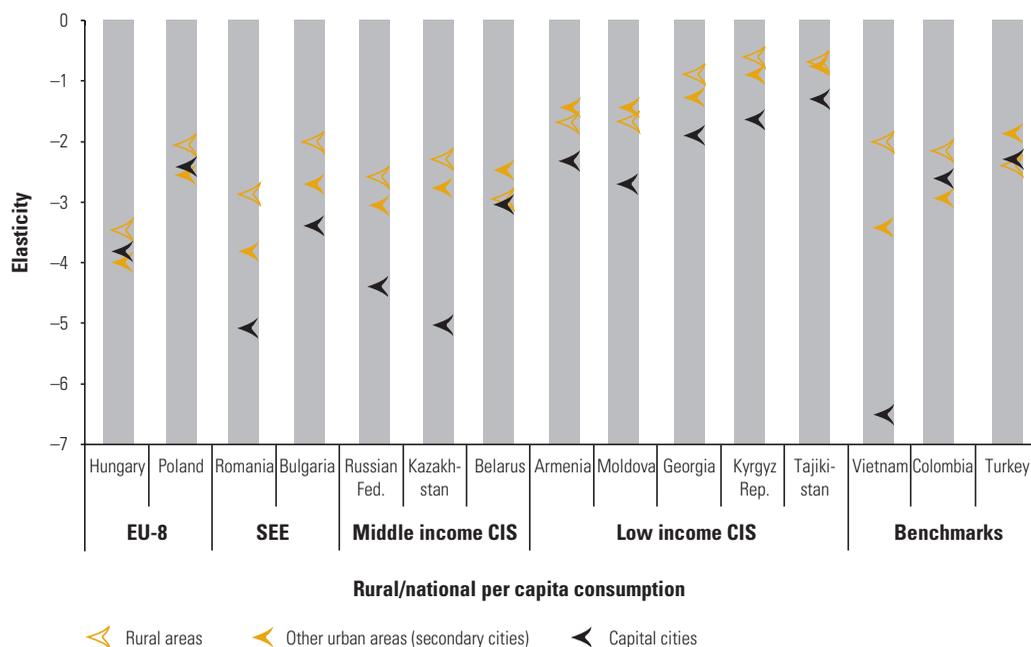
tion, although higher inequality there may diminish their potential in reducing poverty with a given growth rate. How exactly all these factors interplay can be studied with survey data.

(Partial) elasticities (based on distributionally neutral growth) are presented for the Region and benchmark countries in figure 2.10 (note that because elasticity is negative, in the figure the smaller elasticity is closer to the top). In general, one observes very similar rural and urban secondary cities’ (partial) elasticities in the low income CIS countries, reflecting similar levels of consumption and inequality in rural and urban areas. However, capital cities clearly stand out, with much higher elasticities than observed in either rural or secondary cities. Outside the low income CIS countries, rural incomes are sig-

nificantly lower, and the gap in the elasticity between urban and rural areas the largest (although here too there are exceptions: see, for example, Belarus). Where lower incomes in rural areas are combined with higher levels of inequality, it results in a lower (partial) elasticity of poverty reduction in rural areas. Even where inequality in rural areas may be no higher than in urban areas, the impact of lower incomes typically results in a lower rural elasticity (see figure 2.10). Thus, for most countries outside of the low income CIS group, initial conditions with regard to not only income but also (in some cases) inequality are such as to make poverty in rural areas less responsive to growth.

Intuitively, a lower elasticity of poverty to growth in rural areas is not difficult to understand. Rural households have access to land and the means to produce their own food, which is a very important item of consumption for the poor. One would therefore expect during a recession or a macroeconomic downturn that rural poverty will rise less sharply than urban poverty. Conversely, in an upswing, one would expect urban poverty to fall more sharply because of the better integration of the urban poor into labor markets.

**FIGURE 2.10**  
**Partial Elasticity of Poverty Reduction to Growth Is Lower in Rural Areas**



Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix table 3 for the latest years available by country.

Note: Simulations using the assumptions of distributional neutral growth and the latest year of survey data. For EU-8, Belarus, and Bulgaria \$ 4.30 a day at 2000 PPP is used as poverty line, otherwise \$2.15.

Lower (partial) elasticity of poverty reduction in rural areas implies that without higher rates of growth in rural areas or significant improvements in distribution, reductions in rural poverty can be expected to lag behind reductions in urban poverty. Over time, this can lead to an increasing relative risk of poverty in rural areas and a concentration of poor in rural areas, unless mitigated by migration from rural to urban areas. Conversely, where growth is negative, the increase in poverty among rural residents can be expected to be lower than among urban residents. These expected changes in the risk of poverty in rural areas relative to urban areas appear to have been borne out since 1998. Outside of the low income CIS countries, where changes were marginal, there has been a growing relative risk of rural poverty in subregions (and countries) where poverty has declined. Where poverty has increased (for example, Poland and, to some extent, Lithuania), the relative risk of poverty in rural areas has declined. As a result, the relative risk of poverty in rural areas has grown in SEE and the middle income CIS countries, while in the EU-8 (with its mix of poverty outcomes), there is no clear trend.

As with rural-urban differences, the framework developed earlier in this chapter is also useful for understanding growing regional differences in poverty. Like rural areas, many poor regions, especially those with high levels of inequality, could face a poverty “trap” (that is, face poverty rates that respond very slowly to growth). Over time, such regions could become a “pocket of poverty” in an otherwise growing national economy. This is likely to be important in countries where there are large regional differences, such as Russia.<sup>11</sup>

From a poverty perspective, differences in the response of poverty to growth suggest that without concerted efforts to raise growth rates in rural areas and lagging regions, persistent differentials in poverty are likely to be maintained for some time, or they may even grow over time. Thus, a key issue for public policy is: what should be done about these persistent or growing differentials? Chapter 5 discusses some key measures to address regional and spatial inequality.

## Conclusions

This chapter elaborated on the role of growth and changes in distribution in explaining poverty reduction in the Region since the end of the financial crisis in Russia. In general, high rates of growth and the overall responsiveness of poverty to growth have meant that growth has been the most important factor in explaining changes in poverty.

In the CIS countries, growth has gone hand in hand with improvements in distribution (with the notable exception of Tajikistan), which has enhanced the impact of growth on poverty reduction. Some of the reduction in inequality may simply be a feature of “catch-up” growth and may be due to factors such as the elimination of wage arrears. For this reason, it is not clear that further improvements in distribution can be expected in the future. As a result, poverty reduction may become more difficult, particularly if distribution shifts away from the poor. Outside the CIS countries, trends in inequality have been mixed. However, in the EU-8, growing unemployment and polarization of employment opportunities away from the poor are an important and growing source of inequality in some countries. Where this is not addressed, it will act as a significant brake on poverty reduction and social inclusion.

This chapter also elaborated on how poverty is less responsive to growth in rural areas than in urban areas. As a result, there is a persistent and, in many cases, growing gap in poverty incidence between rural and urban areas, which can be expected to grow over time. Addressing this gap will require a concerted effort to raise rates of growth in rural areas if subnational gaps are not to persist and militate against attempts to reduce overall poverty. Much the same applies to lagging or poor regions, which also face disadvantages similar to those of rural areas.

In the chapters that follow, the discussion turns to the impact of growth on household income. The most important source of household income is the market for labor (chapter 3). Following a discussion of labor markets and poverty, the focus turns to the role of service delivery in influencing poverty, both in the short term, through impacts on nonincome dimensions or capabilities, and in the medium to long term, through impacts on human capital (chapter 4). Finally, the study examines prospects for poverty reduction in the future and public policy priorities for reducing poverty (chapter 5).

## **Annex 1: How Accurately Do Survey Data Record Changes in Consumption in the Region?**

There are two main sources of information on consumption: household sample survey data (“survey data”) and national accounts data. Survey data, collected from households, form the basis for analysis of poverty and distribution. National accounts are the basis for measuring economic growth and include an estimate of private consumption

(or private consumption expenditure), which is typically computed as a residual from national income after backing out other sources of final expenditure.

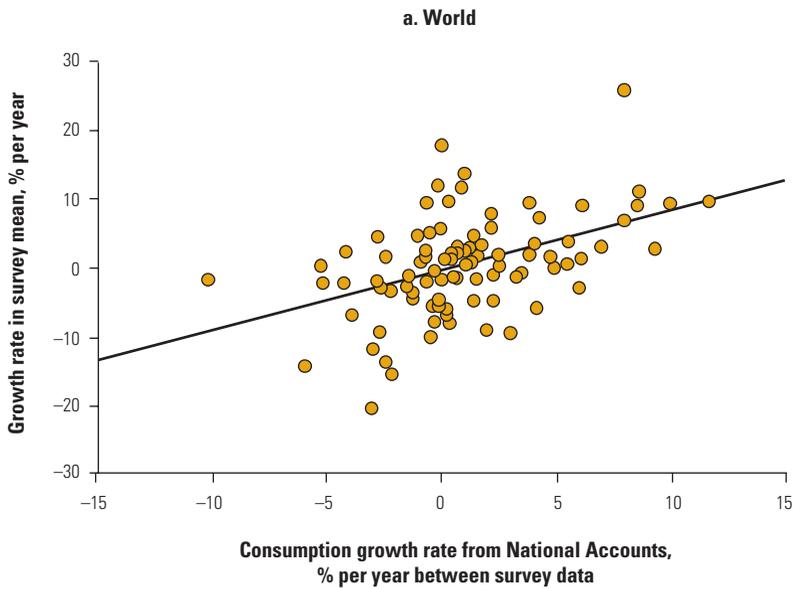
Although related in principle, the concept of consumption measured by the two sources is different. For example, survey data generally exclude consumption of goods and services by unincorporated businesses and nonprofit organizations; however, these are included in the national accounts measure of private consumption expenditure. Another difference is imputed rent from owner-occupied housing, which is covered in national accounts, but typically not constructed for surveys. The two sources are also subject to independent measurement error, and the price deflators typically used to bring expenditures to real terms also differ. As a result, the two sources yield different estimates of consumption and consumption growth.

Although the two sources provide different estimates of consumption, they are reasonably well correlated across most regions and data sets. In the past, however, data from the Region have been considered somewhat suspect because of the perception that household-survey-based private consumption data are below acceptable quality standards and contain numerous oddities. Ravallion (2001b) finds no correlation between the private consumption growth rates from surveys and those from the national accounts. The data covered 27 growth episodes in 19 countries, mostly in the period from 1988 to 1996. For the same reason, Ravallion (2001a) drops data for the Region's countries in a cross-country study on the MDGs. Adams (2002) documents growth and inequality changes among the various regions of the world and argues that the data from the Region should not influence the debate on global patterns of poverty and inequality change because of their poor quality.

Although this may have been true in the early years of transition, which were characterized by economic and institutional decline and crisis, the data work undertaken for this report suggests a different picture. To conduct the analysis, this report has re-created consumption aggregates from recent surveys in a comparable manner to enable good cross-country comparisons. The data suggest a strong positive correlation in growth rates as measured by the two sources (see annex figure 1). In fact, when growth rates of survey means are regressed on growth in private consumption (national accounts), a  $\beta$ -coefficient of 0.95 ( $t = 6.37$ ) is obtained, which is comparable to the estimate of 0.84 ( $t = 5.74$ ) reported by Ravallion (2001b) for countries of the world, excluding the Region. Annex figure 1 plots the 38 regional "periods" used in the report alongside the graph used by

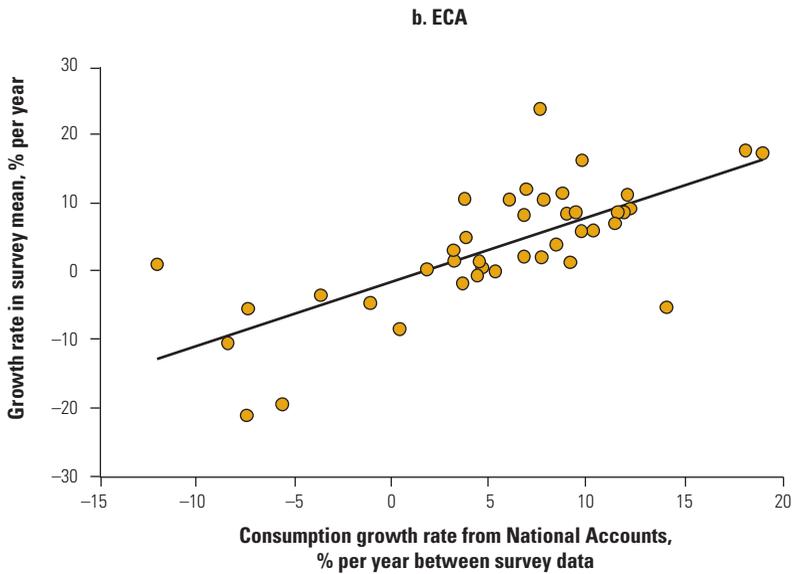
**ANNEX FIGURE 1**

**Growth of Household Consumption Measured by SNA vs. Surveys**



Source: Ravallion (2001b), figure 3.

Note: Data cover 115 growth “spells” from the 1980s and 1990s in Africa, East and South Asia, and Latin America.



Source: Staff estimates.

Note: Data cover 38 growth spells in the ECA region over 1998–2003.

Ravallion (2001b). As might be expected from the above regression results, the pictures look very similar.

Within the picture of broad consistency between the two measures, there are some notable outliers. In a few instances, consumption growth as recorded by the two sources goes in opposite directions; for example, Georgia (1998–99, 1999–2000) and Romania (1999–2000). In others, although the growth rates go in the same direction, they differ quite substantially; for example, Moldova (1998–99, 2001–2) and Russia (1998–99). At the same time as these deviations are relevant for the measurement of poverty in the individual countries, they do not detract from the picture of overall convergence between data patterns in this Region and other regions.

This impression of broad convergence is reinforced when the ratio of consumption measured by the two sources is examined. As argued by Deaton (2004), consumption as measured by survey data is typically found to be lower than consumption as measured by national accounts. Moreover, the ratio of the two is often lower in richer countries than in poorer ones, which is attributable, at least in part, to the difficulty of sampling well-off households. As a result, many countries have seen a decline in the ratio between survey consumption and national accounts consumption over time.

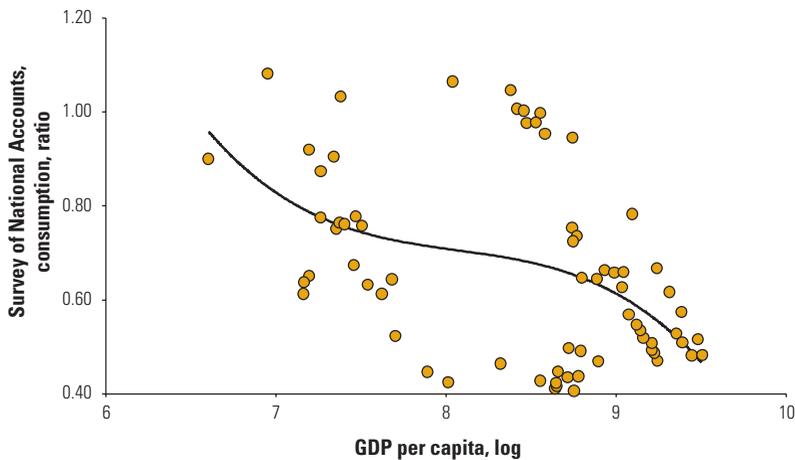
Following Deaton's approach, one finds a similar relationship in the Region, with the poor countries tending to have the higher ratios (see annex figure 2). The average ratio of survey consumption to national accounts consumption is 0.69, which is lower than the average reported by Deaton for the Region's countries in his sample (0.84).<sup>12</sup> As with growth rates, within the broad picture of consistency with patterns from other regions, there are some notable outliers. Belarus and Ukraine stand out as having relatively high ratios among the group of middle-income countries.

As noted by Deaton and various other authors (Adams and Ravallion; but also Bloem, Cotterell, and Gigantes 1998), it would be incorrect to presume in favor of national accounts: this alternative can also be subject to many errors and may well be overstating growth in consumption. Bloem, Cotterell, and Gigantes (1998) argue that the introduction of the 1993 System of National Accounts (SNA) in most of the formerly centrally planned economies led to the emergence of a number of problems. Some of these problems probably cause overestimates of national accounts variables, while others cause underestimates, and it would be purely coincidental if these effects cancel each other out. Most researchers now would agree that a unit ratio between survey and national accounts is rarely a sign of data quality.

## ANNEX FIGURE 2

## Level of Household Consumption in SNA vs. Surveys

Consumption from Surveys to SNA consumption in ECA, 1998–2003



Source: World Bank ECA Household Survey Data Archive.

Note: Data cover 51 estimates of consumption from 13 countries in ECA over 1997–2003. See tables 1 and 2 in the appendix.

Deaton (2004) uses variance in the ratio of survey to national accounts consumption as a crude indicator of combined survey and national accounts quality. He argues that problems with national accounts notwithstanding, survey measures are more likely to vary from year to year because of changes in sample and survey design, and from country to country because survey protocols are less standardized than national accounts. Applying this measure to data from 59 surveys from the Region, Deaton does not find evidence of particularly high variance in the Region. Analysis with the more recent and standardized data used in this report suggests an even closer match.

Overall, the emerging evidence of consistency of data quality in the Region with that from other regions does not come as a surprise and can be related both to the economic rebound in the Region and to investments in improving statistical capacity (in both national accounts and sample surveys) that have occurred in the Region. As observed earlier, this does not mean that there are no problems in using survey data in the Region. Overall, however, there is a weak case for regarding the Region as something of an outlier for the purposes of global analysis. Within the Region, further efforts can be made to improve overall data quality, especially in countries where there are inexplicable inconsistencies or trends. However, the initial efforts in improving data quality appear to have paid off.

## ANNEX TABLE 1

## Ratio of Private Consumption from Household Surveys and National Accounts

	Unweighted				Population weighted		
	No of surveys	Mean Ratio	Standard error	Standard deviation	Mean ratio	Standard error	Standard deviation
Estimate (ECA) according to this report							
	57	0.632	0.025	0.190	0.646	0.021	0.159
Estimate according to Deaton (2004)							
All	277	0.860	0.029	0.306	0.779	0.072	0.191
EAP	42	0.819	0.069	0.224	0.863	0.031	0.110
ECA	59	0.847	0.038	0.230	0.796	0.040	0.184
LAC	26	0.767	0.094	0.329	0.585	0.078	0.193
MENA	20	0.955	0.104	0.300	0.867	0.111	0.270
OECD	33	0.781	0.052	0.097	0.726	0.032	0.076
SA	23	0.649	0.063	0.122	0.569	0.036	0.103
SSA	74	1.000	0.061	0.415	1.089	0.089	0.459

Sources: Deaton (2004) and staff estimates based on ECA Household Survey Archive.

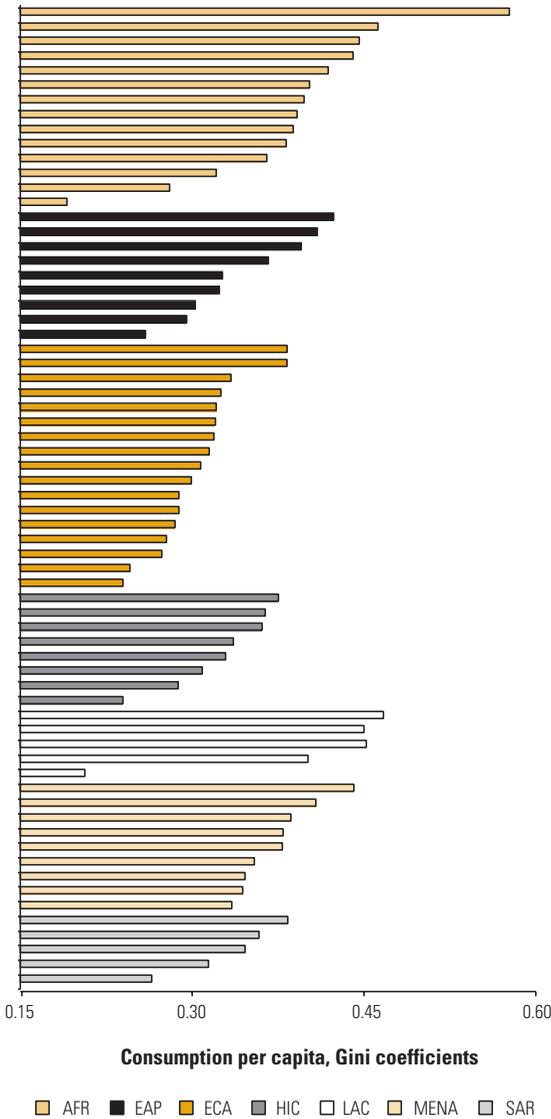
Note: EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

## Annex 2: Inequality in the Region in Comparative Perspective

How equal or unequal is consumption in the Region relative to other parts of the world? The answer to this question is not straightforward because comparison of inequality across countries and regions is confounded by the noncomparability of the measures reported by different sources (see World Bank 2005j). This study nonetheless makes a first attempt to place inequality in the Region in international perspective (see annex figure 3). For the countries in the Region, the authors use the data developed for this study, for which a concerted effort has been made to ensure comparability. However, the same degree of comparability is difficult to achieve for the wider international sample. To increase comparability, alongside the data from this study, measures are reported that pertain to per capita consumption from other countries (inequality in per capita income is generally higher). However, the authors have not been able to control for other factors such as differences in the definition of consumption across surveys. Therefore, the comparisons should be treated as an approximate, rather than exact, picture of differences across countries.

As the accompanying figure suggests, the Region shows the full spectrum of inequality outcomes, from fairly unequal to fairly equal. Median inequality in the Region is lower than in the rest of the developing world; however, it is broadly comparable to the median inequality in rich countries.

**ANNEX FIGURE 3**  
**Inequality in the Region in an International Perspective**



Sources: World Bank 2005j; World Bank 2003g; Bazan and Moyes 2003; and Sieminska and Garner 2002.

Note: HIC stands for "high income countries," which include France, Greece, Israel, Italy, Spain, Taiwan, United Kingdom, and United States.

What factors "account" for inequality in the Region? In other words, to what extent can inequality be explained by inequality between groups, such as rural residents versus city dwellers, or high school graduates versus those with less than high school education? Looking at several types of partition (including education, age and gender of the household head, rural versus urban residence, and

region), the *World Development Report 2006* (World Bank 2005j) finds that the two factors that explain the highest share of total inequality in the Region are education and region (each explaining around 10 percent of total inequality in the median country). However, these factors are no more nor less important than in other parts of the world. Therefore, the Region does not stand out as one where educational or regional differences are *exceptionally* important as drivers of inequality.

The *World Development Report* data do not include Russia, a country with vast regional differences. It is an open question whether including Russia would give a different impression of inequality in the Region (or at least in Russia).

One respect in which the Region does appear to be somewhat different is the smaller role of rural-urban inequality. Unlike in most developing regions, differences between rural and urban areas do not explain a significant share of the overall national inequality (the share in the median country is about 5 percent, in the Region less). In this respect, the Region appears more like the high-income countries in the sample, where rural-urban differences play a relatively small role in explaining total inequality compared with other factors.

## Endnotes

1. The only countries to have experienced negative growth in GDP since 1999 are FYR Macedonia (2001) and Turkey (2001). The Kyrgyz Republic experienced zero growth in 2002.
2. Data from the early years of the transition may not be fully comparable in some cases; therefore, comparisons should be treated as illustrative, rather than fully indicative.
3. In Russia, it is estimated that higher oil prices accounted for growth in excess of 4–5 percent per year.
4. For all analyses in this chapter, this study uses data from 15 countries (10 countries from the A cluster on chart 1 in the appendix, plus Estonia, Kazakhstan, the Kyrgyz Republic, Ukraine, and Uzbekistan) spread across the four subgroups (see chapter 1 for groupings for the Region). For the quality of association between household survey and national accounts data in the Region, see annex 1 to this chapter.
5. Term “income” here is used for explanation purposes, but all data refer to consumption. This is justified by poor reporting of income data in household surveys across the Region, making recorded consumption level a more accurate reflection of living standards at the household level (see also appendix, A. Data and Methodology, for a detailed discussion of the use of income versus consumption in the Region).
6. The time of the financial crisis in Russia (1998–99) was also one of declining inequality. Incomes contracted across the board; however, the contraction was sharper in the uppermost deciles. The fact that the rich

- suffered proportionately more than the poor (or, what is the same thing, that the distribution of income shifted in favor of the poor) moderated the impact of the crisis on poverty.
7. Elasticities are computed using the growth rate in the year in question. The distribution of income is assumed to be standard log normal, with parameters estimated from survey data. For the relationship between the Gini coefficient and dispersion parameter  $\sigma$ , see Dikhanov (1996). The distributionally neutral change in poverty is taken from Epaulard (2003, 12).
  8. However, the poverty line used to produce figure 2.4 is \$2.15 a day, while \$4.30 was applied for estimates reported in table 2.1; the lower poverty line automatically implies higher elasticities. Use of \$2.15 in many EU-8 countries produces a headcount that is not statistically significant based on actual survey data, and thus any empirical analysis of elasticity is meaningless. For the theoretical distribution simulated to produce figure 2.4, this is not an issue.
  9. For a discussion of inequality in the Region in an international context, see annex 2 to this chapter.
  10. The definitions used are as follows: dependence on (a) wage employment: no working members who are self-employed and minimal income from self-production (<5 percent); (b) entrepreneurial activities: at least one adult in self-employment, but minimal income from self-production (<5 percent); (c) subsistence activities: at least one adult in self-employment and significant income from self-production (>5 percent); and (d) nonemployment: no adult in employment or self-employment.
  11. See Kolenikov and Shorrocks (2003) for an analysis of factors underlying differences in poverty rates across Russian regions. Large regional disparities are not confined to big countries: Hungary is also known for large dispersion across regions. See, for example, Förster, Jesuit, and Smeeding (2005).
  12. For the report, this study uses a fairly parsimonious definition of consumption to enhance comparability across countries. In particular, the survey-based consumption measures do not include flow of services from durables, rent (where paid), and catastrophic health care.



# The Role of Labor Markets and Safety Nets

In 2003, more than two-thirds of the poor in the Region (or around 40 million poor people) belonged to families where someone worked. Although economic growth has served the poor well (particularly the working poor), they remain the largest group among the poor. This chapter analyzes the main channels through which growth affected the well-being of the poor during 1998–2003. It shows that alongside higher wages, increased transfers were instrumental in reducing poverty. But neither higher wages nor increased transfers can be expected to sustain poverty reduction in the Region. The chapter concludes that higher productivity and enhanced employment generation are needed to sustain poverty reduction. To achieve this, policy makers need to push for the continuation of structural reforms to bring market discipline to old enterprises and encourage entry by new firms.

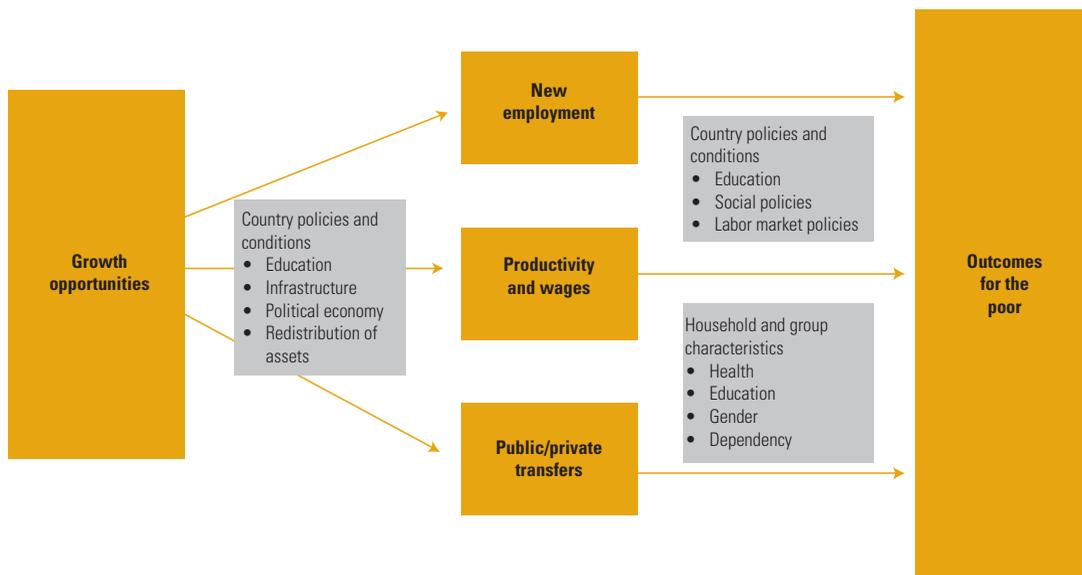
### How the Poor Can Connect to Growth

The poor connect to growth processes in various ways, direct and indirect. This chapter adopts a simple framework (used by “Pro-Poor Growth in the 1990s,” World Bank 2005f) to analyze how economic growth shapes the opportunities available to the poor in the Region.

There are three main channels that affect different groups among the poor. The *unemployed poor* directly benefit from increased employment resulting from growing demand for their labor. The *working poor* gain from rising real wages or higher productivity of their self-employment. Growth can also trickle down to the *nonworking or economically inactive poor* through increased public and private transfers (figure 3.1). Policies affect the scale of opportunities open to the poor. Geographic location, gender, or membership in a specific group (ethnic, political, and so forth) influence access to these opportunities. Other individual circumstances (dependency rates and so forth) determine whether a given growth in earnings or transfer income is sufficient to move a household out of poverty.

Different patterns of growth have different effects on the poor, depending on where they are. Table 3.1 presents labor market profiles of the poor (defined as employment status of the household head) in four representative countries of the Region: Poland (EU-8), Romania (SEE), Russia (middle income CIS group), and Moldova (low income CIS group). This table complements the data on poverty by individual labor market status discussed earlier (chapter 1, figures 1.4 and 1.9). This study adopts the definition of the working poor in line with the one developed by the Indicators Subgroup of the EU Social Protection Committee.<sup>1</sup> It defines the working poor based on the work intensity

**FIGURE 3.1**  
**Connecting the Growth to the Poor**



Source: Adapted from World Bank 2005f.

TABLE 3.1

**Work Does Not Protect Families from Poverty in the Region**

Poverty Profile by Sector and Type of Employment of the Household Head, Selected Countries, around 2002

Household head employment	Poland		Romania		Russian Federation		Moldova	
	Poverty rate	Share of Poor	Poverty rate	Share of Poor	Poverty rate	Share of Poor	Poverty rate	Share of Poor
Sector of employment								
Agriculture	35.8	15.1	26.3	33.7	20.1	24.8	67.1	35.7
Industry	35.3	24.2	9.1	9.8	13.4	14.3	51.3	9.1
Services	19.2	29.5	10.7	21.4	3.2	27.9	48.3	26.9
Type of employment								
Public employee	18.8	16.7	5.0	5.0	5.0	35.4	48.9	11.6
Private employee	31.8	35.4	7.6	11.6	5.5	28.2	56.3	35.6
Self-employed	25.7	16.8	26.3	48.3	9.9	3.4	61.9	24.3
Employed	25.6	69.0	14.8	64.9	6.6	67.1	56.7	71.4
Not employed	30.4	31.0	16.3	35.1	12.7	32.9	57.4	28.6
Total	27.1		15.3		8.6		56.9	

Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: For Poland \$4.30 a day at 2000 PPP is used as a poverty line; for other countries in this table \$2.15 is used.

of the household as a whole. If no member of a household with work-capable members worked for even a single day in the reference period, such a household is classified as “jobless”; all other households with employed work-capable members are classified as “working.”

Work does not protect families from poverty in the Region. Table 3.1 shows that the working poor (in a broad sense) constitute two-thirds of the poor. Their risk as a group is noticeably lower than the average poverty incidence, especially in Poland and Russia, but it is definitely above zero everywhere. There are also clear differences across sectors, with agriculture characterized by an elevated poverty risk and services by a significantly lower risk. The growth of the service sector, therefore, can be expected to have different consequences, depending on whether it is translated into the increase in *employment* (in which case, it will strongly contribute to poverty reduction) or the rise in *earnings* (in the latter case, the impact on poverty will be minimal because workers in the sector are above the poverty line already). With regard to ownership structure, the public sector has the lowest incidence of poverty, while self-employment is characterized by the highest incidence.

These channels may reinforce each other, but they can also interact negatively. There are complex interactions between the three channels presented in figure 3.1. For example, if wage growth outpaces productivity improvements, it may depress the demand for labor. Excessive and poorly designed transfers may create dependency traps and discourage the poor from taking advantage of new

employment opportunities. Underdeveloped safety nets may, on the other hand, prevent the poor from changing jobs, thereby locking them into low-productive activities.

This chapter is organized around the three channels presented in figure 3.1. The next (second) section presents trends in wages, employment, and public and private transfers during 1998–2003. The third section assesses not only how well the poor in the Region were able to take advantage of new opportunities by entering the labor market or moving to more productive and remunerative occupations but also how well they were served by the transfer system. The fourth section explains why the poor were able to connect to growth in different degrees. The fifth section concludes by reviewing the main findings and discussing implications for policy.

### **Economic Opportunities Have Expanded**

Rapid real wage growth outpaced employment generation in the Region. Figure 3.2 presents the evidence on broad economywide trends in employment and wages. It shows that between 1998 and 2003, *real wages* increased in all countries in the Region. Successes in generating new employment were less impressive, especially in SEE and the EU-8, where job destruction during the period exceeded job creation (see box 3.1).

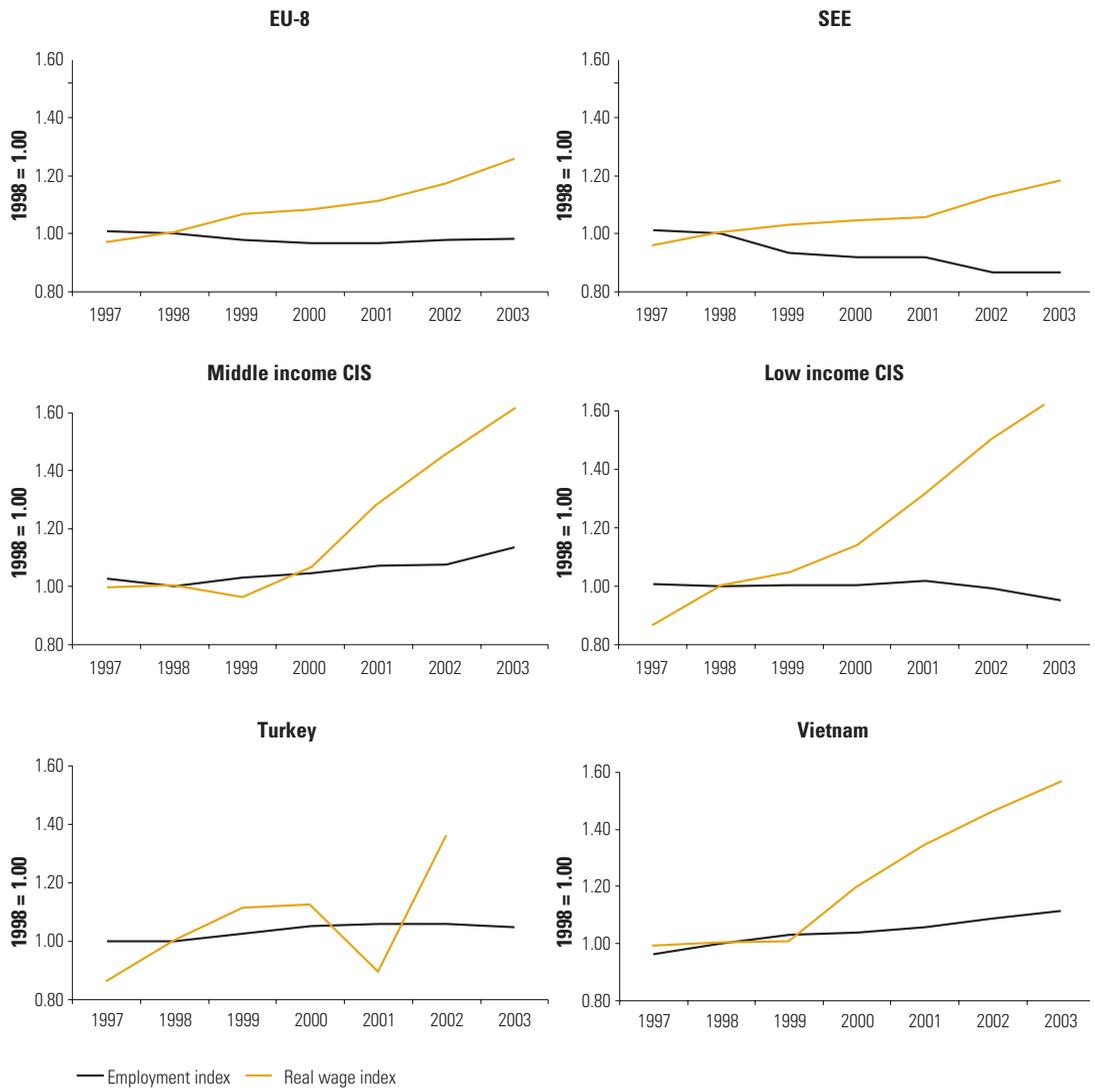
In the poorest CIS countries, average real wages have almost doubled since 1997. This rebound should be put in an historic context. In the early 1990s, real wages in transition economies fell sharply. In CIS countries, where enterprises adjusted to the fall in output by delaying salaries rather than by shedding redundant labor, real wages generally fell more than in the EU-8, where enterprise restructuring was carried out through labor retrenchment. Since the mid-1990s, real wages have recovered everywhere, rising faster than output and productivity in most cases. Comparison with Vietnam in figure 3.2 suggests that rapid increases in wages (from a low base) are not unique to the Region, but issues of sustainability are key (discussed in the last section of this chapter).

Average wages are above the poverty threshold for most countries in the Region. The increase in real wages translated directly into raising consumption of workers and pulled many out of poverty. Although around 1998, practically all countries in the low income CIS group had average wages below the poverty standard (\$2.15 a day per capita),<sup>2</sup> in 2002, wages would put an average worker in poverty only in Tajikistan. In the EU-8 and SEE (except for Serbia and Montenegro), average wages also exceeded the economic vulnerability threshold (\$4.30).

**FIGURE 3.2**

**Real Wage Growth Typically Outpaced Net Employment Growth in Transition Economies**

Real Wages and Employment by Country Groups and Benchmark Countries; 1998 = 1.00



Sources: ILO Key Indicators of the Labour Market (KILM); LABORSTA (ILO); General Statistics Office of Vietnam; and Turkey's State Planning Organization.

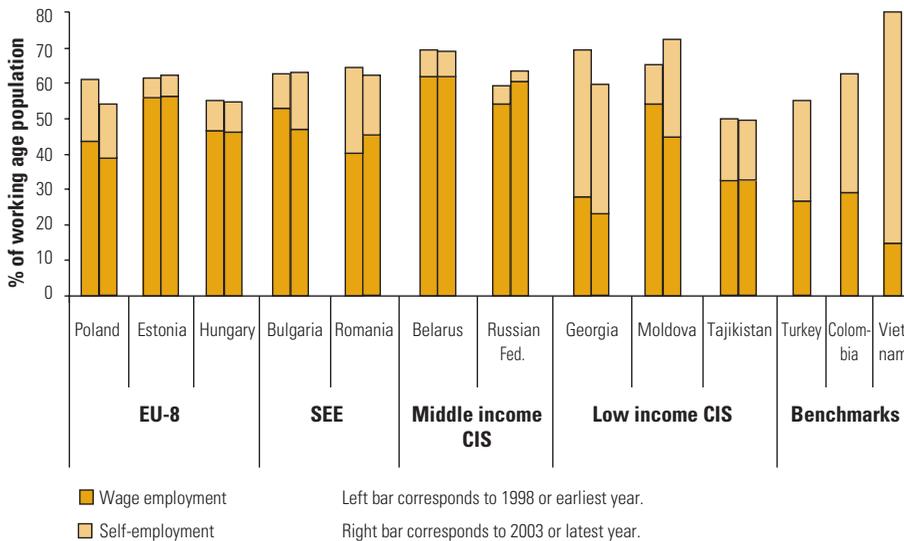
Note: The following countries were used to compute averages. Wage data are average wages of full-time workers in all sectors of economy deflated using CPI indexes. Simple averages are used. The Consumer Price index was used to deflate current wages. For Vietnam: Data on wages includes only state sector employees. For Turkey: Wage data is for private sector employees only. Employment data before 2000 included persons 12 years or older, and later—persons 15 years or older. Employment data is for civilian employment only.

The structure of employment has changed, even though employment levels might have been stable or declining. Figure 3.3, based on household data (which is typically different from official unemployment data, as discussed in box 3.1) reports dynamics of employment for selected countries in the Region and for benchmark countries, breaking

**FIGURE 3.3**

**The Structure of Employment Has Changed**

Wage- and Self-Employment Rates Over Time for the Region and Benchmark Countries



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Employment and self-employment levels are derived from household survey data and may differ from official statistics; includes full-time and part-time employment with at least one hour of gainful work in the reference period of the survey. The age brackets are 16-64 (inclusive) for all countries.

it down by wage employment and self-employment. In Bulgaria, Georgia, Moldova, Romania, and Russia, noticeable structural shifts between self-employment and wage employment occurred during the period. But even in 2002, all transition economies in the Region (except for Georgia) had significantly lower rates of self-employment, compared with benchmark countries. It suggests that there exists a potential for further shifts in the employment structure (box 3.1).

The major source of new employment in low income CIS countries has been the growing sector of self-employed (own-account) workers. Self-employment was the main source of employment growth in the low income CIS group. In these countries, self-employment accounts for about half of total employment, compared with 17 percent and 20 percent for middle income CIS countries and the EU-8, respectively. Figure 3.3 shows significant reallocation between two main forms of employment, wage employment and self-employment, suggesting the existence of large flows in the labor market.

The process of labor reallocation between sectors is far from over. The transition process has disproportionately affected the manufacturing sector, resulting in a reduction in the share of employment in industry, while the service sector share of total employment has

## BOX 3.1

**In Most Countries, Household Survey Data Report Higher Employment Figures than ILO Statistics**

This report relies on information from the Household Budget Survey (HBS) or variations on it, such as the Integrated Survey or the Living Standards Measurement Study (LSMS). Even though this type of data is not primarily intended to measure employment, it provides representative coverage and collects information on earnings alongside information on characteristics and activities of household members. The HBS programs across transition countries have benefited from international technical assistance, with a fair degree of useful unification and standardization. As a result, their quality is sound. HBS data have been used extensively in empirical studies that explore the relationships between employment, earnings, and poverty. However, HBS-based figures may differ from official labor data, which rely on different sources. As the table in this box suggests, trends in employment, as reflected in different sources, point in the same direction (except for Bulgaria, Georgia, and Moldova). Such discrepancy is not unique to the Region, with HBS data generally capturing higher employment ratios than specialized labor market surveys. Such a discrepancy may come from a different reference period to qualify respondents as employed (in the HBS, typically a longer survey period) or to better capture some informal activities in the HBS/LSMS integrated surveys.

**Employment Rates from HBS/LSMS and Official Labor Data, Percentage of Population**

	EU-8						SEE			
	Poland		Estonia		Hungary		Bulgaria		Romania	
	1998	2002	2000	2003	2001	2002	1995	2003	1998	2002
Survey	60.9	54.0	61.4	62.3	63.1	61.4	61.6	62.7	63.9	61.9
ILO data	59.0	51.5	60.3	62.0	56.5	55.5	42.2	41.5	64.2	57.6
	Middle income CIS				Low income CIS				Benchmarks	
	Belarus		Russian Fed.		Georgia		Moldova		Turkey	Colombia
	1998	2002	1999	2002	1999	2002	1998	2002	2002	2002
Survey	69.7	67.7	64.0	67.3	69.2	59.7	64.2	71.0	55.0	62.8
ILO data	65.4	64.3	57.6	65.0	49.5	53.2	52.9	52.4	50.8	51.6

Sources: World Bank staff estimates using data from ECA Household Surveys Archive, ILO Key Indicators of the Labour Market (KILM), and Labor Statistics (LABSTAT), <http://laborsta.ilo.org/>.

Note: Age brackets in HBS/LSMS are chosen to be consistent with the official definition.

generally expanded in response to rising demand for services from both consumers and enterprises (World Bank Forthcoming-a).

The shifts of employment between sectors of the economy continued between 1998 and 2003. Figure 3.4 reports shifts in employment between agriculture and services over the past five years. In most countries, even where aggregate employment ratios have been stagnant, the shift of employment between sectors continued. These shifts imply that

in a typical country, at least 5 percent of workers change their jobs on a net basis.<sup>3</sup> Data for two benchmark countries (Colombia and Turkey) suggest that these developments are in line with sectoral reallocation observed in rapidly developing economies with structural transformation. Expansion of services, a general pattern observed in all countries in the Region, is reflecting a global trend and has generally meant good news for the poor in the Region because this sector is characterized by the lowest poverty risk (see table 3.1). In contrast, the evolution of agricultural employment varies by subregion. In most EU-8 countries, agricultural employment has fallen, and its share is now close to the EU benchmark; however, agriculture employment has increased slightly in most SEE and low income CIS countries.

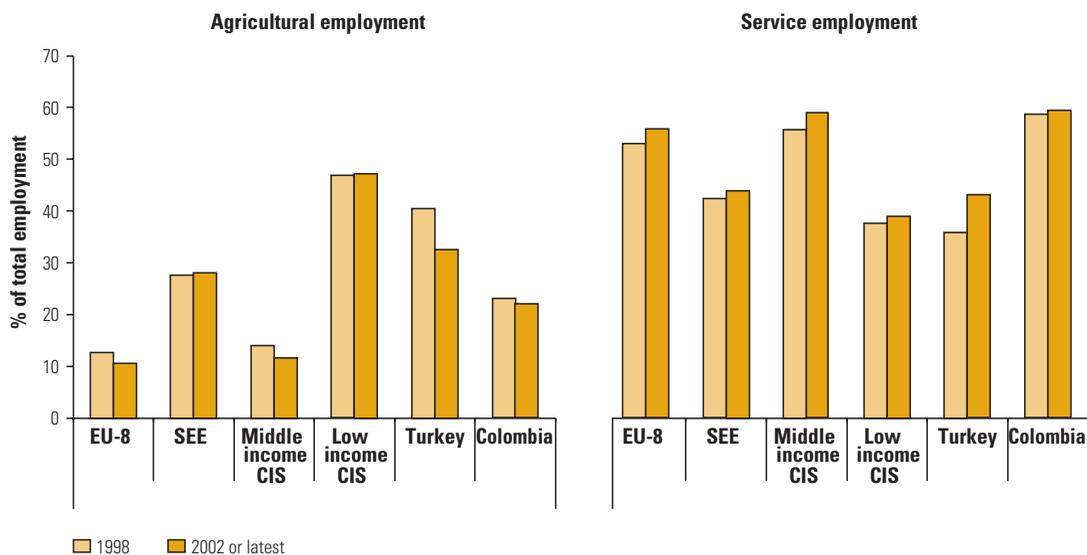
Employment shifts have generally enhanced productivity. The implications of the reallocation of labor across sectors are better understood by taking into account the productivity differentials between sectors. Data on sectoral productivity (measured as value added per worker) reported in figure 3.5 are fully consistent with the poverty profile by sectors of employment (table 3.1): higher productivity implies lower poverty.

Figure 3.5 also illustrates differences in productivity levels across sectors and across country groups. In EU-8 and middle income CIS coun-

**FIGURE 3.4**

**Employment in Service Sector Expanding; in Agriculture, Mixed**

Structure of Employment by Sectors for Subregional Groups and Benchmarks, 1998–2003



Sources: ILO Key Indicators of the Labour Market (KILM) database and World Bank staff estimates.

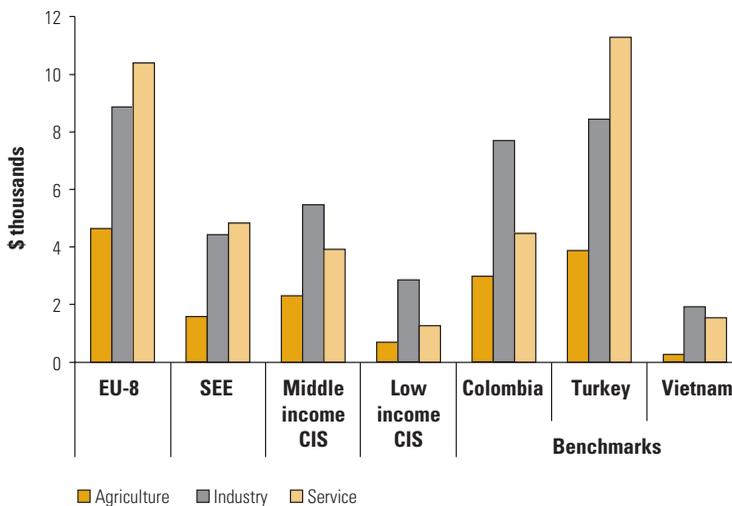
Note: In 2000 US\$. For this figure CEE countries include the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia. SEE countries include Bulgaria, Croatia, and Romania. Low income CIS countries include Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan. Middle income CIS countries include the Russian Federation.

tries, the recent shift in employment away from agriculture and into services can be seen as movement into more productive sectors. It also reflects general trends in productivity-enhancing job reallocation within and across industries, or resource flows from less productive to more productive firms within industries (Brown and Earle 2004a and b). While EU-8 countries approached or exceeded levels of productivity typically observed in middle-income developing economies, the middle income CIS group and SEE significantly lagged behind. At the same time, low income CIS economies exhibit levels and patterns of productivity typical of low-income developing countries.

The increase of agricultural employment in the low income CIS group also potentially enhances productivity. In low income CIS countries, agricultural self-employment has underpinned the growth of aggregate employment and the reduction of poverty. Because it generally reflects the movement of people from unemployment (or potential unemployment) into agricultural self-employment, the growth of agricultural employment has improved household welfare. In fact, the evidence presented in this report (see box 3.2 and appendix B. Key Poverty Indicators, table 3) suggests that where labor intensity is highest (that is, where the ratio of labor to land is high, as is typical in the poorest CIS countries),

**FIGURE 3.5**  
**Value Added per Worker Is Lowest in Agriculture**

Sectoral Value Added per Worker, Subregional Groups and Benchmarks, in 2000 PPP Dollars



Sources: World Bank World Development Indicators (WDI) database; ILO Key Indicators of the Labour Market (KILM) database; and World Bank staff estimates.

Note: In 2000 US\$, 2002 or latest available year. For this figure CEE countries include the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, and Slovenia. SEE countries include Bulgaria, Croatia, and Romania. Low income CIS countries include Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan. Middle income CIS countries include the Russian Federation.

**BOX 3.2****The Role of Agriculture in Transition**

Transition to market has affected agriculture through several channels. The liberalization of prices and the trade and subsidy cuts caused a dramatic decline in farm profitability and rural incomes in the Region at the onset of the transition. Reduced domestic demand, with falling incomes and subsidy cuts, was reinforced by falling foreign demand and increased import competition with trade liberalization. Land reforms, farm restructuring, privatization of agrifood companies, and liberalization of markets have initially caused important disruptions and sometimes reinforced output declines and income falls. More recently, these reforms have been sources of growth.

The process of reforms, the implementation, and the effects, both initially and more recently, have varied tremendously between countries. There are differences between groups of countries in the Region in the levels of agricultural productivity and implications for labor markets and poverty. Productivity in agriculture remains lowest in low and middle income CIS countries, but it is also relatively low compared with other sectors in national economies elsewhere. The employment levels are high in the low income CIS group and SEE. In some EU-8 countries (Hungary), agricultural productivity was increasing very fast and converged to average levels, while in others (Poland), the gap remains wide open. But employment levels in agriculture are declining very rapidly there. Thus, the challenges and policy implications are different.

In the EU-8, large-scale agriculture led productivity growth, with major labor shedding from farms. Effects on poverty have been mitigated by increased social transfers. In those countries, large-scale privatized farms have laid off surplus workers, who have either found jobs in other sectors, become unemployed, or gone into early retirement. The countries could manage associated fiscal costs because initial levels of agricultural employment were low. Productivity growth came mainly from major gains in labor productivity on large farms, rather than from yield increases, which started only as of the mid-1990s.

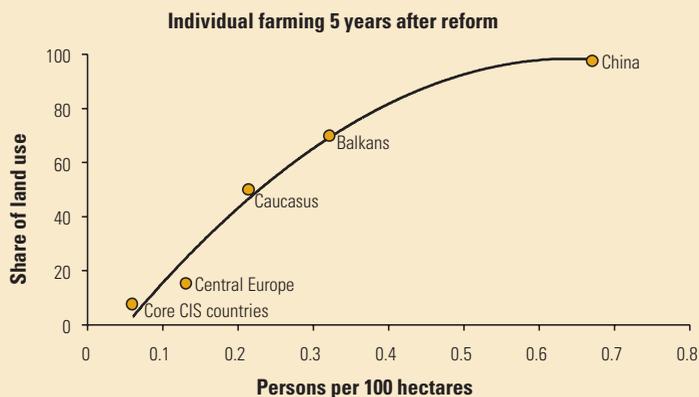
SEE faced different challenges. Rural households in Bulgaria, Romania, and countries in the Balkans possessed relatively developed and capital-intensive agricultural production systems, and productivity gains from shifting to small farms were less than those in poor, labor-intensive agricultural countries, while the costs of losses of scale economies and technology disruptions were larger. With limited access to credit, inputs, and technology and few off-farm employment opportunities in rural areas, there were many constraints limiting growth or investments. The safety net systems were less developed than in the richer Central European countries, and households that were laid off by large farms had to fall back to farming to complement their income. As a consequence, relatively few people left farming, and there was even some inflow of labor into agriculture as people laid off in industry fell back to semisubsistence agriculture. The problems were further complicated because land restitution concentrated land ownership in the group of older households. Young and dynamic people left the rural areas in search of better opportunities in the urban areas, and often abroad, pushing up the share of older, low-skilled, and

less-educated people in rural areas and dampening productivity improvements.

In the middle income CIS group (for example, Kazakhstan and Russia), large farms have remained, and the restructuring of these large-scale farms did not lead to significant income gains in rural areas, but it has not resulted in open unemployment either. This can be explained by the more capital-intensive nature of agriculture in these countries. Indeed, raising productivity of large farms depends to a much greater extent on access to other inputs and factors, which collapsed in the early years of transition. Low agricultural productivity in these countries is further exacerbated by relatively poor human capital stock. The recent improvements in rural poverty in those countries are likely due to an improvement in agricultural prices and overall liquidity in the economy, which have pushed up wages and improved services and wage payments, but not through significant gains in productivity.

In the low income CIS countries, although it is true that observed productivity is extremely low, one should take into account the extremely low capital intensity of this production, which often developed as a coping strategy. An important factor mitigating against even lower agricultural productivity was land reform. Land distribution to poor rural households during transition induced important productivity gains and enabled self-employment in agriculture, which helped mitigate the negative shock of transition. Figure 3.6 shows the high degree of correlation between labor intensity in agriculture and the growth of household farming. In labor-intensive rural economies, access to land through distribution of land plots to rural households induced important growth in productivity and income in rural areas. This is what happened in China in the late 1970s, in Vietnam in the mid-1980s, in Albania in the early 1990s, in the Kyrgyz Republic in the mid-1990s, in Azerbaijan in the late 1990s, and in Moldova after 1999 (which may explain why Moldova is the only country where rural poverty declined much more strongly than urban poverty during 1998–2003).

### Factor Intensity and the Growth of Household Farms



Sources (figure): Rozelle and Swinnen 2004; (box): Macours and Swinnen 2004.

the ratio of rural to urban poverty rate also tends to be lower—an association consistent with the critical role of labor-intensive agriculture in mitigating poverty. Nevertheless, the expansion of agricultural employment in low income CIS countries also reflects the reallocation of labor toward a sector where productivity is lowest and where further increases in productivity may not be possible without addressing market imperfections in factor and output markets. By contrast, reallocation of labor to services has been slow (see box 3.2).

Changes in employment and earnings discussed so far represent only a part of the channels that connect the poor to growth. Changes in the real value and direction of transfers represent another major channel. The Region is characterized by a significant amount of redistribution that takes place both through the government budget in the form of taxes, social contributions, and transfers and through private channels in the form of remittances, gifts, and in-kind intrafamily reallocations (see World Bank 2000a). At the onset of transition, the severe recession led to large declines in government revenues throughout the Region and consequently large declines in social safety-net spending. However, better macro and fiscal performance after 1998–99 helped to address major gaps in financing safety nets and to increase the real value of transfers. This has facilitated the regularization of pensions and social benefit payments and relieved poverty pressures on the working poor and on the elderly.

There are substantial differences between countries in the Region in the role of public transfers, with richer countries spending two times more in GDP shares than poorer countries do. By 2000, spending on social security and welfare in the low income CIS group constituted (on average) 6.5 percent of GDP, while in the EU-8, it represented 13.8 percent of GDP. Fiscal management (with some exceptions) has been careful over the period and avoided major spikes in transfer payments, but even with roughly stable shares of GDP, economic growth resulted in increases in real transfer payments.

The expansion of real transfers is reflected in the real value of pensions, which constituted between 70 percent of all public transfer spending in the EU-8 and 50 percent in the poorest CIS countries. Table 3.2 shows that there was an increase in the real value of pensions in all country groups, particularly strong in SEE and the middle income CIS countries. Public transfers (at least pensions) played a much more limited role in the low income CIS countries, and an average public pension remains well below the poverty threshold. However, very high levels of transfer payments in the EU-8 and SEE

**TABLE 3.2**  
**The Evolution of Pension Spending by Groups of Countries**

	EU-8		SEE		Middle income CIS		Low income CIS	
	1998	2002	1998	2002	1998	2002	1999	2002
Pension spending/GDP	9.72	9.47	7.80	8.45	6.85	6.90	4.50	3.34
Real Pension Index	1.00	1.05	1.00	1.30	1.00	1.40	1.00	1.04
Pension Spending, \$*	871	917	434	565	241	339	59	61

Source: Regional Fiscal Database

\* Annual per capita in 2000 PPP

Note: EU-8 = Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, and Slovak Republic; SEE = Albania, Bulgaria, and Croatia; middle income CIS = Belarus, Kazakhstan, the Russian Federation, and Ukraine; and low income CIS = Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, and Moldova.

are causes for concern because they may introduce perverse incentives to the nonworking poor and contribute to fiscal imbalances that hamper prospects for growth.

Private transfers compensated limitations of public transfers in low-income countries. Data on private transfers are extremely scarce in the Region, but they are believed to exceed by several times what is available as public social welfare, especially in countries where remittances play a major role (see box 3.3). As economic growth in several large countries in the Region attracted migration of workers from poorer economies, remittances have expanded too.

The evidence presented in this section suggests that the economic growth in the Region's countries translated into an expanded set of opportunities open to people. Were the poor able to take advantage of these opportunities? The next section assesses how the gains from economic growth were distributed among various groups.

### The Poor Took Advantage of New Opportunities

Opportunities have expanded everywhere in the Region, in the form of either increased earnings or new employment. Parallel increases in public and private transfers made it easier for the poor to connect to growth. Among these factors, increasing real wages were of paramount importance so far. Figure 3.6 presents evidence on how the gains in real wages were associated with poverty reduction in the Region between 1998 and 2003, as well as in several benchmark countries. Each symbol on the graph represents a period of poverty changes as measured by the survey data and a corresponding change in the economywide average real wage. The Region's countries clearly stand out in the size of the changes in real wages and in their impact on poverty.

**BOX 3.3****The Role of Remittances in the Region**

During the past 15 years, there were huge migration flows within the Region, as well as from countries in the Region to the rest of the world. By 2003, close to 30 million citizens of the Region's countries were residing abroad. It is evident that such size of migration, most of which is due to economic reasons, has had an effect on the economies of both the receiving and sending countries. Migrants' transfers to relatives and friends at home have recently gained prominent importance in several countries of the Region. In 2003, remittances to the Region from relatives and friends working or living abroad amounted to about 10 billion U.S. dollars. The Balkans and Eastern Europe received the major bulk of total migrants' transfers into the Region. In Albania, Bosnia and Herzegovina, Moldova, and Tajikistan, they account for more than 10 percent of GDP (in Moldova, a quarter of GDP in 2002). These numbers, based on the balance-of-payments statistics, are likely to underestimate the scale of remittances because of the predominance of informal channels to remit. Remittances can play an important role in poverty alleviation. They spur domestic consumption, investments, and human capital accumulation and thus contribute to growth. The study of their effects on the poor is made difficult by relatively poor reporting in the household surveys, but available statistics suggest that the poor rely more on remittances than the nonpoor.

*Source:* Chernetsky Forthcoming.

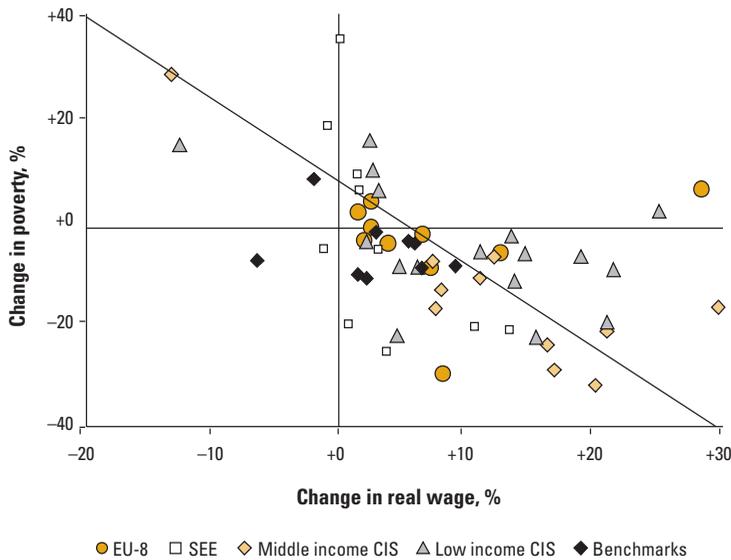
The differences across countries highlight the different roles of channels connecting the poor to growth. Some growth periods in the EU-8 resulted in a sizable wage growth in highly productive sectors, with initially zero poverty accompanied by fixed or falling overall employment levels. Thus, there are some periods over which wage and poverty changes were not correlated. In SEE, employment has fallen; gains in real wages have been moderate, while transfers have expanded considerably; hence, the potential for dissociation between poverty and wages. In the middle income CIS group, employment opportunities, earnings, and transfers have all increased at a similarly high pace, and the relationship between wages and poverty was the tightest. Finally, in the low income CIS group, there was a growing divide between expanding job opportunities in less-productive agriculture and stagnant employment in increasingly better-paid, more-productive sectors. These differences had important implications for the poor.

Higher average economywide wages were good for the poor. Figure 3.6 suggests that despite some dissociation between wage and poverty movements in the Region, there remains a strong link between changes in real wages and poverty. Earnings growth helps

FIGURE 3.6

**Real Wage Changes Correlate with Poverty Changes**

Change in Poverty and Change in Real Wages in Percentage by Country Groups, Annual Periods, 1998–2003



Sources: World Bank staff estimates using data from ECA Household Surveys Archive for poverty and ILO for data on wages. Data on benchmark countries are from World Bank 2005f and include Bangladesh, Bolivia, El Salvador, Tunisia, and Vietnam during 1990–2002.

Note: The line represents a trend derived with the OLS regression across points representing the Region's countries.

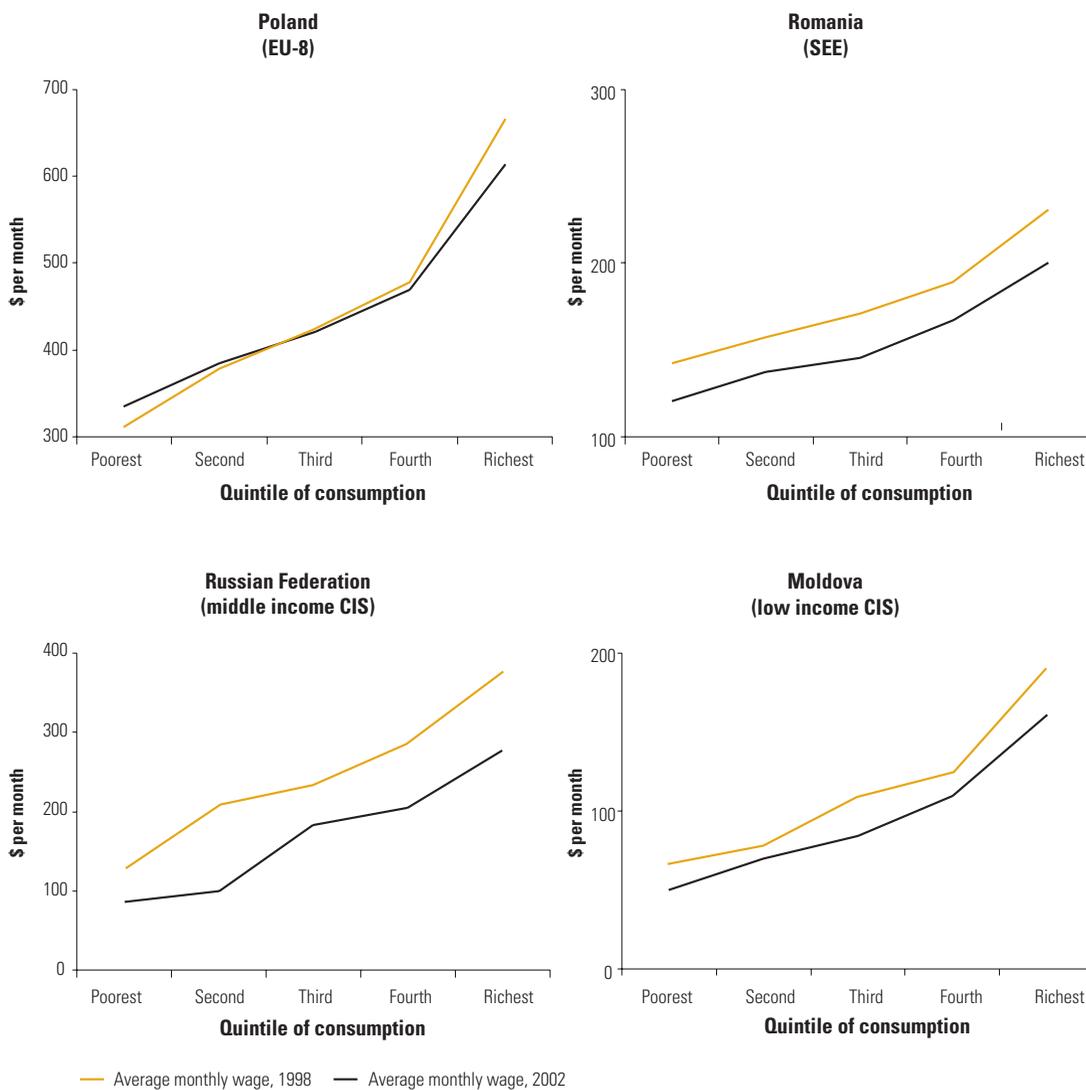
the working poor. Because many poor in middle income CIS countries were working poor, employed for wages, the relationship between real wage growth and poverty reduction is the strongest for this group. But if the working poor represent a smaller fraction of all poor (in the EU-8 and SEE), or the working poor consist predominantly of the self-employed (low income CIS countries), the real wage gains will have less-consistent effects on poverty. Moreover, if the growth in wages is not equitable, increases in inequality may undermine the impact of wage gains on poverty reduction.

The poor gained from wage increases in many countries. Figure 3.7 uses household survey data to examine the relationship between average economy-wage changes and poverty by tracing the evolution of real wages across the spectrum of distribution. It shows that real wages have typically improved for both rich and poor workers, but by different degrees. In Poland, only the well-off have gained, while in Moldova, Romania, and Russia, there was a similar rate of increase for the top and bottom quintile.

Occupational wage data also suggest broad-based wage growth across the Region. The International Labour Organization (ILO) data on monthly earnings for selected occupations for a sample of CEE and CIS countries during 1998–2003 also suggest that real earnings have generally increased across occupations and across countries. Most important, real earnings of blue-collar workers have increased, in some countries more rapidly than in the others. Wages of construction laborers and welders have increased by about 30–50 percent

**FIGURE 3.7**  
**Poor Gained from Real Wage Gains in SEE and the CIS**

Real Wage by Quintiles of Consumption: 1998–2003 (\$ per month in 2000 PPP)



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Per capita consumption, reported monthly wages in 2000 PPP US\$.

between 1999 and 2003 in the Czech Republic, Latvia, and Moldova, but only by 5–10 percent in the Kyrgyz Republic, Poland, and Romania (ILO 2004).

Wage inequalities have recently declined, especially in countries with initially high levels. Chapter 2 provided decompositions of inequality changes and highlighted the role of wages as a driver of the overall inequality outcomes. Direct estimates of the Gini coefficient for wages based on survey data show stability or declines for most countries in the Region. Declines in earnings inequality were also more pronounced than the increases.<sup>4</sup>

Improvements of wage distribution in CIS can be traced to a reduction of wage arrears. As economies have recovered, the incidence of wage arrears has fallen in all CIS countries. In Russia, for example, the proportion of workers with arrears rose steadily from 1994 through 1998, when it reached 63 percent, then fell sharply in 2000 to 29 percent. Similarly, the average number of overdue monthly wages fell from 3 to 1 between 1998 and 2000. At its peak, wage arrears were regressive in impact, driving up inequality among wage recipients (Lehmann and Wadsworth 2001). Not surprisingly, arrears reduction has been beneficial to equality (World Bank 2005g).

Returns to education have stabilized. Extensive literature has emerged in recent years documenting the rapid increases in returns to education during the early stage of the transition. Few country case studies cover the pretransition period in the EU-8 and middle income CIS countries all the way through the late 1990s using comparable data; those that do suggest that the sharpest increases in returns to skills happened in the early transition and that returns seem to have largely stabilized by 2000 at around 8 percent per year of schooling, a level observed in most market economies.<sup>5</sup>

Nonworking poor had problems connecting to growth in countries with little job creation. In many EU-8 and SEE countries, notably in FYR Macedonia and Poland, unemployment rates have been increasing, despite growth. Over the past five years, unemployment rates have fallen only in a few countries, particularly in the middle income CIS group and the Baltic States. Where major industrial restructuring was postponed (for example, in Bulgaria and Romania in SEE), unemployment exploded in the aftermath of renewed reform efforts.

Another concern is long-term unemployment. The incidence of long-term unemployment in transition economies is higher than that in their advanced-economy counterparts, and some countries have experienced rapidly increasing shares of long-term joblessness among the unemployed. Among advanced market economies, the incidence of long-term unemployment is below 40 percent, and some countries

have successfully reduced long-term joblessness in recent years. In contrast, in the EU-8, some 40 to 50 percent of the unemployed have been jobless for at least a year; the incidence of long-term unemployment has been generally stagnant, although in some countries it has risen rapidly since 1997. For example, long-term joblessness among the unemployed in Poland rose from 38 percent in 1997 to 48 percent in 2002. Over this same period, long-term unemployment increased from 28 percent to 50 percent of the unemployed in the Czech Republic. In low income CIS countries, long-term unemployment is also remarkably high. Some 70 percent in Armenia have been unemployed for at least a year. In the Kyrgyz Republic, the incidence of long-term unemployment among the registered unemployed increased from less than 10 percent in 1995 to nearly 30 percent in 2001 (Babetskii, Kolev, and Maurel 2003). Youth unemployment also remains high throughout the Region, about two to three times the average unemployment rate. This has discouraged many young workers and, in some cases, has led to increasing inactivity.

Women took advantage of new opportunities. Gender inequality in employment over the transition does not point to a specific disadvantage of females (Paci 2002). Transition affected men and women differently; but in nearly two-thirds of the countries, the ratio of female to male activity rates has increased slightly, indicating that women are more likely to be employed than men (only Bosnia and Herzegovina, the Kyrgyz Republic, and Tajikistan show worsening outcomes for female employment). There is limited evidence to suggest a reversal of these trends in the recent past. However, there are also emerging gender differentials in the extent to which formal employment has been replaced by informal economic activity, but with ambiguous effects on poverty.

The poor benefited from expanded job opportunities and lost out where they shrank. Figure 3.8 uses household survey data to see how the employment rate has moved over time for the poor as compared with the rich. It shows that in countries where employment has increased noticeably (Moldova and Russia), all income groups have benefited from this increase, and the poor benefited approximately to the same extent as wealthier households. In Poland, where employment fell, all groups suffered, but the poor suffered disproportionately. In Romania, the employment rate has not moved for any quintile of the distribution, and the poor have an employment rate well below that of the rich.

Where job opportunities have been shrinking, it has hurt youth and workers with poor human capital endowments the most. As mentioned previously, long-term unemployment is high and, in

many instances, growing. Across all countries, the bulk of long-term unemployed are those with lower education attainment, inhabitants of rural and remote regions, and representatives of ethnic minorities (for example, Roma in the EU-8 and SEE).

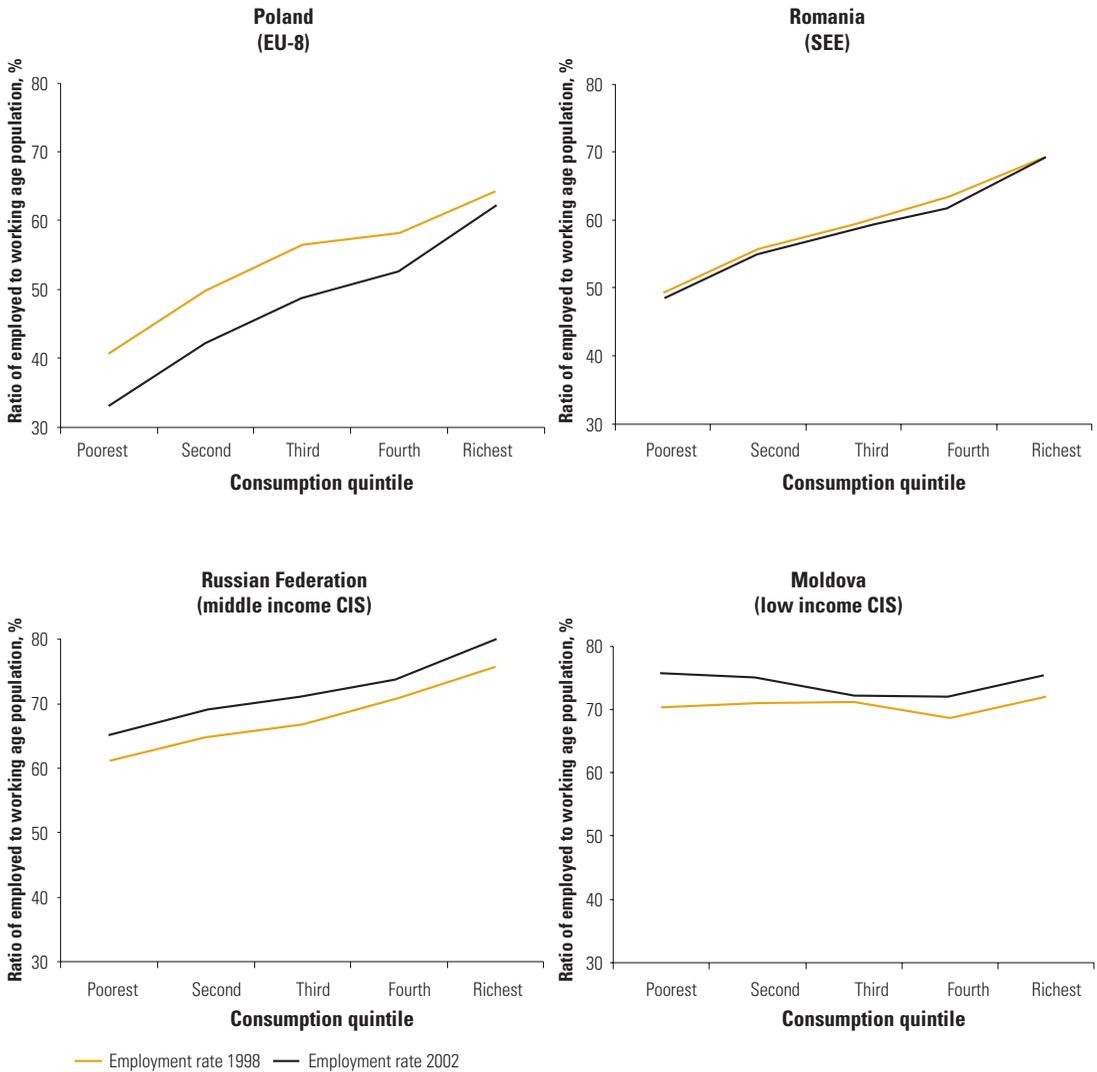
Some groups among the poor literally face handicaps to participating in the growth process through employment. Rising health inequalities could well be an important obstacle to equitable (and sustainable) economic growth and poverty reduction because the relationship between health status and employment is extremely strong. For those individuals who are between ages 40 and 59, Mete and Liu (2005) find that poor health status leads to a 56.7 percentage-point decline in the probability of employment in Romania. Reflecting on the past, deteriorating population health status during transition might have contributed to the decline in employment rates. As for the upcoming challenges in the future, deterioration of health status could emerge as a serious obstacle in achieving higher employment rates, productivity, and (by extension) a more-equal distribution of income.

Unemployment in depressed regions has proven to be stubborn. Bornhorst and Commander (2004) find that regional disparities in unemployment rates are large and grew from 1991 to 2001. In recent years, the gaps between regions with the lowest unemployment rates and the regions with the highest unemployment rates have remained large, about 10 percentage points for most countries for which data are available and more than 50 percentage points in Russia. In Russia, the gap narrowed between 1997 and 2000, but has steadily increased since then. Compared with selected OCED counterparts, transition economies have experienced a higher degree of variation in regional unemployment rates; the dispersion in Russia, in particular, is higher than that in most comparators. Bornhorst and Commander argue that this labor market phenomenon is consistent with rising long-run unemployment. It is also associated with rising inactivity, because high unemployment rates have tended to discourage workers.

As noted earlier, the real value of transfers increased in most countries, and quite substantially in the middle income CIS countries and in SEE. This increase occurred largely through the existing social safety nets, which on aggregate and in most countries in this group are distributionally neutral. This implies that increases in transfers during 1998–2002 were passed on to the poor and nonpoor alike. The story in the low income CIS group is more complex. Although there was a small gain in the overall amount of public transfers, social assistance programs aimed at improving their targeting to the poor, so it is possible that income gains for this group are greater than the averages would suggest.

**FIGURE 3.8**

**Changes in Employment Rate, 1998–2002, by Quintiles for Selected Countries**



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Per capita real consumption used to rank households. Employment rate is the share of wage and self-employed among 16- to 64-year-olds.

Private transfers, especially remittances, grew during this period and came to play a major role as a source of income growth for the poor, especially in the low income CIS countries. The employment opportunities that expanded in the middle income CIS countries and easier access to labor markets in developed countries set off migration flows. The ensuing flow of workers’ remittances has been a sizable source of hard currency for many economies (see box 3.3). Massive outflow of migrant labor from low-income countries of the CIS

toward middle-income countries may have also had effects on local labor markets, pushing real wages up.

Public and private transfers not only expanded but their effect on poverty also seems to have become stronger. Where data are available, they suggest that social benefits have also improved in targeting, coverage, and adequacy. The reduction in arrears, particularly in pensions but also in other benefits, has no doubt contributed to these improvements. As a result, social protection transfers have come to play an important role in reducing poverty.

Figure 3.9 puts together available evidence on the coverage of social protection programs in general, and pension systems in particular, across the Region's countries. It is derived from household survey data. To make an assessment of coverage, the poor are defined based on *ex ante* consumption (before the receipt of transfers). As the figure suggests, there is some overlap between social insurance (pensions) and other forms of social protection.

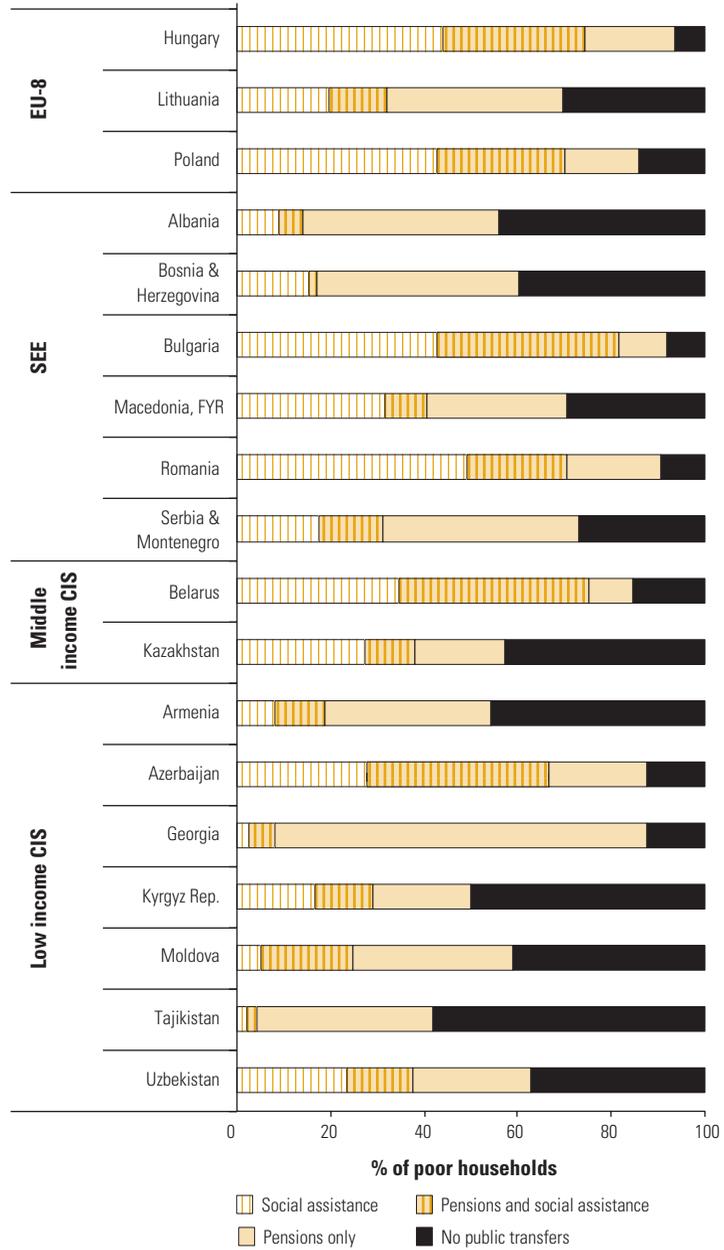
Figure 3.9 shows that social protection programs generally cover the poor quite well. In Azerbaijan, Belarus, Bulgaria, Georgia, Hungary, Poland, and Romania, nearly 100 percent of all poor (assessed based on consumption before transfers) receives some form of social transfer. But even in the poorest CIS countries, coverage rates are high, exceeding 50 percent (except for Tajikistan). But there are stark differences across countries in coverage by social assistance programs targeted at the poor. In EU-8 and SEE countries, close to 80 percent of the poor are captured by these programs. The low income CIS countries show coverage rates around 20 percent (except for Azerbaijan and Uzbekistan). Although the size of transfers in the EU-8 and SEE makes them relatively efficient in reducing poverty, constrained funding of social programs in low income CIS countries, combined with low coverage, translates into relatively small effects on poverty (see table 3.3).

In part, the efficiency of programs in many countries is due to programs targeting the poor increasingly well, although the improvements are slower than anticipated (see box 3.4). In Romania, for example, 50 percent of all social protection spending is going to the poor, compared with 47 percent five years ago, a rather limited success for significant reform efforts. Efficiency also varies enormously between countries. In the Kyrgyz Republic, only 20 percent of funds go to the poor, as opposed to 70 percent in Poland. There is strong evidence that the targeted part of social protection is operating increasingly well (in Kazakhstan, the share of social assistance spending received by the poor increased from 6 percent five years ago to 56 percent in 2003).

**FIGURE 3.9**

**Safety Nets Cover Many Poor in the Region**

Coverage of Social Protection by Country Groups, around 2003



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Poor are defined based on ex ante consumption levels, \$2.15 is used; see also box 3.4 for detailed references to the ongoing study.

Social protection transfers were helping to reduce poverty, and poverty would have been significantly higher in a hypothetical “no-transfers” situation (table 3.3). Although somewhat simplistic (particularly in assuming no behavioral response in the no-transfer scenario, except in a few instances), the data are nonetheless illustrative of the importance of public transfers to poverty reduction, especially *outside* the low income CIS group.

Data on private transfers are scarce and do not allow any systematic assessment of trends. The limited data on remittances (see box 8) suggest that private transfers play a much more important role than public transfers in low income CIS and some SEE countries. Unfortunately, it is unclear what happened to the distribution of private transfers over time (Chernetsky Forthcoming).

Government transfer policies sometimes conflict with labor supply incentives among the poor, although this is more likely to be an issue in the EU-8 and (to some extent) SEE. The design of public transfer systems often implies high marginal tax rates (withdrawal of benefits) for earnings if the poor move from inactivity and unemployment to jobs. This creates powerful disincentives for the poor for entering the labor market (Poland: World Bank 2004h; the Slovak Republic: World Bank 2002g).

## Why Are Many Workers in the Region Still Poor?

Despite the evident progress to the benefit of the working poor, every third worker in countries of the Region remains poor or economically vulnerable. Although this is a lower incidence than observed globally because of the low workers-to-population ratio in the Region (see box 3.5), the employed nonetheless represent the largest group among the poor.

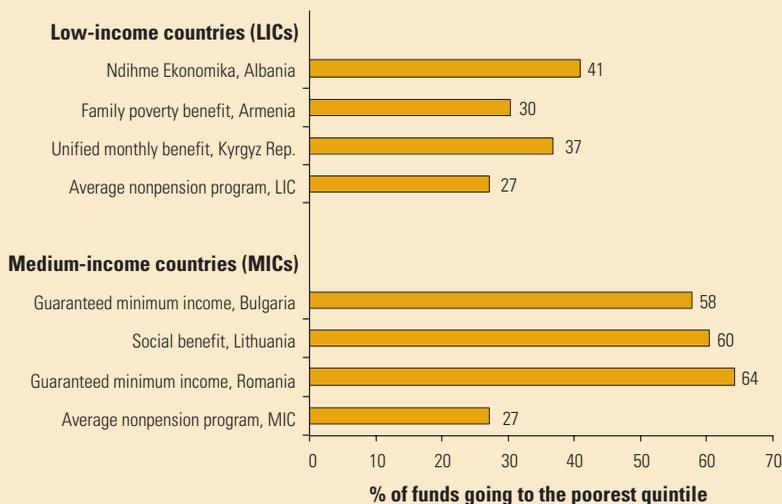
This section provides answers to a question: why, despite gains to the employed across all countries of the Region in the past five years, do many workers remain poor? There are **three groups of explanatory factors**. First, the level of productivity (real wages) in the economy or in a particular sector determines whether an average worker is productive enough to earn incomes above the poverty threshold. Second, group and individual characteristics of workers, their human capital, and dependency rates may explain why their living standards are lower than those of nonpoor workers. Third, policy, institutional, and structural causes inherent in the process of transition explain why, despite similar characteristics, some workers remain in poverty despite the nationwide productivity gains. These three sets of factors are discussed in turn.

## BOX 3.4

**Improvements in Targeting: Lessons from Recent Policy Reforms**

Most countries of the Region target social benefits to the poorest. The range of benefits encompasses social assistance (cash or in-kind), scholarships or free school supplies, health-fee waivers, subsidized medicines, and utility services (heating, electricity, transport, and so forth). Although the overall targeting performance of these programs is very heterogeneous, a few of the Region's programs are among the best performers in the world (Coady, Grosh, and Hoddinott 2004).

To study targeting performance further, the World Bank has studied key design and implementation arrangements of six well-targeted programs in the Region: Family Poverty Benefit (Armenia) and the Unified Monthly Benefit (the Kyrgyz Republic) in the low income CIS group, *Ndihme Ekonomika* (Albania) and Guaranteed Minimum Income (Bulgaria and Romania) in SEE, and the Social Benefit (Lithuania) in the EU-8. All programs under review transfer a larger share of their benefits to the poorest quintile, compared with other social assistance programs (see figure that follows).

**Share of Social Protection Benefit to Lowest Quintile**

Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Although the overall cost of these programs is rather modest, they provide an effective shield against poverty and destitution. Two models seem to emerge. In the EU-8 and SEE, targeted programs are residual programs that serve those households not assisted by other programs, such as social pensions, unemployment benefits, and child allowances. Targeted programs with budgets between 0.25 and 1 percent of GDP are found to reduce the extreme poverty in such countries. In contrast, in the low income CIS countries, fiscal constraints have led to the replacement of the diversified system of social assistance inherited from the socialist regime by one large, targeted program. These programs transfer about 1–2 percent of GDP and cover 25–35 percent of the bottom decile of the population.

Programs that use more than one targeting method to select their beneficiaries have better targeting performance. Although all programs use means or proxy means tests, these are often combined with work requirements or categorical filters to strengthen targeting. All successful programs seek to balance the need to protect the poorest with maintaining adequate work incentives. All programs use a comprehensive indicator of household means, which include both formal and informal income, as well as tests of assets—an important feature for reducing inclusion and exclusion error. An important finding of the World Bank’s evaluation is that administrative costs are moderate, and the marginal costs associated with targeting are only a small component of the total cost.

Source: Coady, Grosh, and Hoddinott 2004.

**TABLE 3.3**  
**Transfer Payments for Social Protection Have Had an Important Role in Reducing Poverty outside the Low Income CIS Countries**

Country	Year	Increase in poverty without all social transfers, %
EU-8		
Poland	2001	141
SEE		
Bosnia & Herzegovina	2001	68
Bulgaria	2001	156
Romania	2002	49
Serbia	2003	41
Montenegro	2002	34
Middle income CIS		
Belarus	2002	143
Kazakhstan	2002	100
Russian Fed.	2002	68
Low income CIS		
Armenia	2001	12
Kyrgyz Rep.	2001	10
Benchmark Countries		
Guatemala	2000	9
Vietnam	1998	5

Sources: For ECA, World Bank, various poverty assessments; for Guatemala, World Bank 2003; for Vietnam, Van De Walle 2002.

Note: Simulations use national poverty lines. Some behavioral response is assumed in Romania (50 percent of transfer income is replaced) and Serbia (72 percent of transfer income is replaced in rural areas, 87 percent in urban areas). For Guatemala, transfers include both public and private transfers.

## Sectoral Profile

Low levels of productivity in the low income CIS countries explains why most workers are poor there. Figure 3.5 showed average levels of productivity (in US\$ value added per worker) by groups of countries and sectors in the Region. Clearly, when an average agricultural worker

**BOX 3.5****Global Trends in the Number of Working Poor**

A recent ILO report (2004) finds that some 1.39 billion workers and their families are living below the US\$2-a-day level in the world. It estimates that one-third of all employed *in transition economies* were poor around 2003. This aggregate estimate is quite close to the assessment presented in this report, based on actual country-level data. There are important differences in the way ILO and this report estimate the number of working poor. The difference in PPP is one source of these differences (ILO used poverty estimates based on 1993 PPP). This report uses different poverty lines (\$2.15 in CIS countries, but \$4.30 in the EU-8). The ILO estimates the number of working poor based on the overall poverty rate multiplied by the total labor force. The formulation *assumes* that the poverty rate of working-age people is equal to that of the population as a whole and that the labor force participation rate of the poor is equal to that of the population as a whole. Both assumptions, according to evidence presented in appendix tables, may not be true for individual countries of the Region, but they reflect the average levels well. Direct evidence on consumption levels of those in employment used to establish whether they are poor or not poor provides much richer insights.

Source: Kapsos 2004.

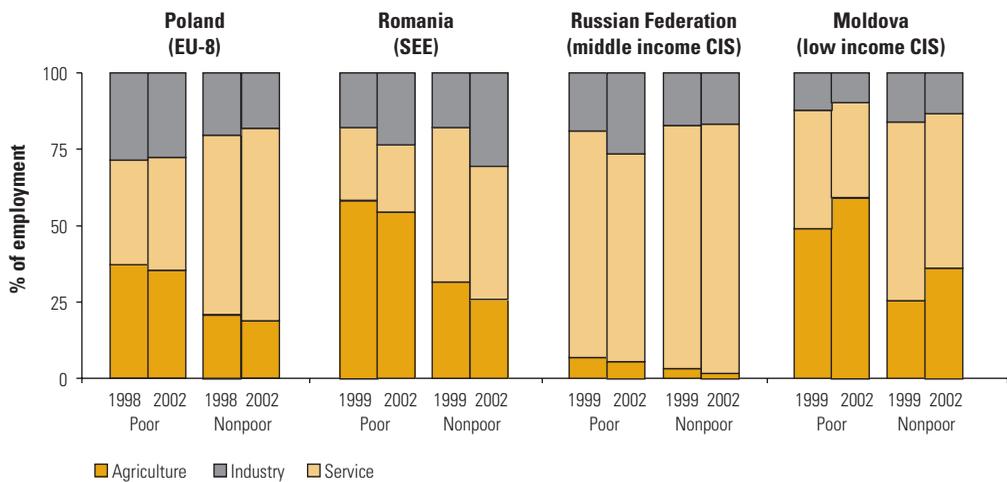
in the low income CIS group adds less than 2 dollars per day of value to output, it is impossible to expect that he or she will not be poor.

Low agricultural productivity in the middle income CIS countries and in SEE drives agricultural workers into poverty. Low productivity of agriculture in these countries keeps workers there mired into poverty. It is important to understand country variations and patterns of change (see box 3.2), which reflect not only the initial conditions of these countries but also their policies. The analysis suggests that low agricultural productivity in these countries reflects a failure to address the main constraints to rural growth.

The poor have not moved to more-productive occupations to the same extent as the nonpoor have. Comparison of changes in sectoral employment shares over time shows that the differences in employment patterns between poor and nonpoor remain large. Figure 3.10 reports results for four representative countries (similar data for other countries yield similar conclusions). The poor are overrepresented in agriculture, the least-productive and shrinking sector, but in some countries, employment in agriculture has even expanded for the poor.

The poor are overrepresented among the self-employed, especially in low income CIS countries. In principle, self-employment covers a wide range of occupations, from aspiring entrepreneurs to subsis-

FIGURE 3.10

**Sectoral Wage Employment for the Poor and Nonpoor in Selected Countries**

Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Sectoral employment data are derived from household survey data and may differ from official statistics; includes full-time and part-time employment with at least one hour of gainful work in the reference period of the survey.

tence farming. Subsistence agriculture, however, is normally characterized by high poverty risks. Applying the criteria for defining subsistence farming discussed in chapter 2 (analysis of inequality), 20 percent of the population in Georgia, 24 percent in Kazakhstan, and 40 percent in Moldova rely on subsistence farming as the main source of their livelihood. Only 2 percent in Hungary and Poland, 11 percent in Romania, and 14 percent in Russia do the same (see figure 3.10).

Informal employment plays an ambivalent role for the poor. Informality is often discussed as a synonym of self-employment, although this is not entirely correct (box 3.6). The informal sector represents a conglomerate of different activities, some of which result in low productivity and poverty and some of which do not. But many among the working poor are found to be employed in the informal economy. A large informal sector may also have indirect effects on poverty by reducing the tax collections and thus limiting resources available for social programs and services. However, the definition of the informal sector remains one that is difficult to implement in empirical studies of poverty. It is even harder to analyze distinct types of informal employment and their implications for poverty. So far, there is no solid evidence that informality in itself drives workers to poverty in the Region.

**BOX 3.6****Informal Employment in Transition Economies**

Informal sector jobs are usually defined as value-adding activities outside the tax net and regulations. These activities may be unregistered and untaxed by their nature (household subsistence economy) or emerge because of purposeful evasion and noncompliance. According to the ILO, the informal economy is a sum of production units operating as unincorporated enterprises. This definition emphasizes that the direct relationship between operating revenue of the production unit and workers' well-being is a constituent feature of informal sector employment. There are four distinct types of informal employment: (a) subsistence-type activities; (b) small-scale entrepreneurial activities; (c) informal wage labor, usually of a casual nature; and (d) employment in formal businesses, with part or all of payment consisting of undeclared wages (for tax reasons or to avoid the withdrawal of social payments and other benefits they are entitled to as unemployed).

Evidence shows that some informal sector activities, especially of types (a) and (c), are characterized by lower productivity and by higher inequality of outcomes (risk). That would normally imply that poverty of workers in the informal sector is higher than in the formal sector, which is indeed the case in a typical developing country. In transition countries, there is evidence that some small-scale firms chose to remain informal, with resulting undercapitalization and lower productivity than comparable firms in the formal sector. Several studies have documented that many working poor in the Region are employed as wage laborers in such "classical" informal sector activities. But this is only a part of the informal sector employment in transition countries.

**Individual and Group Characteristics**

Differences in consumption between the poor and nonpoor can be decomposed into several factors: measures of dependency, labor market participation, labor earnings per income earner, and other factors (such as transfers). Workers from the lowest consumption quintile in all countries in the Region for which such analysis has been undertaken have higher dependency ratios (usually about 10–20 percent more dependents for each employed) and lower employment rates (sometimes significantly so, especially in SEE and the EU-8, where poor households have a third less employed than nonpoor households).

But the importance of these factors as drivers of poverty diminishes compared with the role of *earnings*. Results presented five years ago and updated in various country studies (Bosnia and Herzegovina, see World Bank 2003d; Serbia and Montenegro, see World Bank 2003l) eloquently show that between 60 and 75 percent of the gap in

In addition, formal employment in transition also often takes characteristics that make it indistinguishable from informal employment. For example, workers of old unstructured enterprises subject to wage arrears often are characterized by high uncertainty of earnings and low capital endowments, exactly as their informal sector counterparts. On the other hand, workers choosing to hide their jobs in fear of losing entitlements to social benefits are generally not poor. Thus, a formal sector job in transition does not automatically imply incomes above the poverty line, and not all informal workers are poor (because of the risk premium, informal activity can be highly rewarding). In addition, a buoyant informal sector can generate additional dynamism in the economy and have positive spillover effects on the poor in general.

Although the size of the informal sector is notoriously difficult to estimate, informality is reportedly large in low income CIS countries (close to one-half of all employment) and smaller in CEE countries (about a quarter of employment). In relative importance of various types of informality, there are significant differences between the low income CIS group (predominantly subsistence farming), middle income CIS countries and SEE (undeclared wage employment in manufacturing and services, with extensive subsistence), and the EU-8 (household entrepreneurship and undeclared paid jobs in the service sector). Informal sector activities also follow different dynamics in the EU-8, SEE, and CIS. The EU-8 countries are characterized by a "flat" trend line representing the size of the informal sector in the recent period. The SEE countries seem to have the size of the informal sector peaking around 1996–99 and have recently seen some reduction. Little is known with certainty about the role and dynamics of the informal sector in low income CIS countries.

*Sources:* ILO 2004; Yoon and others 2003; Schneider 2002; and Commander and Rodionov 2005.

consumption levels between poor and nonpoor workers can be explained by this single factor: differences in earnings per each employed.

The education profile of poor workers helps to explain some part of this earnings gap. Lower education results in less pay and thus correlates with higher levels of poverty. The empirical analysis of earning functions undertaken for the purposes of this report shows that by 2003, a worker with primary education faced a wage disadvantage of 20–40 percent across countries of the Region, compared with a worker with secondary education (Yemtsov, Mete, and Cnobloch 2005). A recent analysis of detailed firm surveys in several countries reveals the presence of education-specific wage differentials within blue-collar skill grades. In particular, blue-collar workers with relatively less education have seen their wages fall in Hungary, Romania, and Russia (Commander and Köllö 2004), reflecting relative productivity developments.

Workers with low skills have lower chances to find employment, and once they do, their wages are lower. Thus, differences in labor market prospects between skill groups are translated into different poverty outcomes. But what is interesting is that there are large differences in wages within the same educational clusters between poor and nonpoor workers, suggesting that skills are not a full explanation of why certain workers are receiving low wages.

Gender is also a major source of wage differentials in the Region. The crude gender gap is significant—but declining—in most countries. Controlling for other characteristics, women currently face 3 percent (Bosnia and Herzegovina, 2002) to 25 percent (Tajikistan, 1999) lower wages compared with those of males, with most of the differential not accounted for by their human capital characteristics (Paci and Reilly 2004).<sup>6</sup> Although being an important indicator in itself, the wage gender gap cannot explain why certain workers are poor. Low-paid female workers often come from nonpoor families and provide secondary sources of income; therefore, their low pay is not a critical factor in determining the poverty status of the household.

Standard human capital characteristics explain only a small fraction of the wage gap between poor and nonpoor workers. In-depth studies of wage gap determination for EU-8 countries (Poland, Newell and Socha 2005; the Czech Republic, Munich 2003) and middle income CIS countries (Russia and Ukraine, Gorodnichenko and Peter 2004) find that less than half of the gap in wages between the bottom decile and the median worker can be accounted for by standard Mincerian human capital characteristics (age, education, gender, and so forth). In addition, this gap is quite persistent. Although the explained share of the gap has increased remarkably compared with that of the mid-1990s in all countries studied, it remains much less determined by human capital characteristics than similar gaps in market economies.

### **Institutional Factors**

To understand the nature of wage differentials between poor and nonpoor workers requires going beyond individual and household characteristics and connecting earnings of workers to performance of their enterprises. Labor markets in the Region are still functioning less than optimally, with serious barriers to competition and free movement of workers, which are required to equalize wage rates across firms (World Bank Forthcoming-a). This results in persistent differences in pay across firms within the same sector and close links between firm-level productivity and wages. Unfortunately, there are practically no data in the Region that would connect household infor-

mation on workers to firm characteristics; therefore, indirect evidence must be relied on.

Two observationally similar workers may have very different pay rates in the Region. Figure 3.11 presents household survey data on average monthly wages for male urban prime-age full-time workers in private manufacturing enterprises by levels of skill and poverty status (expressed in PPP terms). The figure shows that there is a significant gap between poor and nonpoor workers with the same characteristics across all country groups. Expressed not as absolute differences in monthly pay rates, but as a percentage gap, it is greatest in Moldova and Russia (more than 50 percent). Remarkably, the gap is significantly narrower in Colombia than in any country in the Region, and there are no manufacturing full-time workers with vocational education who are poor in Turkey.

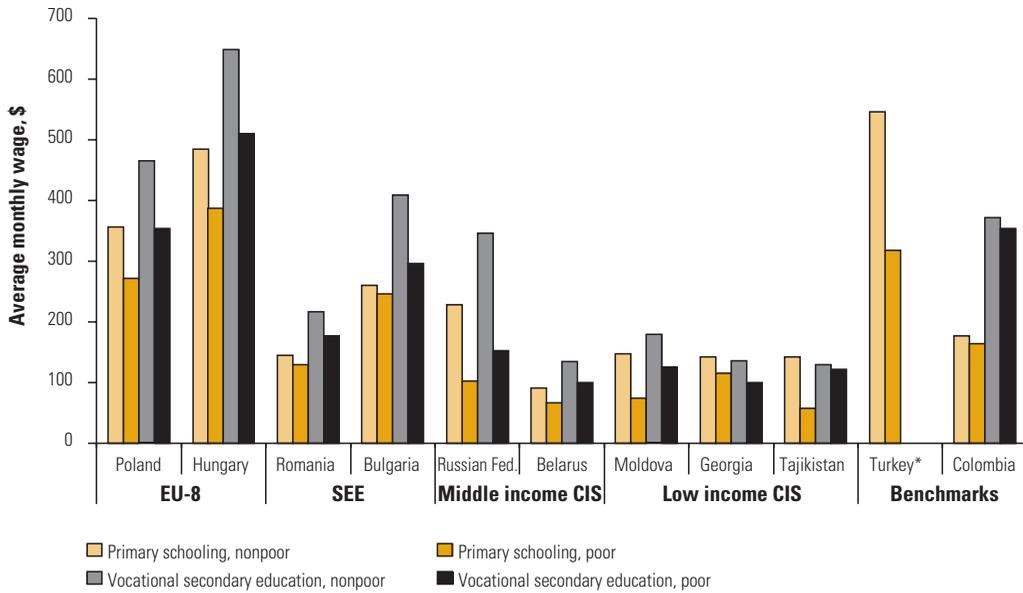
These differences can be traced to several factors: differences in wages across firm sizes, differences in wages across subsectors of manufacturing, and differences in wages between the formal and informal sectors. Most likely, all these factors coexist and are not entirely unique to transition. But on top of these common factors is also an additional unique source: persistent differences in productivity that are observed between old, restructured, and new enterprises of the same sector in transition economies. As argued elsewhere (see World Bank 2002h), interaction between old enterprises, restructured enterprises, and new entrants is key to economic growth in transition. These differences in productivity are illustrated in figure 3.12. The historical legacy in the form of persistent differences in productivity between old, restructured, and new enterprises can persist, reflecting political economy factors blocking or facilitating reforms that bring about discipline over the old and restructured firms and encourage the entry of new firms.

Several sources based on survey data suggest that dispersion of productivities and the resulting dispersion of earnings are indeed larger in transition economies compared with market economies, reflecting the historical legacy described above. First, a detailed study of wage dispersion by narrowly defined subsectors of manufacturing (European Commission 2003) reveals that new member states and accession countries are characterized by a much lower explanatory power of regressions that predict average wages (by subsectors) based on a set of common industrial structure characteristics than are the EU-15. The highest share of “unexplained” dispersion in sectoral wages is found in Bulgaria, the Czech Republic, and the Slovak Republic; the lowest in Hungary and Latvia. But even in the most advanced transition countries, the unexplained portion of dispersion

**FIGURE 3.11**

**Large Wage Gap between Poor and Nonpoor Persists across the Region**

Average Monthly Earnings in PPP Dollars for Full-Time Urban Prime-Working-Age Males Employed in Manufacturing Private Firms



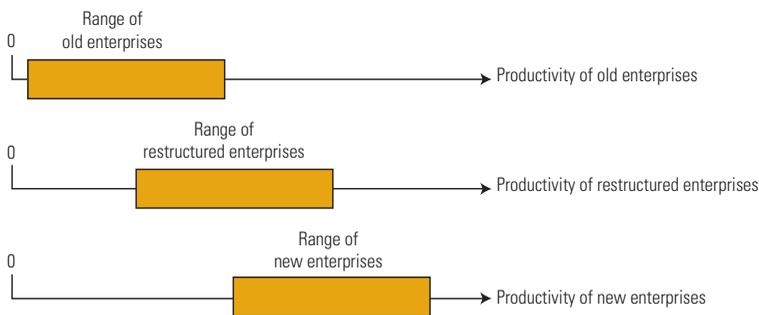
Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: US\$ in 2000 PPP, prime age is between 35 and 45 y.o. Poor defined as per capita consumption levels below \$2.15, and \$4.30 in Poland, Hungary, Bulgaria, Colombia, and Belarus. \* In the Survey no worker with vocational education is poor in Turkey.

in wages is far greater than in Germany, Ireland, Italy, or the United Kingdom. Such differences are reflected in excessively large *regional variation* in wages within subsectors.

Second, a large literature on wage determination continues to show that the explanatory power of the Mincerian earning function<sup>7</sup> remains significantly lower in transition countries of the Region than in market economies. It suggests that standard factors used to explain wage dispersion, such as human capital characteristics, location, and standard job and firm characteristics combined (including sector and occupation), explain around 30–40 percent of hourly wage dispersion in transition economies (more in the EU-8 and less in the middle income CIS group); in market economies, 55–65 percent of variation is fully accounted for by these characteristics (Ukraine and Russia, Gorodnichenko and Peter 2004; Hungary, Delteil, Pailhé, and Redor 2004). It is important to note here that compared with the mid-1990s, the explanatory power of standard earning functions in transition has increased by at least 10 percentage points (as documented in Newell and Reilly 1997; also see Fleisher, Peter, and Wang 2004), reflecting that restructuring that took place led to clear association between indi-

**FIGURE 3.12**  
**Productivity Distribution of Old, Restructured, and New Enterprises**



Source: World Bank 2002h.

vidual productivity, job characteristics, and wages. The gap in how well an earning function predicts wages between markets and even the most advanced transition economies suggests that transition is not over.

Finally, Munich (2003) directly compares wages and factors of wage determination between new private firms, restructured firms, and state firms in the Czech Republic. He finds not only persistent wage gaps between these groups of firms but also differences in returns to human capital.

These studies suggest that the presence of a wage gap between poor and nonpoor workers can be traced to the productivity differentials at the micro level and that such differences can possibly be a further explanation for the working-poor phenomenon. These productivity differentials can be traced in turn to a number of *institutional factors*, but they are normally reflected in the degree of wage dispersion across the enterprises. Two observationally similar workers may earn very different wages for the same types of job within the same sector. These differences are unique to the transition process and are persistent because there are barriers to competition to equalize productivity across historic types of firm and because workers are not taking full advantage of mobility. Lack of discipline and encouragement in economic policies may thus be a factor behind poverty.

Workers' mobility, in principle, could mitigate some of disparities in productivities, but transition economies are characterized by a legacy of low labor mobility springing from a high concentration of enterprise production and a history of low voluntary migration. These, in turn, have been sustained by institutional factors. First, compensation in Russia and many CIS countries tends toward nonmonetary benefits such as housing and childcare, thus sustaining worker attachment to firms. Second, moving costs have been high, commuting costs have

increased, and information about job opportunities has been poor. Third, institutional incentives discourage mobility. Subsidies have disproportionately favored home ownership over rentals. Privatization of cooperative houses and flats has promoted home ownership.

Andrienko and Guriev (2004) find complementary evidence that migration is constrained by low liquidity and poor asset value of workers. High wages have encouraged outward migration, while high unemployment has tended to discourage it. Rising income thus increases, rather than decreases, labor outflow. Their estimates suggest that up to a third of Russian regions could be locked in poverty traps.

## Conclusions and Policy Recommendations

The analysis up to this point has not addressed this question: what are the implications for policy? Trends described in this chapter are fully exploited in the companion study on labor markets in the Region (see box 3.7). The study also focuses on policy recommendations, varying by country groups, providing a comprehensive analysis of policy actions needed to spur job creation. The discussion here is limited to the linkages between the labor market and poverty.

This discussion begins by considering three major concerns regarding poverty and the labor market highlighted thus far:

- Wage increases have outpaced productivity growth. Wage gains in many countries have outpaced productivity improvements, squeezing out profit margins (figure 3.13). These developments underpin jobless growth and constrain further scope for employment generation. To sustain poverty reduction and to permanently improve the welfare of working families, wage increases need to be driven by real improvements in productivity.
- There is stubborn unemployment in the EU-8 and SEE. Employment opportunities have been stagnant or declining, thus leading to a missed opportunity to reduce poverty further. In these countries, transfer systems have been instrumental to smooth social costs of transition to the market. They have cushioned the poor, but by their design created perverse incentives and discouraged employment.
- There is a persistence of low-productive employment in the low and middle income CIS countries. In many poor countries, the expansion of employment reflects an increase in low-productive

**BOX 3.7****Labor Market Study Discusses Ways to Enhance Job Opportunities in the Region**

The forthcoming labor market study for the Region, *Enhancing Job Opportunities in Transition Countries: Eastern Europe and the Former Soviet Union*, finds that the economies' growth in the 1990s in the Region had not resulted in an equivalent improvement in employment: only Slovenia had (barely) exceeded the employment rate of the early 1990s. The study diagnoses the key causes of the Region's disappointing labor market outcomes. The dominant role has been played by the demand-side factors, while the supply-side effects were relatively limited. The study claims that the crux of labor market problems in the Region is insufficient rates of job creation. Thus, widespread defensive restructuring is an important factor behind relatively low rates of job creation, despite often significant economic growth. Another important reason is the high cost of doing business. Investment climate constraints to job creation range from the high risks associated with operating a business in low income CIS countries (for example, policy unpredictability, insecure property rights, weak contract enforcement, and unreliable infrastructure) to the considerable administrative barriers in middle income CIS countries (for example, numerous permits, inefficient regulations, and red tape) to the high monetary costs in the EU-8 and SEE countries (for example, high taxation).

The study examines the set of policies that are still needed to create more and better jobs in the Region's countries. It argues that improving labor market outcomes in the Region as a first priority requires removing key constraints to firm entry and growth—that is, reducing the costs of doing business. In most countries of the Region, higher investment rates are necessary to accelerate economic growth and job creation. A second priority is to enhance labor market adaptability through less-stringent employment-protection regulations and decentralized bargaining between employers and workers. Active labor market programs, if properly designed and implemented, can also contribute by providing greater incentives for the unemployed to go back to work and for employers to employ disadvantaged individuals.

The specific mix of policies that each country needs to adopt varies and depends upon its particular economic and labor market situation, and thus priorities for reform are country-specific. To spur job creation, measures to improve the business climate can be identified by comparing the regulatory and institutional settings in the Region's countries with those of other economies with a vibrant private sector. As to improving labor market adaptability, countries where employment protection legislation is stringent, but enforcement capacity is weak (mainly in the CIS and SEE), need to simultaneously liberalize the law and promote compliance so that core worker rights are protected. Countries where the enforcement capacity is strong and legislation relatively flexible (mainly in the EU-8) need to focus on addressing specific constraints to labor market flexibility. For example, countries where there are few regulations on temporary employment, but regular employment is highly protected, need to reduce protection granted to regular employees to avoid creating labor market duality.

Source: World Bank Forthcoming-a.

agricultural employment. In richer countries, a stagnant pool of workers, often characterized by poor endowments, remains employed in low-productive occupations. This casts doubt on whether poverty reduction will be sustained over time. Employment, particularly when associated with low productivity, does not offer protection from poverty.

What are some of the policy actions that would help address these concerns?

*Raising productivity and employment.* With increasing productivity levels and growing wages, all or most of those who are already employed will be out of poverty. For those who are not employed, success in reducing poverty will critically depend on the ability to expand employment because small or negative overall employment change makes the growth process less favorable to the unemployed or new entrants. In the Region, the main job flows consist of mobility between jobs (World Bank forthcoming-a). Thus the “extra” pull of labor demand is needed to bring nonworking poor to the labor market.

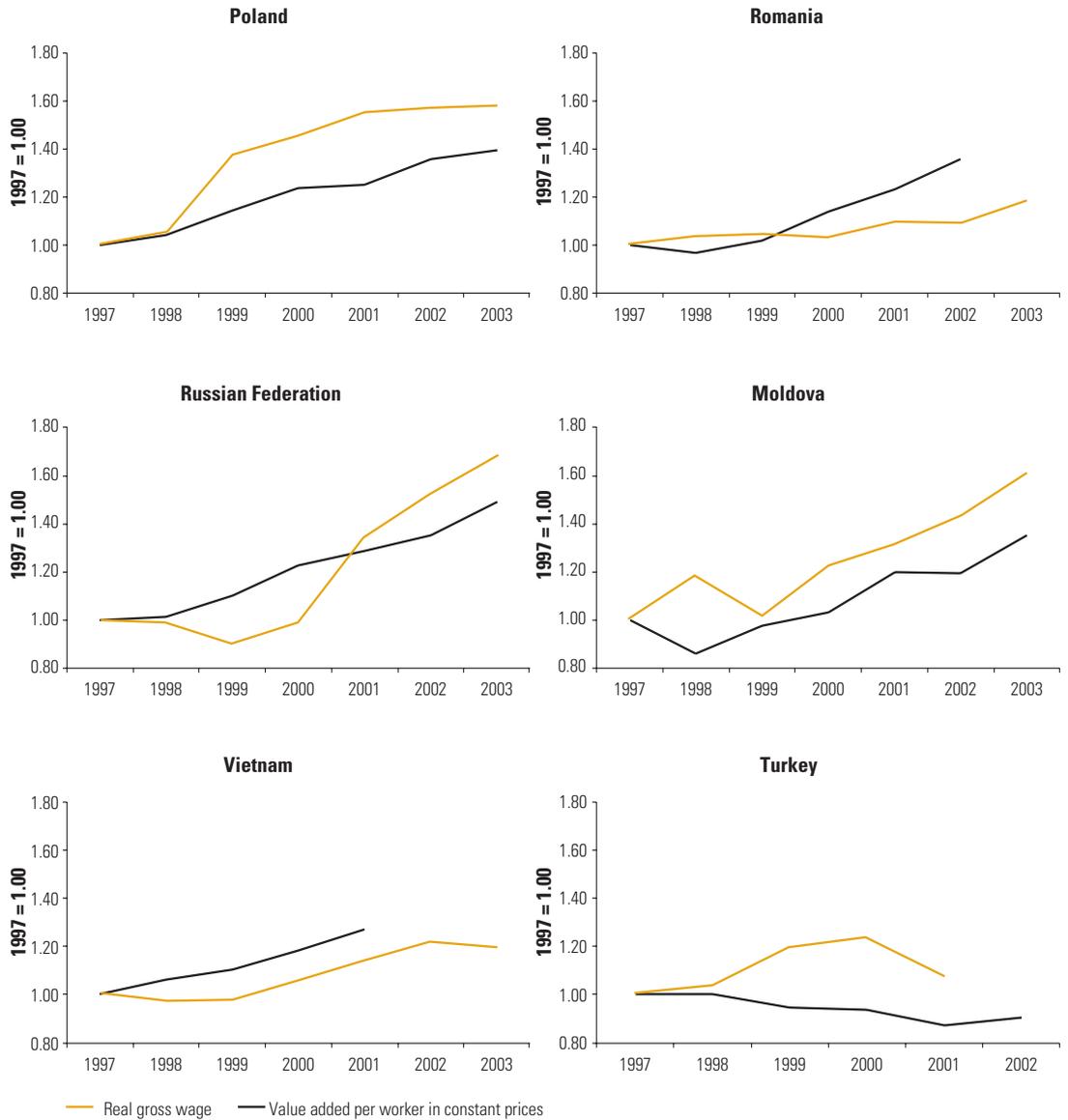
Whether the issue is to generate more employment or to raise productivity, it would seem that countries need to focus on improving the climate for investment, which will reduce obstacles for job creation. World Bank (forthcoming-a) provides a detailed set of recommendations tailored to the Region’s subregions, spanning a wide range of policy action and instruments. For the CIS countries in particular, but also the SEE countries, balancing discipline over the old enterprises and encouragement of new entries is critical. This requires a policy environment that disciplines low-productivity old enterprises into releasing resources and encourages high-productivity new enterprises to absorb those resources and to undertake new investment. There are also the well-known elements that create a better investment climate. In low income CIS economies, special attention is needed to ensure productivity gains in agriculture (box 3.8).

Resisting noncompetitive pressures to boost wages, for example, through unsustainable increases of minimum wages, will also be important. This is more of an issue in the EU-8, where minimum wages represent a high proportion of the average wage, around 40 or 50 percent. This binding minimum wage constrains wage flexibility at the bottom end of the distribution. In Poland, for example, a binding minimum wage appears to be linked to the experience of downward wage rigidity (World Bank 2004h). In recent years, the real value of the minimum wage has been somewhat eroded, but it remains a barrier to wage flexibility. Similarly, a relatively high minimum wage is found to

**FIGURE 3.13**

**Wage Increases Outstripped Productivity Gains during the Economic Recovery in the Region**

Real Wages and Value Added per Worker in Manufacturing in Selected Countries, 1997–2003; Indexes: 1997 = 1.00



Sources: ILO, Key Indicators of the Labour Market (KILM) and WDI 2005; LABORSTA (ILO), and General Statistics Office of Vietnam.

Note: Constant international 2000 US\$ used (WDI 2005) to deflate current local currency units figures. For Vietnam, data on wages includes only state sector employees.

constrain employment opportunities for low-skilled workers in Lithuania (World Bank 2002h). In Estonia and Hungary, experience with minimum wage increases in recent years indicates such hikes reduce the employment prospects of selected groups of workers, in particular

**BOX 3.8****Raising Agricultural Productivity**

Agricultural growth is crucial for poverty reduction, in particular in the poorest countries, where agriculture remains a major source of income and employment. Several policy actions can raise the productivity of agriculture. These include promoting land reforms where they are lagging (for instance, in middle income CIS) and improving land markets (for instance, in several SEEs) to facilitate land restructuring. Improving the investment climate in general, and in rural areas specifically, is very important. Investments in food processing, agribusiness, trade, and retail companies play a crucial role in helping small farmers to overcome input and output market imperfections, to upgrade the quality of their products, and to access markets. Integration of the rural poor in the labor markets (either through rural off-farm employment generation or by improving access to urban labor markets) will be crucial for sustained income growth, in particular in middle-income countries. Further increasing rural-urban mobility might help compensate for the human capital disadvantage of rural areas (for example, through private transfers). The integration of rural credit markets is crucial for investments and productivity growth in rural activities, including agriculture.

*Source:* Macours and Swinnen 2004.

those directly affected by the increase, those in small firms, and those earning low wages (Hinnosaar and Rõõm 2003; Kertesi and Köllö 2003).

In countries where the minimum wage does not represent a large proportion of the median or average wage, it may still be relatively high, particularly in depressed regions with large pools of unskilled workers. This is the case in Poland (World Bank 2004h). In Hungary, large disemployment effects of the minimum wage have been documented, for the low skilled and those in depressed regions. However, in other countries such as the Slovak Republic, the minimum wage is low and does not appear to be binding even in poorer areas (World Bank 2002g).

Reshaping social protection to aid the restructuring of the economy and employment growth will also be important. Countries need to maintain the momentum in the ongoing social insurance and social assistance reforms designed to improve sustainability and enhance coverage and targeting of the poor. In low-income countries, the main constraint will continue to be the fiscal means to cover the population adequately. Better alignment between public and private resources (which could start with improving the understanding of, and collect-

ing better data on, private transfers) is needed to raise the efficiency of public funds. Although more fiscal space for social protection exists in the middle income CIS countries, there may also be greater resistance to reforms, as suggested by the difficulties with the monetization of privileges in Russia. Although the objective of the reforms is not in question, the difficulties in implementation are a useful reminder as to the importance of sequencing with other social and economic reforms, the need to protect the most vulnerable groups, and an appropriate communications strategy to explain the benefits of reforms. In countries in SEE and the low-poverty countries of the EU-8, which have the most extensive social protection, a balance will need to be struck between the need for protection and labor market incentives.

## Endnotes

1. Dennis and Guio 2003. See also Atkinson and others (2002) and the Web site of the Directorate General: Employment and Social Affairs, of the European Commission, [www.europa.eu.int](http://www.europa.eu.int), for details.
2. "Poverty wage" is defined as the level of wage in 2000 US\$ PPP sufficient to keep a worker and 1.5 dependents (the typical ratio of workers to dependents in the Region) above the poverty line of \$2.15 a day (if it is fully spent on consumption and the household does not have any other sources of income).
3. This is the net change; gross changes required to bring about such sizes of net changes are much higher.
4. Between 1999 and 2002 in Russia, the Gini coefficient for wages fell from 0.47 to 0.42; in Tajikistan, from 0.55 to 0.53. In contrast, in Poland, the Gini index for wages rose from 0.30 to 0.32; in Moldova, from 0.44 to 0.45. (Data on individual wages are from the Regional Household archive and represent all wage earners reporting positive wages in the reference period of the survey.)
5. For example, see Fleisher (2005); also Kertesi and Köllő (2001) for Hungary; Vodopivec (2004) for Slovenia; and Newell and Socha (2005) for Poland.
6. Countries included in the study of gender wage gap are Albania, Bosnia and Herzegovina, Bulgaria, Serbia, Poland, Tajikistan, and Uzbekistan.
7. Mincerian earning functions are based on the seminal research by Jacob Mincer (1974), which estimated the rate of return to education using log of earnings as the dependent variable and education (as well as experience and experience squared) as independent variables.

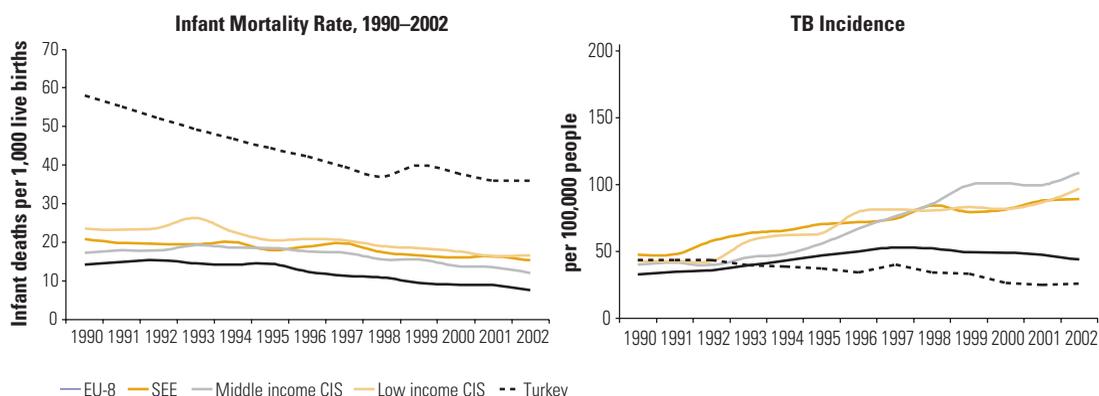


## Affordable Access to Quality Services

The Region is characterized by a legacy of relatively high levels of human development achievement. Millennium Development Goal (MDG) indicator targets such as enrollment rates, infant or maternal mortality, and access to piped water show that most countries of the Region are generally better-off than other countries at equivalent levels of income. Although there was some worsening of trends in the early years of the transition, infant mortality rates (shown in figure 4.1), as well as maternal and child mortality, have been declining in recent years.<sup>1</sup>

The early transition years of overall economic decline and reduced fiscal resources were paralleled by an increase in private resources as households began to contribute toward the cost of services, not only in the social sectors but also in basic infrastructure. Because the delivery networks were not adjusted to reflect the different level and composition of demand, public resources were spread across a large number of providers, reducing the effectiveness of services. This mismatch between available resources and the funds needed to maintain the existing networks was reflected in increasing wage arrears for staff in health and education and the inability to repair basic infrastructure such as gas and electricity. These shortages played a significant role in the difficult early years of transition and may have been partially solved as economic recovery provided additional, although limited, funds. Although quantitative evidence is hard to find, it is reasonable

**FIGURE 4.1**  
**MDGs in the Region: Infant Mortality and TB Incidence**



Sources: WHO-Health For All database (the Region and Turkey); PAHO (Colombia); and WDI (Vietnam).

Note: Infant mortality is defined as yearly rate of deaths in children less than one year old. Missing data points have been interpolated. Country groups for this figure: EU-8: Hungary, Poland, Estonia, and Latvia; SEE: Romania and Bulgaria; Middle income CIS: Belarus, Kazakhstan, Russia, and Ukraine; Low income CIS: Armenia, Georgia, the Kyrgyz Republic, Moldova, and Uzbekistan.

to assume that the inability to maintain and renovate the service delivery networks has affected the quality of services provided.

Other dimensions of well-being, such as life expectancy, quality of education, or the incidence of communicable diseases such as TB or HIV/AIDS, reflect some of the outstanding challenges in service delivery. For example, TB incidence in selected countries has been increasing. In Russia, it increased from 80 cases (per 100,000 population) in the mid-1990s to 113 cases in 2003, much higher than the average for the European Union (about 83). The HIV/AIDS epidemic in the Region shows alarming indicators. In Central Asia, the number of reported cases increased from 500 in 2000 to more than 12,000 in 2004 (Godinho and others 2005). In Ukraine, the country with the fastest-growing HIV epidemic, more than 12,000 *new* HIV-infected individuals were reported in 2004 (including 2,300 children), totaling more than 134,000 HIV-infected individuals (Lekhan, Rudi, and Nolte 2004).<sup>2</sup> Although other factors such as lifestyle or educational attainment are also important, the emergence of these new risks also reflects the mismatch between the level and quality of services (including information) and the actual needs of the population.

These mixed social and human indicators reflect persistent challenges in the processes underlying the outcomes in health, education, and other living conditions. Good health status, educational achievement, or living conditions jointly reflect the nature of the public interventions in these sectors and the ability of households to invest in

human and physical capital. Household characteristics are at the center of this process, but household inputs need to be combined with an effective network of services to produce desired outcomes. In this context, poverty in social services is understood as the deprivation from such services or, to be more precise, deprivation from affordable access to quality services.

This chapter discusses three closely interrelated dimensions of poverty in service delivery: access and utilization, quality, and affordability. A household may be deemed poor if children do not have access to a school or if—even in the presence of a school—children cannot attend because of reasons beyond the household’s control (lack of income to pay for fees, ethnic or language discrimination, and so forth). For some social services in the Region, such as education, these two dimensions (access and utilization) are almost the same because enrollment rates are very high. In other services like health care, access and utilization are different. Although access reflects the existence of a provider within the reach of a household, utilization captures the need to seek care and the ability to pay for those services.

These dimensions of well-being must be read together; for example, the decline in quality or the increased cost of some services are associated with reduced utilization of these services. The main argument in this chapter is that poverty as lack of access to services is perhaps not a major issue because of the inherited legacy of broad network coverage; however, the inability to actually use these services has gained relevance in recent times. In addition, the delivery network has persistent weaknesses that are reflected in the declining quality of services. Finally, the affordability dimension has acquired importance as formerly subsidized public services have come to rely increasingly on households’ contributions. These arguments are illustrated by using three sectors: education, health, and utilities.

## Education

This section reviews access to education and its quality. It starts with primary education, but primarily focuses on the secondary level, where problems in the Region are most pressing.

### Coverage of Education

Most countries in the Region inherited a wide network of education services that enabled them to achieve almost universal coverage in compulsory education. Although fiscal resources and enrollments

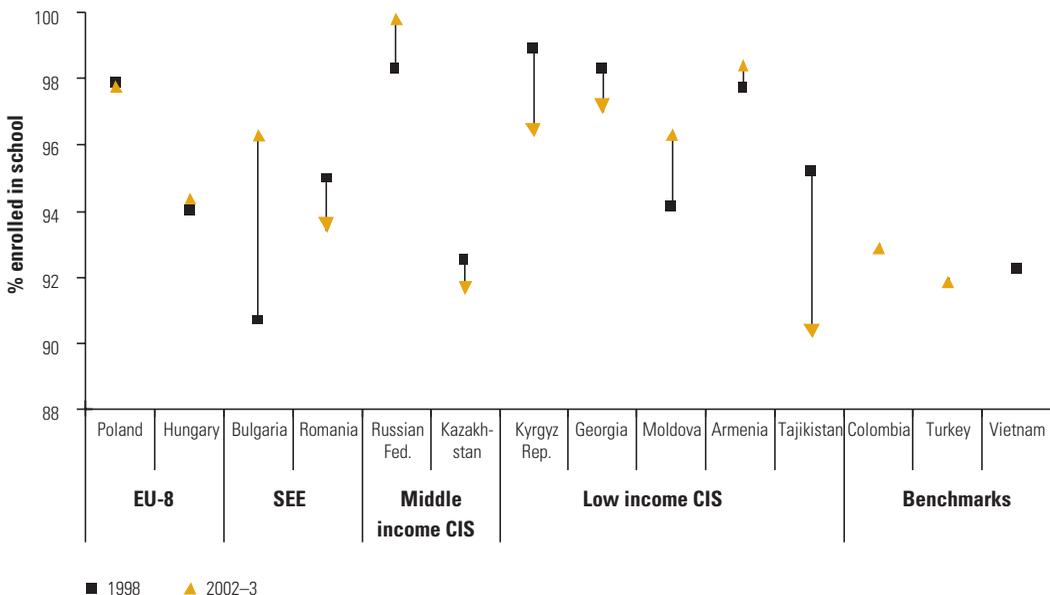
came under some pressure during the 1990s, particularly in the low income CIS group, enrollments continued to be high relative to levels of income.

**Primary Education**

During the period since 1998, most countries of the Region maintained, and some even improved, enrollment in primary school: enrollment at the primary level is more than 90 percent in all the countries (figure 4.2). However, not all low income CIS countries saw improvements—Georgia, the Kyrgyz Republic, and Tajikistan experienced some reductions in the proportion of children ages 7 to 14 years enrolled in school. On the other hand, in Moldova and Uzbekistan, the coverage of primary-school-age children was increased.

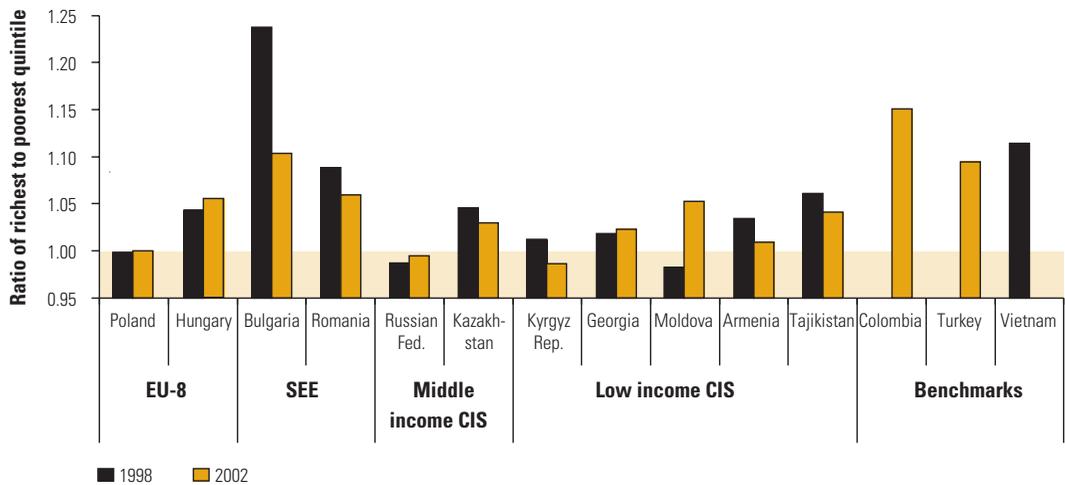
Most of the Region’s countries are characterized by relatively equal coverage of education across income quintiles, and in many countries differences were further reduced. Figure 4.3 displays the ratio of enrollment rates between the richest and the poorest quintiles (or, the income gradient in primary education coverage). Bars close to the shaded area (= 1) indicate that the top and bottom quintiles have similar levels of coverage. Although children in better-off households

**FIGURE 4.2**  
**Regional Coverage of Education, Ages 7–14**



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

FIGURE 4.3

**Inequality in Access to Primary Education in the Region, 1998–2002**

Source: World Bank staff estimates using data from ECA Household Surveys Archive.

have slightly better coverage than those in the poorest quintile (except in the Kyrgyz Republic and Russia), these differences are generally not greater than 5 percent (Bulgaria stands out as a country with a relatively large gap of about 10 percent in 2002). In fact, countries with the steepest income gradients (enrollment gaps of more than 5 percent) also showed the largest declines in the ratio between top and bottom because of improving coverage for the bottom quintile between 1998 and 2002.

However, there are exceptions to this declining trend. For example, in Moldova, enrollment rates were very similar across the income distribution in 1999, but by 2003, enrollment rates in the richest quintile were more than 5 percent higher than those in the poorest quintile. This is partly because the post-1999 recovery benefited those in urban areas and the better-off, increasing socioeconomic differences in education. Equally, enrollment rates in urban areas fell more significantly during the crisis (in fact, enrollment in rural areas were temporarily higher than in urban areas in 1998/99) because urban areas and the better-off suffered the largest consumption losses (Signoret and Murrugarra 2003). Enrollment in urban areas thus appears particularly vulnerable to crises.

### **Secondary Education**

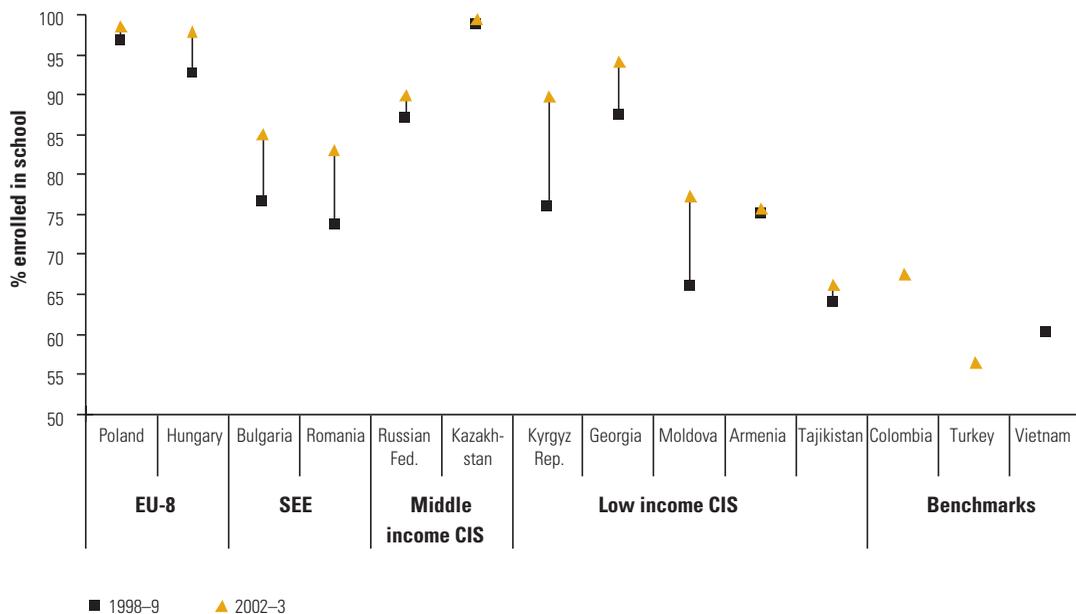
For children ages 15 to 17 years, the Region experienced a dramatic increase in coverage, reaching more than 85 percent. The improve-

ments were evident for all countries, even for those with relatively low coverage, such as Moldova or Uzbekistan (figure 4.4). The overall improvements in secondary education coverage may reflect the more attractive wages for better-educated individuals in both local and external labor markets (chapter 3).

The overall improvement in coverage was paralleled by a reduction in the large enrollment gaps across income groups (figure 4.5). The ratio of coverage rates for children in the richest and the poorest income quintiles is larger than at the primary level. For SEE countries like Bulgaria and Romania, coverage of the children in the top income quintile is more than 50 percent higher than that of the poorest quintile, compared with only 10 to 20 percent at the primary level. These differences, however, were reduced in most countries outside the low income CIS group, where gradients increased (except for the Kyrgyz Republic).

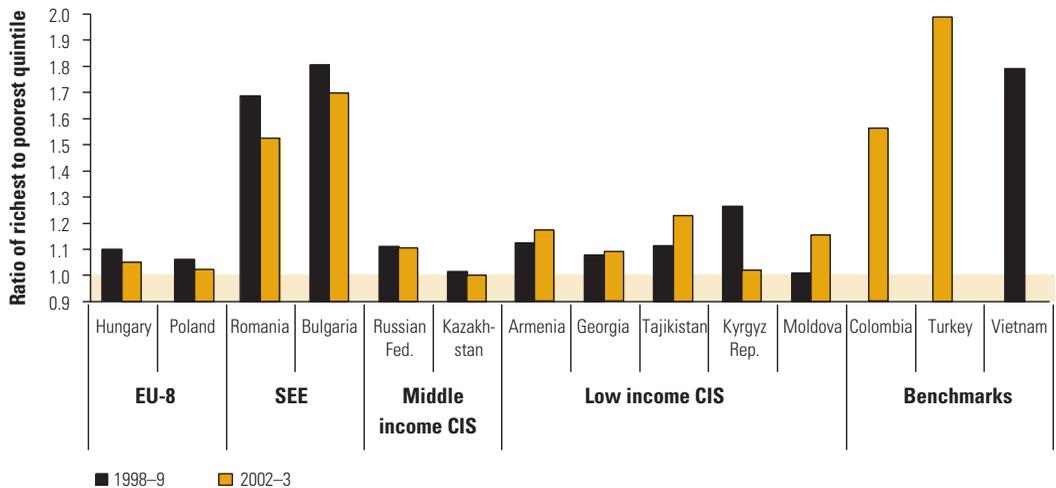
The reduction of enrollment gaps across income groups is also observed across gender and geographic dimensions. At the secondary education level, there are small gender differences in enrollment, and these appear to be continuing to shrink (figure 4.6). In countries like Armenia and Moldova, where formal labor market opportunities are

**FIGURE 4.4**  
**Regional Coverage of Education, Ages 15–17**



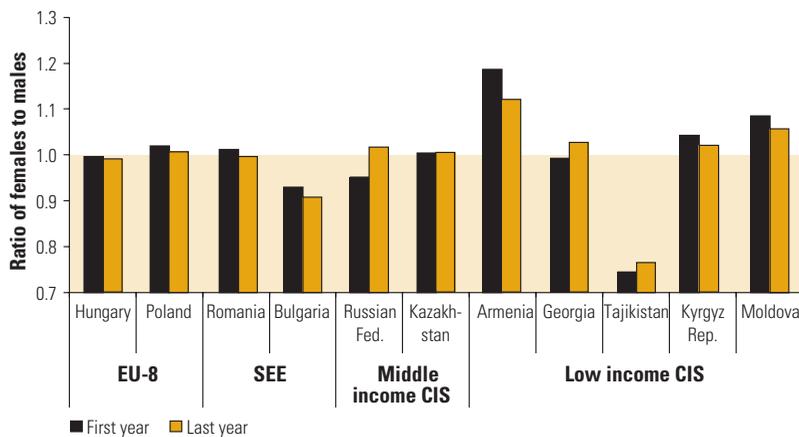
Source: World Bank staff estimates using data from ECA Household Surveys Archive.

**FIGURE 4.5**  
**Inequality in Access to Secondary Education, 1998–2002**



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

**FIGURE 4.6**  
**Gender Inequality in Access to Secondary Education, 1998–2002**



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

limited and migration is common (especially among young men), young women tend to stay longer in school. These differences, however, were reduced as enrollment rates among young men increased. Tajikistan stands out as the country with the largest gender gap at the secondary level: enrollment for girls is three-quarters that of boys, despite recent improvements. Urban-rural inequalities in access to education have also declined in most countries, including Tajikistan, the only country where coverage is higher in rural areas.

Other sources of deprivation in access to education services include those related to ethnicity and language. Although ethnic dimensions do not represent a major preoccupation in many countries in the Region, the increasing availability and transparency of information has shed light on the deprivation of certain groups. One of them is the Roma population in Central and Eastern Europe. Across countries, 70 to 80 percent of Roma populations have less than primary education, while very few have completed both primary and secondary education. Moreover, most Roma children are enrolled in remedial “special schools,” which are physically separate from other schools: between 75 and 85 percent of Roma children in the Czech Republic, Montenegro, and the Slovak Republic and between 60 to 70 percent in FYR Macedonia and Serbia are enrolled in special schools. The combined effect of poverty, isolation, and education in a nonmaternal language only underscores the outstanding challenge of providing quality services to groups that face other sources of exclusion and vulnerability.

In sum, the evidence during the past years shows a varied range of outcomes in poverty of education services. The biggest concern is in the low income CIS countries, where although some countries have made significant progress, others are still lagging behind. Coverage of secondary education, on the other hand, seems to have increased everywhere, even in the poorest countries. Still, public intervention to improve access to education services seems to be facing challenges in reaching certain minority groups.

### **Quality of Education**

The deterioration of infrastructure during the early transition years had important impacts on the delivery of social services such as health and education.<sup>3</sup> Schools came to be without adequate heating during the winter, and other services like electricity and water were irregular. This section provides some evidence on the evolution of quality of inputs and its impact on education performance. Although education outcomes between 1995 and 2003 (such as achievement tests) are presented, linkages with specific inputs are discussed only for the period between 1995 and 1999. Detailed school surveys that included teachers’ and students’ characteristics, as well as data on mathematics and science tests, are available only until 1999, precluding analysis for the later period.<sup>4</sup>

#### ***Test Scores as a (Partial) Reflection of Quality***

Assessing the quality of education requires examining the different elements in the education process, such as schools, teachers, and

(obviously) households. A positive interaction of these different elements could result in students with higher educational achievements in the short run and increased productivity (and employment) in the long run.

Countries of the Region have been characterized by very good performance levels in international tests. The results in mathematics from the Trends in International Mathematics and Science Study (TIMSS) show that the selected countries of the Region were performing at about the same level as some OECD countries like England and the United States (table 4.1). Hungary, Latvia, Lithuania, the Slovak Republic, and Russia have average scores better than England's.

Despite the good performance (with a few exceptions), the Region's countries show worrying trends of declining performance over time. Although some countries performed well and may have even improved over time (such as Hungary or Lithuania), others have shown major losses in average scores (figure 4.7). Russia maintained its performance between 1995 and 1999, but by 2003, significant declines in average scores were observed. EU-8 countries (except for Estonia and Poland, not covered by TIMSS), have maintained a stable performance; but this hides important country heterogeneity. While the Baltic States and Hungary have maintained or slightly improved their performance, the Czech Republic, the Slovak Republic, and Slovenia experienced dramatic declines that are similar to those observed by some SEE countries.

**TABLE 4.1**

**Mathematics Performance, 1995–2003**

(TIMSS mean scores for eighth grade students, ranked by 2003 score)

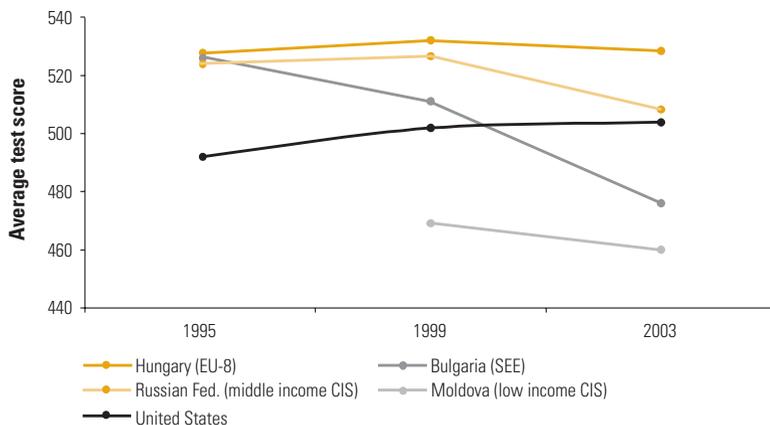
	1995	1999	2003
Hungary	527	532	529
Slovak Rep.	534	534	508
Russian Fed.	524	526	508
Latvia	488	505	505
United States	492	502	504
Lithuania	472	482	502
United Kingdom	498	496	498
Slovenia	531	530	493
Armenia	—	—	478
Czech Rep.	546	520	—
Bulgaria	527	511	476
Romania	474	472	475
Moldova	—	469	460
Macedonia, FYR	—	447	435

Source: TIMSS Web site ([www.timss.org](http://www.timss.org)).

— = did not participate.

FIGURE 4.7

### Recent Declining Trends in Regional Mathematics Performance (TIMSS)



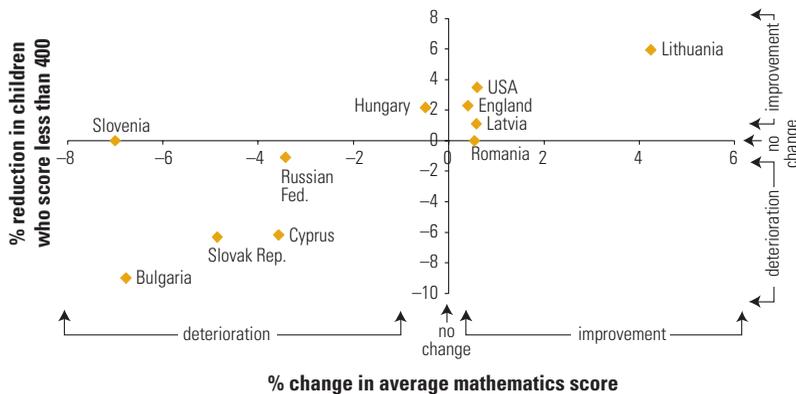
Source: World Bank staff estimates based on TIMSS data.

The changes in average scores were uniformly observed across the achievement distribution. A drop in average scores for these high-performing countries may not have represented a major weakness in their education systems if they could have kept most of the students performing above the minimum required standards. The evidence from TIMSS, however, indicates that there are major increases in the fraction of students below minimum educational skills for their age.<sup>5</sup> Between 1995 and 1999 (not shown here), two of the very best performers, the Czech Republic and Slovenia, multiplied their fraction of underperforming students between two and three times to reach between 3 and 4 percent of their student populations. FYR Macedonia, Moldova, and Romania have more than one-fifth of their eighth graders not reaching minimum levels in mathematics by 2003. Between 1999 and 2003, Bulgaria almost doubled its fraction of underperformers, increasing from 10 to 18 percent, and the Slovak Republic increased from 4 to 10 percent. The only exceptions were Latvia and Lithuania, where the fraction of underperformers was cut by 40 to 50 percent, reflecting major gains in their average scores (figure 4.8).

#### *What Was the Role of Quality of School Inputs in the Changes in Performance?*

To assess the role of inputs and their quality in performance, four country case studies are used to examine schools, teachers, and household characteristics. These countries are Latvia (with major progress),

**FIGURE 4.8**  
**Mathematics Performance in Selected Countries of the Region, 1999–2003**



Source: World Bank staff estimates based on TIMSS data.

the Czech Republic (good performer, but losing significant ground between 1995 and 1999), Romania (stable at a low level), and Russia (good performer and stable). Although that analysis uses data between 1995 and 1999, the evidence described before suggests that the deterioration of quality is an ongoing phenomenon after 1999.

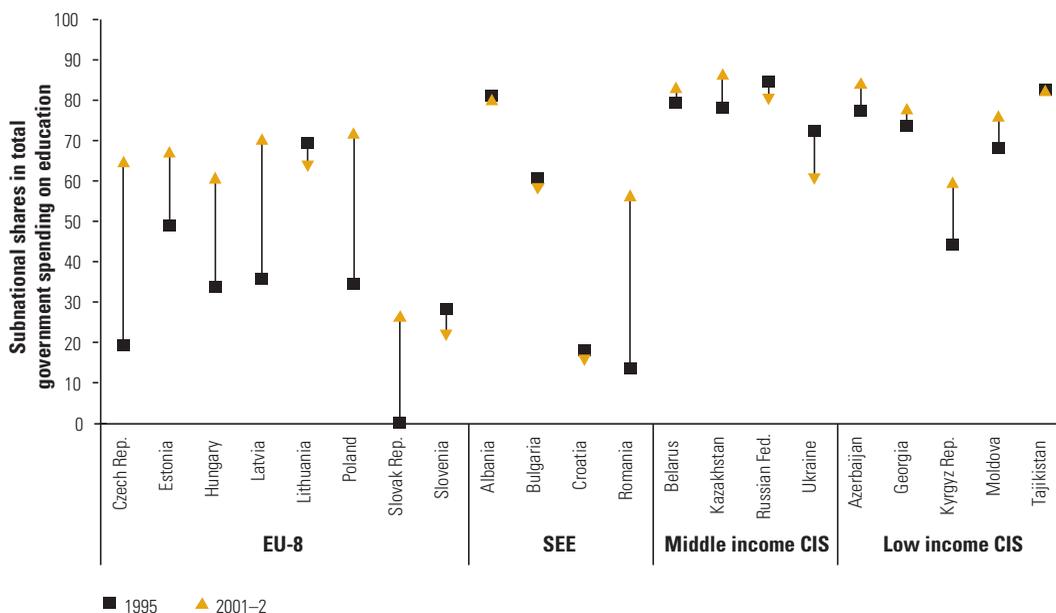
*Functioning of schools: infrastructure and governance.* The limited fiscal resources and the large network of providers crowded out expenditures on maintenance of basic infrastructure. Between 1995 and 1999, the fraction of students in schools facing energy shortages increased. Even in Latvia, a country with major progress in education achievement, this proportion increased from 55 to 65 percent, and in Russia, this fraction jumped from 50 to 63 percent. The deterioration in infrastructure was also observed in other physical inputs: in Romania, the fraction of students in schools lacking some instructional materials increased from 40 to 54 percent between 1995 and 1999.

The transition process also brought other changes that affected the delivery of education. One important change was the decentralization process, through which most countries transferred some responsibilities for the provision of education services to lower levels of government.<sup>6</sup> In all countries in figure 4.9, except for Croatia, the Slovak Republic, and Slovenia, subnational governments hold more than 50 percent of all public education sector responsibilities. The highest subnational government involvement in the sector is in Azer-

baijan, Belarus, and Kazakhstan. This process of decentralization in the delivery of education services took many different forms. In Albania, Armenia, the Czech Republic, and Romania, basic education services were provided through deconcentrated regional branches of the central government, with varying (but mostly minor) roles for local governments. A different approach was followed in Hungary, Latvia, and Poland, where subnational governments bear most of the responsibilities for the provision of education services.<sup>7</sup>

The evidence on school autonomy obtained from TIMSS surveys corroborates this finding. The role of parents in setting school policy increased across all countries between 1995 and 1999. In some countries, there is an increase in the role of the school in certain aspects of the service delivery. In the Czech Republic, the fraction of students in schools responsible for teachers' salaries increased from 58 to 80 percent in this period. In Romania, the share of students attending schools fully responsible for teachers' salaries increased from 7 to 16 percent, and those enrolled in schools with key roles in hiring teachers from 17 to 27 percent. Most schools in the Region were responsible for purchasing supplies in 1995, and this role increased even more by 1999.

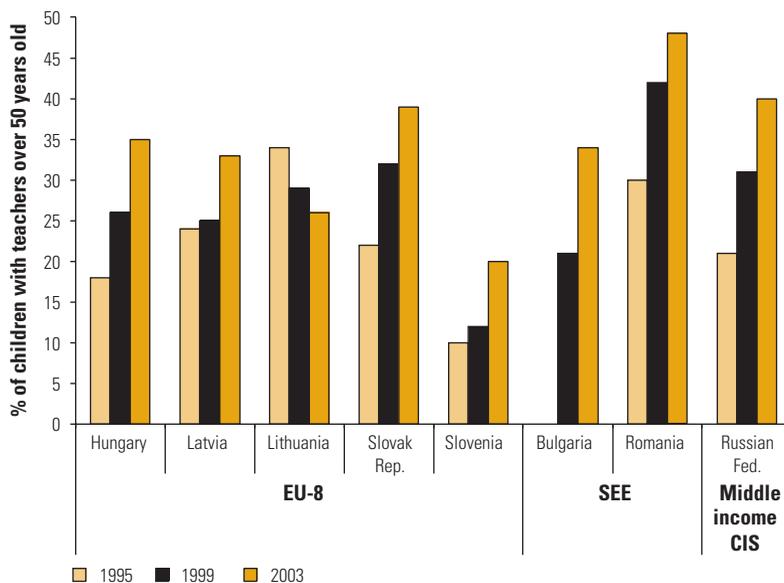
**FIGURE 4.9**  
**Role of Subnational Governments in Education, 1995–2002**



Source: Zeikate 2004.

*An aging teaching force.* Lack of incentives (low salaries and the persistent arrears of the 1990s) led to an aging of the teaching force (figure 4.10). The fraction of eighth grade children with teachers more than 50 years of age almost doubled between 1995 and 2003, except for Lithuania. In the Czech Republic and Romania, the fraction of students with teachers more than 50 years of age increased from 30 to 40 percent by 1999, and in Romania it had risen to close to 50 percent by 2003. In Russia, the increase was from 21 to 41 percent between 1995 and 2003. Although the aging of the teaching force does not necessarily indicate a worsening of quality of education, the lack of funding for training (and retraining) in most countries suggests that teachers have not been adequately equipped with new pedagogical tools and, hence, students may not have benefited from new education approaches. Even in Latvia, a country with a strong education reform, this aging indicator, although constant at about 24 percent during 1995–99, increased to 33 percent by 2003. Besides the negative effect of a stagnating teaching force, the lack of incentives for teachers to improve their skills and worsening school conditions may have affected the school environment and teaching practices in the Region.

**FIGURE 4.10**  
**Aging Teaching Force in the Region, 1995–2003**



Source: TIMSS 2005.

*Increased household heterogeneity.* Quality can also be measured as the match between attributes of the students and those of the education services, such as language of instruction or examination. The increased presence of minorities and the inability to provide adequate educational programs to such groups may be interpreted as a quality deficit and can be reflected in educational achievement. This feature may have worsened since the Region witnessed a slow (but steady) increase of minorities in several countries. In fact, the fraction of students taking a math test in a language that they “speak only sometimes at home” rose from 2 percent to more than 5 percent in Russia, and in Latvia this rose even faster, from less than 2 to more than 6 percent. Despite the emerging heterogeneity among students, children were less likely to skip classes in 1999 compared with 1995. In Romania, the fraction of students that skipped one class or more decreased from 66 to 50 percent. Similar improvements in attendance were observed in Latvia and Russia.

#### ***Lessons on Performance and Quality***

Using microdata for the four countries’ cases, changes in achievement scores between 1995 and 1999 were decomposed into factors related to student, teacher, school, and household background characteristics. The decomposition exercise was applied at different points of the achievement distribution to assess the role of these factors for explaining the relative share of students with lower and higher achievement.<sup>8</sup>

The deterioration of school characteristics played a negative role in education performance, but those effects were offset by household attributes and, in some cases, by specific policies. Russia and Latvia constitute the examples of systems with major worsening of observable measures of school quality (such as school heating), which had a strong negative effect on scores. In these countries, however, the deterioration of school infrastructure was offset by household factors such as parents’ education, and these compensating effects were particularly important among those with lower scores. In Russia, teachers played a complementary role in compensating for the deterioration of schools. In Latvia, however, systemic factors such as the education reform and decentralization of services compensated for the negative school conditions. In other countries, the effects of the worsening education infrastructure were accompanied by detrimental effects of household conditions or teaching force. The drop in performance in the Czech Republic was driven by both school and household attributes, and these linkages were stronger among those with low scores. In Romania, teachers’ attributes also had negative effects, particularly for the low-scoring stu-

dents. These patterns show an even worse picture if specific population groups are addressed.

Given the financial constraints from central governments, school managements are playing an increasing role in delivering education. Other governance factors have played a significant role in keeping up educational outcomes. Countries increasingly relied on local governments for service delivery. The fraction of students in schools where hiring and firing, school budget, and salary decisions are made at the school level increased during the period. Not only did the role of principals and school governing bodies increase but they also had a positive impact on performance. In Russia, students had higher scores when they attended schools where the principal or the school governing body played an important role in staffing, wage setting, and formulating school budgets. In Latvia, the effects are not that marked; because of its broader education decentralization reform, it showed little variation in school responsibilities, compared with the Russian case.

In sum, between 1995 and 2003, performance outcomes of education have remained relatively high in transition countries. These outcomes, which partly reflect the quality of education services, have been maintained because of the skilled stock of human capital in both households and teaching force and, in some cases, by policy interventions such as an effective decentralization in service delivery. Although the decomposition analysis uses data for 1995 and 1999, the continuous declines in performance across the Region suggest that while the Region may be able to live off its previous investments, these are eroding rapidly. The failure to maintain human and physical capital is resulting in environments that are not appropriate for effective education services and that are reflected in declining performance. This is particularly observable in rural areas and among poor households, which typically face the worst conditions. Policy interventions that improve the quality of education services are essential if the decline is to be brought to an end.

### **Access to, and Affordability of, Health Services**

The inability to recover from adverse health shocks and maintain one's human capital is an important dimension of poverty (Narayan and others 2000). Utilization of health services is, in this sense, an interesting object because it reflects several linkages with poverty. First, it reflects the effects of poverty on human capital because impoverished households are more likely to face malnutrition, are more exposed to certain contagious diseases, or are less equipped to identify certain chronic diseases. Second, it also reflects the differential ability of

households to seek health care when needed. Even in health systems with entirely subsidized services, households have to incur other costs to receive treatment, such as transportation or the opportunity cost of waiting. Differences across households in financial capacity or the existence of institutional thresholds, such as ethnic barriers, define other forms of poverty in access to services. All of these forms of deprivation are evident in the Region.

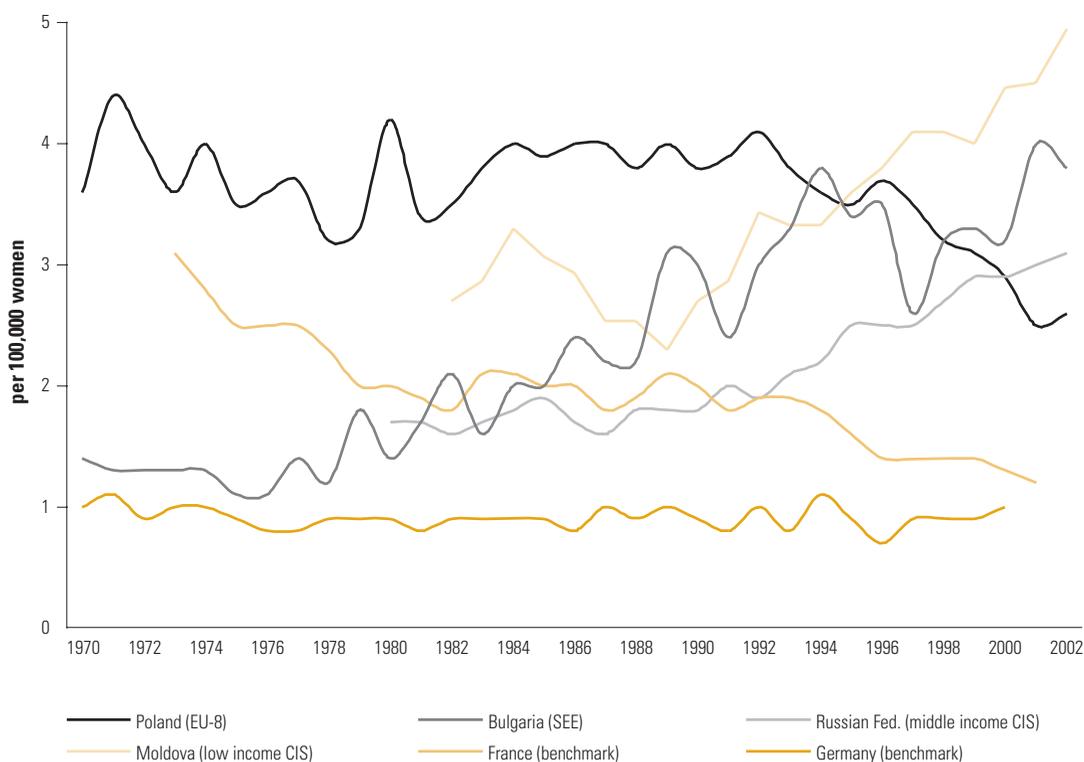
Although the Region's countries have a large public network of health providers who distribute generous services, they suffered major fiscal restrictions during the early 1990s. Between 1994 and 1999, the Region spent on average only 4 percent of GDP on health care, ranging from 9 percent in Croatia to close to 1 percent in Georgia. After 1999, some of the poorest countries (like Azerbaijan, Moldova, Turkmenistan, and Uzbekistan) continued to experience reductions in public expenditures on health, so much so that public health spending fell below 3 percent of GDP. Other poor countries like Armenia and Bosnia and Herzegovina have managed to stem the decline, but at very low levels of spending (around 2 percent of GDP). See annex table 1 for country-level data.

The overall decline in public spending is paralleled by three features that have implications for health and poverty linkages. First, the very large network of providers has not been significantly adjusted for lower fiscal resources. This has resulted in an underfunded and, hence, ineffective network of providers. Second, the lack of resources for public health activities has resulted in repeated episodes of communicable diseases that are easy to prevent. Third, the changing age composition of the population, which is becoming older, has changed the morbidity profile and increased the costs of health provision.

In this overall constrained environment, in which health services have not adjusted to changed circumstances or demand, it should come as no surprise if quality declines, particularly for the poorest groups. However, assessing trends in quality of services is very complex because it requires information about specific failures in the provision of health care. In countries with well-established information systems, quality of care is measured as hospital mortality or infections for specific types of patient and morbidity (Geweke, Gowrisankaran, and Town 2003). Efforts to standardize the collection of information in OECD countries have just begun with the identification of core indicators in different types of treatment (Marshall and others 2004). In the Region's countries, although this information is seldom recorded, anecdotal evidence corroborates the poor quality of health services because of outdated protocols, lack of basic materials and drugs, and the need to retrain personnel (Davidow 1996).

Despite the inability to observe direct measures of quality of service, some morbidities can be partially attributed to the quality of health services. The number of cases and mortality from certain diseases can be associated with deficiencies in service delivery when the prevention, identification, and treatment of those diseases can effectively reduce deaths. One such indicator is the number of cases and deaths due to cervical cancer. Although a number of factors affect cervical cancer, an effective primary health care system should be able to educate populations at risk and identify the morbidities, and hospital services should be able to treat and lessen mortality. Figure 4.11 shows cervical cancer rates for females between 15 and 44 years for selected countries of the Region and for Germany and France for comparison.<sup>9</sup> Although Germany has been able to significantly reduce its morbidity in the past 20 years, most of the Region's countries show an increasing morbidity profile. Only Poland has a declining trend, but it is still at a very high level.

**FIGURE 4.11**  
**Cervical Cancer in the Region and Western Europe, 1970–2002**



Source: Parkin, Whelan, Ferlay, and Storm 2005.

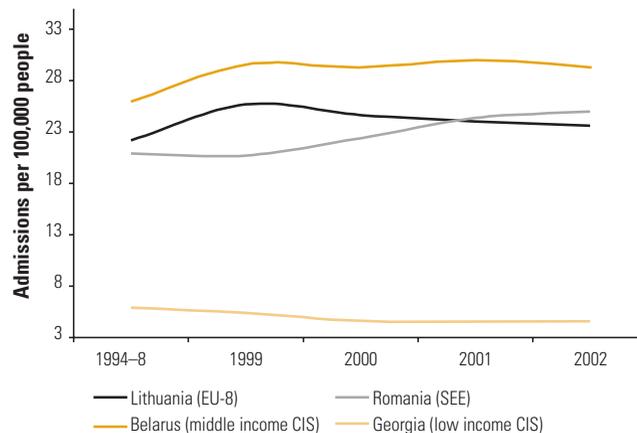
Note: Age-standardized rate, females 15–44.

Anecdotal evidence on quality of care suggests that quality of health services deteriorated even faster in rural areas, and that poor households are more prone to communicable diseases such as TB because of poor living environment. It also suggests that the perception and management of chronic diseases is more difficult among the less educated.

### What Happened to Health Care Utilization?

The reduction in public resources in health care in the Region increased the use of fee-for-services in a mostly unregulated setting, reducing the demand for health care. Official statistics show the decline in utilization of health care during the 1990s, but after 1999 these remained stable or even recovered (see annex table 2). Inpatient care in the Caucasus countries (Armenia, Azerbaijan, and Georgia), Moldova, and Tajikistan declined more than 20 percent between the mid-1990s and 2000. This decline stopped after 2001 and in some cases (Armenia) even recovered. Other countries like Belarus, Russia, and Ukraine continue to have very high hospital utilization rates that are higher than the average in the EU (less than 19)—in Russia, they are still increasing. Thus, official utilization data suggest that the low income CIS group has converged to very low levels of utilization, while countries with higher incomes have not adjusted their oversupplied network and still show very high levels of utilization (figure 4.12).

**FIGURE 4.12**  
**Hospital Utilization (Inpatient Care)**



Source: World Bank staff estimates based on official health statistics (see annex table 2).

*Evidence from household surveys.* Household survey data provide income-related inequalities in utilization. "Utilization" in the household survey is defined as the fraction of those sick individuals who sought health care, reflecting the notion of need in health care. This is different from official statistics that record the number of inpatient admissions and outpatient contacts at the point of service.<sup>10</sup> Figure 4.13 shows the survey-based utilization rates for selected countries by quintile. Armenia stands out as a country with one of the lowest utilization rates in the Region, which declined further between 1999 and 2003. Figure 4.13 (based on survey data) confirms official statistics reported in annex table 3. Russia comes close to Armenia, and other countries like Bulgaria and Romania (not shown) experienced large increases in utilization.

The changes in utilization rates have been uneven across socioeconomic groups. Figure 4.12 shows that generally there has been an overall recovery in utilization. Figure 4.13 helps one to hypothesize that when such gains have been made, they went hand in hand with maintaining relatively low income-related inequality. In countries such as Bulgaria, not only did utilization increase for all income quintiles but also the increase for the poorest was the greatest.

Armenia is a particularly interesting case because of the large utilization gap between the poorest and richest quintiles. Utilization decreased between 1998 and 2003, despite a recovery in utilization between 2001 and 2003 (in both official and survey data). The reduction in utilization during the 1990s significantly increased the income gradient, but after 2001 a modest decline occurred because of a recovery in utilization among the poor. Improved coverage of the poor in the post-2001 period is explained by a recovery in public expenditures in health and the expansion of health insurance for families in poverty. Still, Armenia has one of the largest gaps across income groups in the Region.

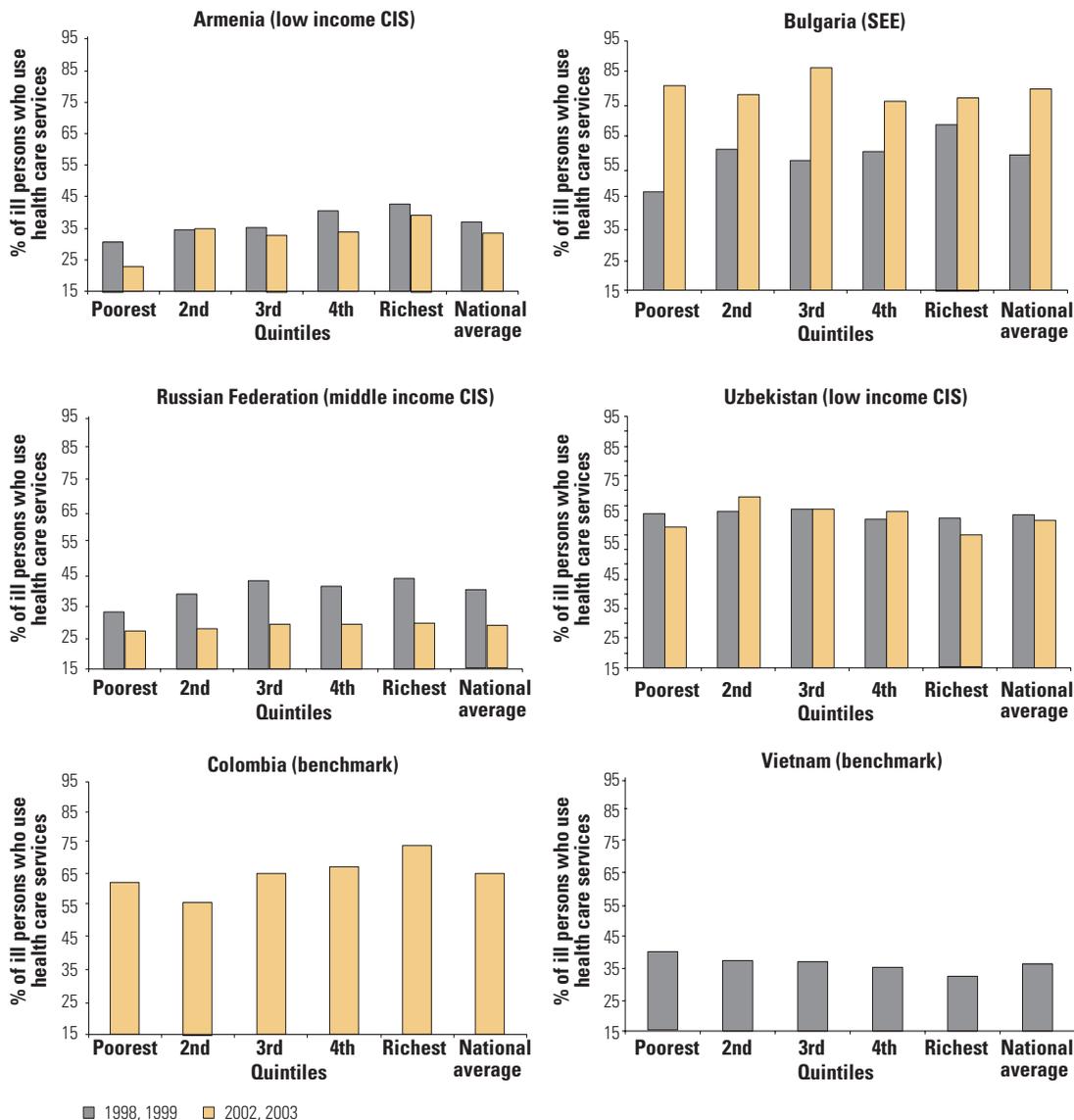
Utilization of health services among the poor suggests that poor countries faced the worst declines in utilization during the 1990s and that the poor fared the worst. This pattern seems to be partially reversed after 1999 through changes that touched two aspects of utilization inequality. First, the improved economic conditions may have enabled households to bear the costs of seeking care. Second, the introduction of policies to provide health insurance for the poor and better funding of such policies may have resulted in better—or more affordable—utilization.

### ***How Are Households Paying for Health Care?***

#### ***Out-of-Pocket Payments and Catastrophic Expenditures***

Health status and health care utilization are important manifestations of economic status, but adverse health episodes can also cause house-

**FIGURE 4.13**  
**Utilization Rates of Health Services by Quintiles**



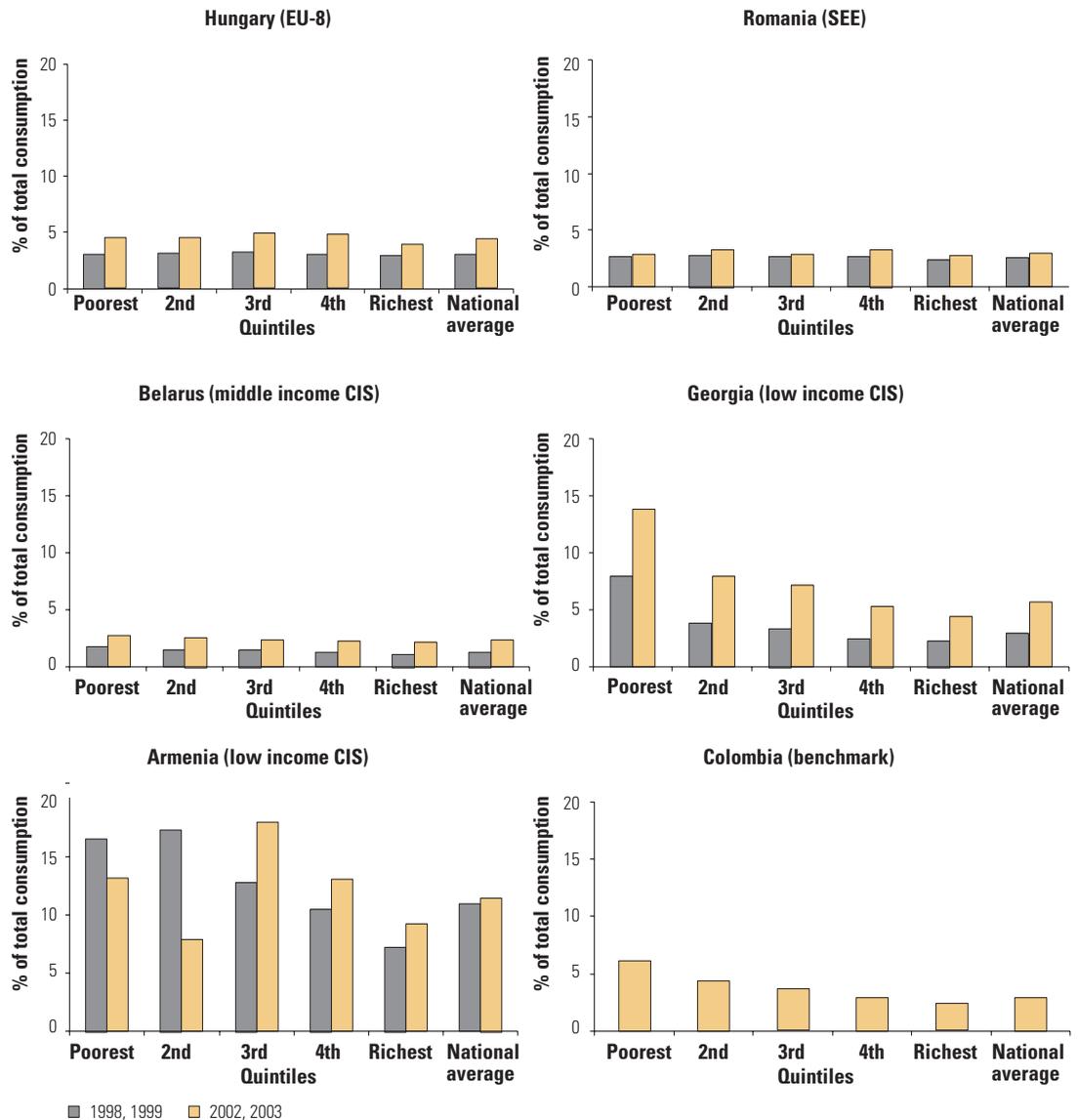
Sources: World Bank staff estimates using data from ECA Household Surveys Archive. See also appendix table 7 for country-level data by years.

Note: Utilization rate shows percentage of respondents who used health services when sick over the reporting period; quintiles are based on consumption per capita.

holds to fall into poverty because of large expenditures on drugs or treatment, or forgone income that reduces consumption. Because public expenditures were reduced during the 1990s, private expenditures played a more important role in the financing of the sector. This was reflected in an increasing share of health expenditures in household budgets across different households (figure 4.14). In Belarus, a

**FIGURE 4.14**

**Ratio of Out-of-Pocket Health Spending to Household Total Consumption, 1998–2003**



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

country with broad and generous coverage of publicly provided health services, the share of households’ budgets devoted to health doubled between 1998 and 2002. In Hungary, the increase was more than 30 percent, reaching almost 5 percent of the household budgets. But nowhere in the Region was the increase so fast and the burden so high as in low income CIS countries Armenia and Georgia.

The increase in households' contributions to health financing had an impact on poorer households. Although health care expenditures reflect the nature of the illness, they also capture some dimension of quality of treatment. This results in better-off households with higher out-of-pocket expenditures compared with those of poorer ones. However, relative to their incomes, the poor spend a larger fraction, and this share of health expenditures on their incomes has been increasing over time.

The increasing costs of health care pose serious affordability concerns in some countries, and they partially explain the decline in utilization in the past decade. Treatment may be postponed, but often only to increase the severity of the illness and the cost of treatment. Then, when treatment (and its expenditures) cannot be avoided, large health expenditures may reduce the resources available for non-health-related spending. This is referred to in the literature as the impoverishing effects of catastrophic health expenditures.

#### ***How Impoverishing Are Catastrophic Health Expenditures?***

*Catastrophic* health expenditures are usually defined as those extreme expenses that affect households' ability to maintain their consumption of basic items (Wagstaff and van Doorslaer 2001). This is different from simply examining the incidence of total health expenditures among the poor and the nonpoor (discussed earlier) because the *impoverishing* concept involves those nonpoor but vulnerable households that may fall below the poverty line because of these unusually large unpredictable expenses. These effects may be underestimated in a country with low utilization of health services because many of those not using the network simply cannot sacrifice any additional consumption and may postpone care. Hence, there are *potential* impoverishing effects that are not observed because households simply decline or postpone care.

Across countries, simulations undertaken for the purposes of this report suggest that catastrophic health expenditures can increase the fraction of poor population by between 3 and 9 percent.<sup>11</sup> Countries with vastly different funding and organization of their health sectors (such as Belarus and Armenia) experience similar impacts (table 4.2).

Belarus, on one hand, has a health system that has changed very little from the previous model under the Former Soviet Union: public expenditures on health represent about 5 percent of GDP and sustain a large network of facilities and personnel (close to 120 beds and 45 doctors per 10,000 people). Although most health status indicators show low infant and maternal mortality, adult life expectancy is

declining because of adult male mortality (life expectancy for males is 62, one of the lowest in the Region). Households spend a small fraction of their budget on health, still reflecting strong public funding. However, the impoverishing effect is high because most households that need health care do seek care, even if they pay a small amount. The poverty impact, then, occurs through the broad number of population affected.

Armenia, on the other hand, represents a different picture. Although spending only 3 percent of GDP, Armenia still has a large network of providers and personnel (more than 43 beds and more than 34 doctors per 10,000 people). The public underfunding of the system has been temporarily covered by active participation of international donors and households in the system (World Bank 2003b). Expenditures on health represent about 5 percent of the average household budget, and about half of those payments are made informally.<sup>12</sup> The levels of utilization, however, are much lower than in Belarus, and those who pay contribute a significant fraction of their incomes. The impoverishing effect of catastrophic expenditure is high in this case because of high expenditures among the households seeking care.

### *Mechanisms to Protect the Poor*

Health systems need to include cost recovery mechanisms not only to generate their own resources but also to introduce some incentives for the rational use of the network among consumers. Fully subsidi-

**TABLE 4.2**  
**Impoverishing Effects of Catastrophic Health Expenditures**

Poverty Indicators before and after Catastrophic Health Expenditures

	Before	After	Impoverishing effect	Impoverishing effect, % impact
Bulgaria (SEE)	4.8	6.3	1.5	31.9%
Romania (SEE)	9.4	10.1	0.7	7.6%
Belarus (middle income CIS)	19.0	20.6	1.6	8.4%
Kazakhstan (middle income CIS)	15.8	16.3	0.5	3.2%
Armenia (low income CIS)	41.2	44.6	3.4	8.4%
Georgia (low income CIS)	40.3	43.9	3.6	9.0%
Kyrgyz Rep. (low income CIS)	61.0	62.4	1.5	2.4%
Moldova (low income CIS)	32.5	35.4	2.9	8.8%
Tajikistan (low income CIS)	64.4	67.7	3.3	5.1%
Uzbekistan (low income CIS)	39.0	40.7	1.6	4.2%

Source: World Bank staff estimates.

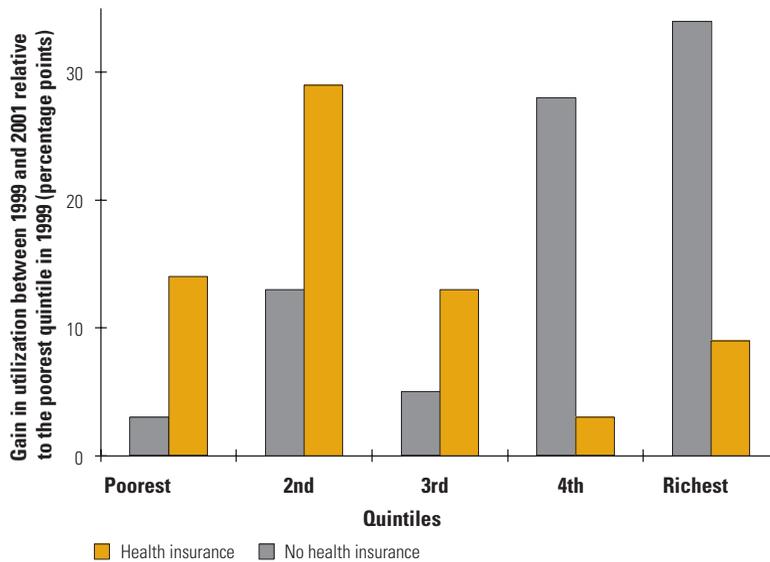
Note: Data used from most recent available household survey; poverty line used is \$2.15 at 2000 PPP.

dized systems may generate excessive use of health resources and hence inefficient expenditures on unnecessary activities. Health systems that depend fully on private expenditures are challenged by the households' ability to contribute, particularly when those expenses are large. There are, then, two areas that require public interventions to address market incompleteness or equity concerns. One is the construction of a functioning health insurance system that can provide households with a mechanism to cope with adverse health events. The second and most important issue for the poor is the introduction of health programs that provide financial coverage for those who cannot afford the cost of health services.

One country where consecutive reforms have enhanced the provision of health insurance for the poor is Armenia. First, in 1999, the government reformed the social assistance system, replacing more than 26 categorical benefits by a poverty-targeted benefit, improving the incidence of social assistance among the poor. Then, in 2001, the Ministry of Health made those beneficiaries of social assistance eligible to receive a basic package of services with no charge. Although health insurance is still limited and faced lack of funding in the initial years, the evidence in 2001 and 2003 suggests that utilization has recovered and has improved more for the poorest households. Figure 4.15 shows the increases in utilization in 2001 compared with the poorest quintile in 1999. The figure shows that compared with the rates observed in 1999 for the poorest, most of the population experienced an increase in the utilization of health services by 2001. But the increase was particularly pronounced for the poor who benefited from targeted health insurance. The effects of this expansion of health insurance are also associated with a better funding of the health care network by 2001. The positive effects of the eligibility expansion on utilization, or take-up, are also evident in higher-income countries with programs for the poor, such as Medicaid in the United States (Shore-Sheppard 2005).

During the recent years while public funding for health services has improved, these services have come to rely much more on private expenditures. The negative implications of this financing structure for equity were evident during the 1990s, but better funding and better programs targeted to the poor have made services more affordable. The experience of Armenia suggests that even countries with limited resources and high poverty rates can make improvements in affordability and access among the poor, albeit on a moderate scale; however, very few poor countries in the Region have followed in Armenia's footsteps.

**FIGURE 4.15**  
**Health Insurance and Utilization in Armenia, 2001**



Source: World Bank staff estimates based on household surveys.

## Energy and Other Utility Services

The Region's countries entered the 1990s well covered with basic utility services, although rapid economic change meant that this infrastructure was not always the right kind or in the right locations. The economic shocks of the 1990s—which lasted longer in the CIS than elsewhere in the Region—meant that utilities deteriorated across the Region for much of the 1990s. Since then, the decline in utility performance (as measured by access, quality, and affordability) has been reversed or slowed in most countries. Electricity has shown the greatest improvement because providers have maintained near-universal coverage while improving reliability in the low-income countries of the CIS. Other recent gains include the expansion of gas to many households affected by the collapse in district heating, and the improvement of water reliability in some countries. Despite these improvements, many households, including many urban households, continue to use dirty fuels such as coal and wood for heating because they lack access to gas and cannot afford (or are not reliably provided with) electricity. In secondary cities, the increasing reliance of households on dirty fuels in some countries represents an especially worrisome trend.

## The Coverage Rates for Most Utilities Remain High

Access to electricity and piped water remains quite high. Close to 100 percent of all households are connected to the electrical grid, while from 80–100 percent of urban households are connected to piped water. It is difficult to evaluate access to clean water for rural households because of the limitations of the survey data (see box 4.1).

Although electricity and network water access rates remain high, household access to district heating and hot water—provided in parallel by district heating companies—dropped precipitously in most low income CIS countries (see box 4.2). In 1989, 78 percent of urban resi-

### BOX 4.1

#### Survey Data Provide Limited Information about Access to, and Quality and Affordability of, Utilities

**Most surveys ask the wrong questions to evaluate whether rural households have access to clean water, improved sanitation, and clean heat.** In urban areas, it is reasonable to assume that water, sewerage, and energy for heating should be provided through utility networks; however, this is not the case in rural areas. Even in much wealthier countries, rural households commonly depend on wells for water supply, septic tanks for sanitation, and liquefied petroleum gas (LPG) for heating and cooking. District heating and other network services make economic sense only in densely populated areas such as cities.

**Surveys ask only about connections, not service provisions.** Power, water, gas, and district heating outages are quite common in some countries in the Region, especially the low-income countries. Surveys that ask households whether they are connected do not answer the question whether services are provided.

**Survey data about payments are weak.** It is difficult to interpret payment data in the household surveys for several reasons: (a) Households living in apartment buildings often receive a single bill for maintenance and state rent plus all utilities other than electricity (that is, the so-called communal services). As a result, they often do not know how much they pay for each utility. (b) Households often pay for communal services on a less-than-monthly basis so utility payments may be very uneven. Heating is inherently uneven because it is needed only in the winter. (c) The surveys provide information only about the amount paid, not the amount billed, so the amount of arrears is not known. (d) Some households are not asked to pay for electricity or other utilities at all. (e) Many households choose not to pay for reasons ranging from lack of cash to knowing the utilities cannot enforce payment to not paying because the household did not receive the service (without metering, households are typically billed normative amounts regardless of how much of the service is actually provided and consumed).

*Sources:* World Bank staff; see appendix, A. Data and Methodology, for a detailed discussion.

dents in Armenia, 42 percent in Azerbaijan, 64 percent in Georgia, and 52 percent in Tajikistan were connected to district heating. By 2002, the percentage of urban residents connected to district heating had dropped to 6 percent in Armenia, 24 percent in Azerbaijan, 1 percent in Georgia, and 21 percent in Tajikistan, with an even smaller number of households actually receiving heat through the connections.<sup>13</sup> As district heating networks shrank and electricity costs soared, affected countries increasingly emphasized gas. The result has been an increase in the number of households connected to the gas network in the low income CIS countries. Although this has allowed some households to switch from dirty fuels or costly electricity to a cleaner and less costly source of heating, many households continue to use dirty fuels for heating, cooking, and light, even if only sporadically.

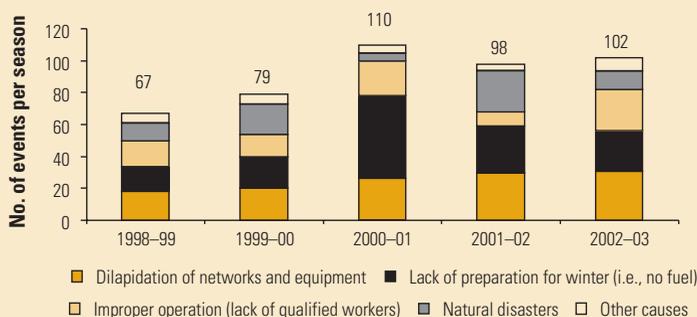
## BOX 4.2

### What Has Happened with District Heating?

Apartments built during Soviet times were heated by district heating at little or no cost (the average family in the Soviet Union spent less than 3 percent of income on all utilities, including heating). However, deep financial crises in the early transition years, often coupled with political and social unrest and the loss of deeply subsidized energy sources in Russia, meant that district heating has disappeared in a number of countries.

Even in countries where district heating continues to function, such as Russia, the systems are at increasing risk of breakdown and stoppages (as the chart below shows). Disruptions of heating supply have increased from the 1998–99 heating season. Although the reasons for the breakdowns vary from year to year, those due to dilapidated equipment have increased somewhat steadily. The deficit of heating fuel has also grown. The failure of heating systems in a country as cold as Russia can severely damage health status, even causing death.

### Breakdown and Stoppages in District Heating in Russia



Source: Russian Federation Construction Agency (Rosstroj).

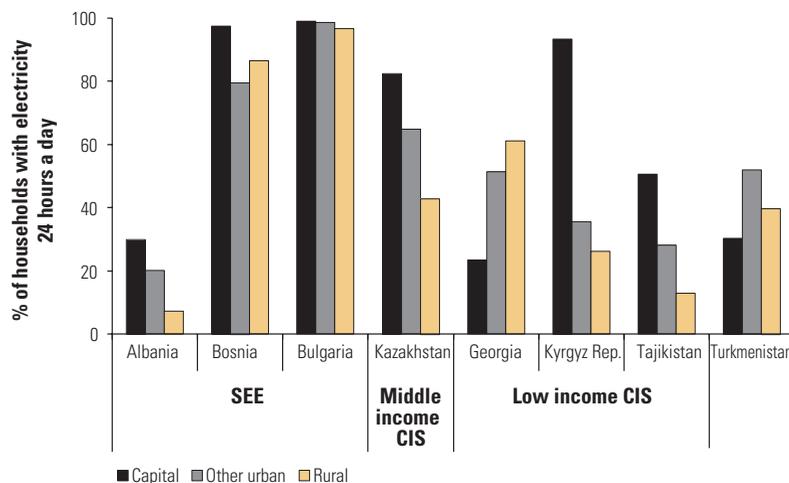
### The Quality of Utility Services Is a Greater Challenge than Access

Access measures only the presence of a connection, but it fails to capture the larger challenge in the Region: service reliability or quality. The quality of electricity, water, gas, heat, and other infrastructure and energy services deteriorated during the early transition years, especially in the low income CIS countries. Although anecdotal evidence suggests that service reliability for electricity and water have improved in at least some countries, in others the reliability of services remains a serious challenge.

Even in electricity, where reforms are most advanced and investment has been the greatest, reliability cannot be assumed. As figure 4.16 shows, in countries such as Albania, Georgia, Tajikistan, and Turkmenistan, fewer than half of the households are supplied with electricity around the clock. The lack of reliable service is generally worse in marginal settlements, such as smaller cities and towns and rural areas, where poverty is also more prevalent.

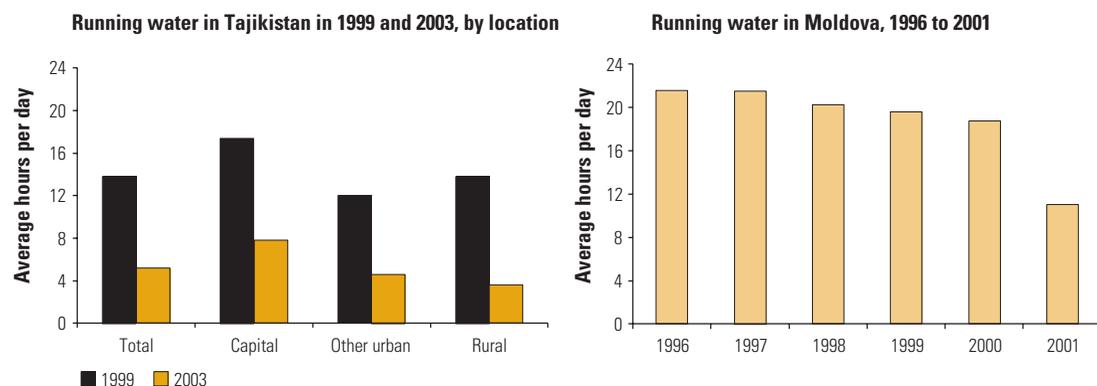
Although time-series data tracking water availability are available for only a few countries, the evidence from two of the poorer countries, Tajikistan and Moldova, shows the influence of years of low maintenance and little investment in water provision. As figure 4.17 shows, households may be connected to water officially, but little water flows through the pipes. On average, Tajik households receive water for less than six hours each day, with the households in smaller

**FIGURE 4.16**  
**Reliability of Electricity in the Region in the Early 2000s**



Source: Hamilton and others 2004.

FIGURE 4.17

**The Deterioration in Water Provision in Tajikistan and Moldova**

Sources: Tajikistan, staff calculations; Moldova, Regional Infrastructure Database.

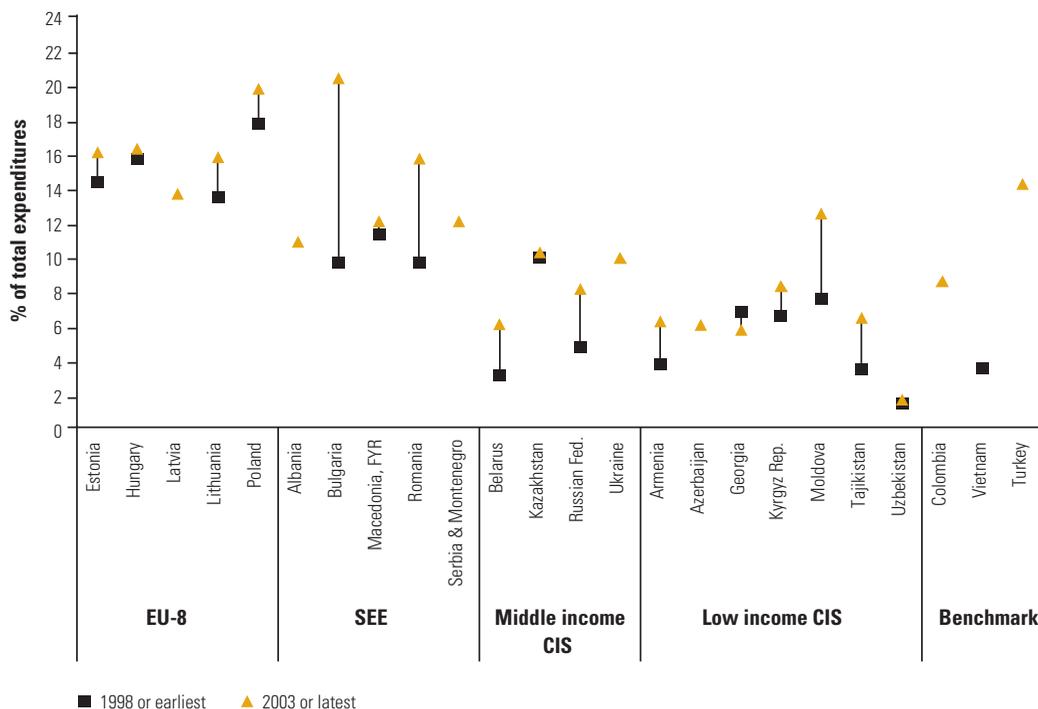
cities and rural areas having the least water. The dramatic drop from 1999 to 2003 suggests that the water utilities are bordering on complete collapse. In Moldova, utilities provide water for less than half the day, down substantially from about 20 hours per day in 1996–97. The average figure probably hides differences between regions, some of which are better-off and some of which are worse-off.

The erosion of access to district heating networks has been reinforced by continuing deterioration in service quality. In Russia, for example, district heating stoppages have increased overall since the late 1990s, as shown in box 4.2. Service failures have potentially disastrous consequences in this country because of its cold climate. Service deterioration and collapse also compel households to switch to other heating sources, including dirty fuels (which will be discussed further below).

**Poor-Quality Services Cost Households More**

As household expenditure shares for energy and other utilities continue to increase, affordability may be a growing concern in some countries. As shown in figure 4.18, utility expenditure shares are highest in the EU-8, followed by those in SEE, the middle income CIS group, and the low income CIS group. Bulgaria, Moldova, and Romania have seen especially large jumps in household expenditure shares in recent years. The increases in overall expenditures on utilities have been largely driven by increased payments for electricity as tariffs have gone up, payments have been enforced, and household reliance on electricity for heating has increased (because of loss of other heating sources) in a number of countries.

**FIGURE 4.18**  
**Household Expenditure Shares for Electricity, Heating, Water, and Sewerage Have Increased from 1998 to 2002/2003**



Source: World Bank staff estimates, using data from ECA Household Surveys Archive.

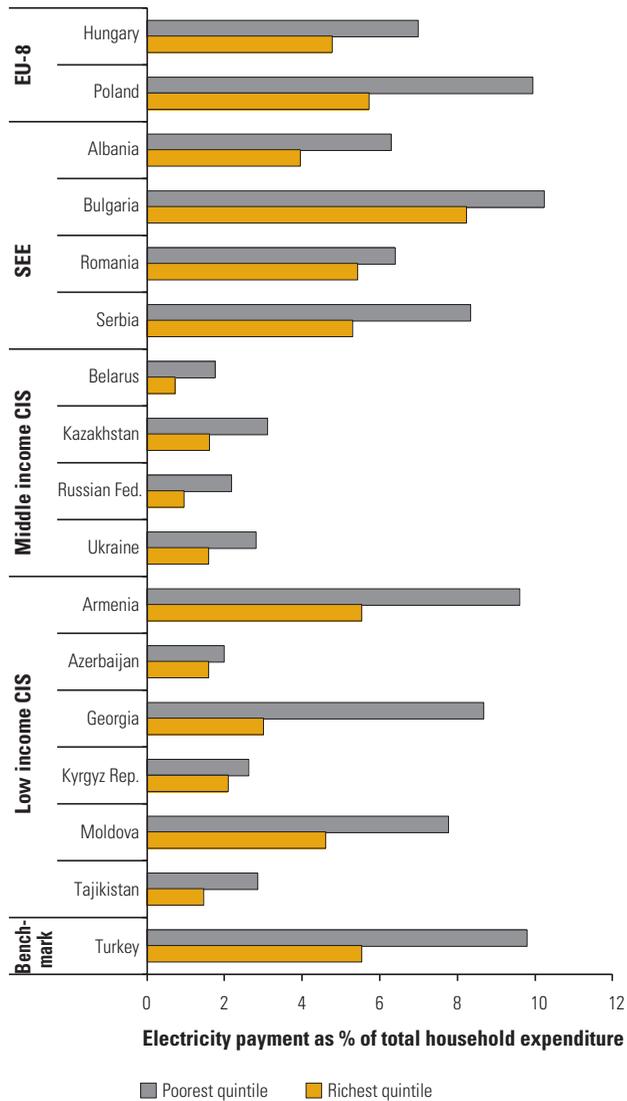
Note: Bulgaria—earliest data are from 1995; Tajikistan—earliest data are from 1999; Estonia, the Kyrgyz Republic, and Uzbekistan—earliest data are from 2000; Kazakhstan—earliest data are from 2001; Albania, Ukraine, Azerbaijan, and Turkey—data before 2002 are not available.

Poor households devote a larger share of expenditures to paying for electricity than better-off households. Figure 4.19 compares the share of household expenditures for electricity in poorest income (quintile 1) and richest (quintile 5) households across the Region’s countries. In every country for which data are available, electricity is a greater burden on poorer households than on richer ones. At the same time, there are significant regional differences. Households in the middle income CIS countries, for example, spend relatively little on electricity, whereas those in the EU, SEE, and some of the low income CIS countries where substantial tariff reform has occurred (Armenia, Georgia, and Moldova) spend relatively more.

Despite tariff increases, tariffs for utilities remain well below cost recovery levels, assuming that investment needs are taken into account. Box 4.3 summarizes current electricity and water tariffs as compared with projected cost-recovery benchmarks. It is important to note that tariffs for both electricity and water will need to increase

FIGURE 4.19

### Electricity Payments Are a Larger Share of Household Expenditures for Poor Households (Quintile 1) than for Rich Households (Quintile 5)



Source: World Bank staff estimates using data from ECA Household Surveys Archive.

Note: Nonpaying households have been excluded from calculations.

substantially in nearly all countries before cost recovery will be achieved.

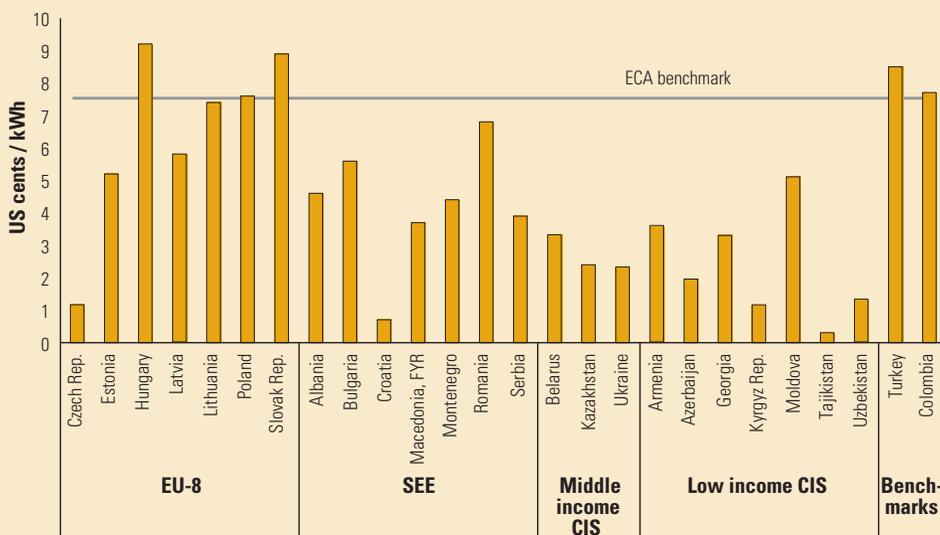
To a large extent, the relatively lower water tariffs reflect less reform in the water sector because governments have prioritized electricity, where the fiscal and quasi-fiscal losses were enormous, the interest of the private sector greater, and the ability to enforce pay-

BOX 4.3

**Electricity and Water Tariffs Remain below Benchmarks for Full-Cost Recovery**

Residential electricity tariffs in most of the Region’s countries have increased to levels sufficient to cover short-term operating costs (3 cents per kilowatt-hour). In only a few countries, however, have residential tariffs increased to the rough benchmark of 7.5–8.5 cents per kilowatt-hour necessary for full-cost recovery, including coverage of capital investment. The chart below compares current residential tariffs with the lower boundary of an indicative regional benchmark (7.5 cents per kilowatt-hour, shown by a broken line). Residential tariffs in the CIS countries fall the furthest below this level, followed by those in SEE and the EU-8.

**Residential Electricity Tariffs Remain Well below the Benchmark of 7.5–8.5 Cents per Kilowatt-Hour**

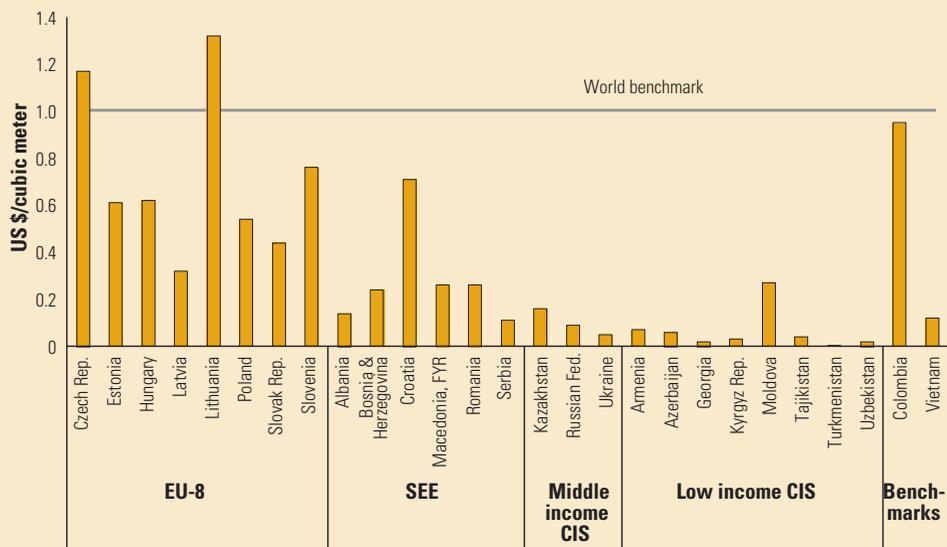


ment much simpler. In contrast to electricity, where metering has always been common and where disconnection is straightforward, water is not usually metered, and disconnecting residential customers in apartment buildings is technically difficult.

The limited evidence available about gas and district heating tariffs suggests that both remain well below cost recovery levels and lag even further behind in overall sectoral reform. This may create additional pressures in the future: late-reforming sectors may not be able to increase tariffs to needed levels because households, especially low-income households, will not be able to absorb additional

Residential water tariffs lag even further behind full cost recovery levels of \$1 per cubic meter, as shown in the chart below. Only two countries (the Czech Republic and Lithuania) have reached the benchmark level (\$1 per cubic meter, shown by a broken line). The low income CIS countries have the lowest residential tariffs, followed by the middle income CIS group, SEE, and the EU-8.

### Residential Water Tariffs Remain Well below the Benchmark of \$1 per Cubic Meter



Sources: World Bank Forthcoming-b. Data on Colombia: Latin American Energy Association (2004); Energy-economic information system. Energy Statistics; <http://www.olade.org.ec/php/index.php?arb=ARB0000006>; and staff calculations from tariff information provided at <http://www.superservicios.gov.co/>. Data for Vietnam are from <http://www.ib-net.org/>.

increases. In some sense, increased electricity expenditures resulting from improved enforcement and increased tariffs may crowd out the ability of many households to absorb additional tariff increases in district heating and gas, where reforms have been implemented more slowly.

### Household Coping Options for Tariff Increases

Households have relatively few options for coping with tariff increases: (a) reducing utility consumption, (b) reducing nonutility

consumption, (c) incurring arrears, (d) relying on the social protection system, and (e) fuel switching. All options present difficulties.

The first option that households have to cope with increasing utility bills is to reduce consumption. Except for electricity, most utilities in most countries are not metered; hence, households are billed based on normative consumption. Without metering, households cannot economize to reduce bills. For electricity, poor households in low income CIS countries such as Armenia, Georgia, and Moldova have already reduced consumption to the absolute minimum.

The second option that households have is to absorb tariff increases by maintaining utility consumption at the expense of other basic consumption items such as education, health, or food. Because households cannot reduce consumption of utilities (which are normatively billed), this scenario may well be commonplace.

The third option is not to pay, or not to pay in full. Review of non-payment patterns finds that a high proportion of households do not pay for utility services. Low-income households in the low income CIS countries are especially likely not to pay, or not to pay in full. Although weaknesses in the survey data (discussed in box 4.1) preclude development of a comprehensive picture of nonpayments and arrears for the Region, available evidence suggests that these problems are widespread, especially in the poorer countries. In Serbia, for example, 1 in 5 people live in households with overdue electricity bills, and 1 in 10 in households with overdue bills for communal services (World Bank 2005h). In Azerbaijan, about one in five urban households report arrears for electricity, although fewer than 5 percent of households do not pay at all (World Bank 2004a). In the Russian city of Norilsk in 2002, an average household paid only 82 percent of all amounts billed (Bashmakov 2004).

Some evidence suggests that poor households are more likely to not pay or to have arrears. In Armenia, poor households report being disconnected for nonpayment of electricity bills at a much higher rate than better-off families. In 2001, about two-thirds of the lowest-quintile households in the capital city of Yerevan were disconnected for nonpayments, while fewer than one-third of the highest-quintile Yerevan households reported disconnections for nonpayment. The pattern was broadly similar in other urban and rural areas in Armenia, although the disconnection rates were lower (World Bank 2003b).

The fourth option that households have is to rely on the social protection system. The two main mechanisms to protect the poor from tariff increases are lifeline (block) tariffs (where consumption can be metered) or targeted subsidies. Lifeline tariffs provide for consumption of a minimal or basic amount by all consumers at a subsidized price.

Higher rates are charged for amounts consumed above the basic block to provide a source of cross-subsidy. The ability to meter consumption is key to implementation. The second mechanism, targeted subsidies, provides cash transfers, vouchers, or discounts on electricity, water, and other utilities to households who are judged to be poor. Although metering is not essential to targeted subsidies, they are more costly to administer. The programs in existence to compensate households for the rising utility tariffs have low coverage of the poor.

The fifth option, discussed in greater detail in the following section, is to switch fuels. Households heating with electricity may be able to switch to gas in some cases. Alternatively, households may opt to switch to dirty fuels for heating.

### Many Households Rely on Dirty Fuels for Heating

Households continue to rely on dirty fuels for heating, especially in secondary cities and rural areas. The major reasons that households switched from clean to dirty fuels include loss of access to district heating, irregular supply of electricity, high cost of electricity, and lack of access to other clean fuel sources, such as gas. The lack of reliable energy sources and the increased costs of the existing choices (such as electricity) pushed many households into lower-quality choices of energy, such as solid fuels. Household reliance on dirty fuels increased sharply in the early transition years. More recently, the pattern has been mixed. Of the countries shown in table 4.3, dirty fuel use increased on a national basis only in Bulgaria and Romania (SEE), while decreasing significantly in Kazakhstan (a middle income CIS country) and Tajikistan (a low income CIS country), as household access to other clean fuels, most notably natural gas and district heating, increased.

**TABLE 4.3**  
**In Most Countries, Households in Secondary Cities Were More Likely to Heat with Dirty Fuels in 2003 than in 1998 (in percentages)**

		Capital		Other Urban		Rural		Total	
		1998	2003	1998	2003	1998	2003	1998	2003
EU-8	Hungary <sup>a</sup>	4	5	16	17	37	37	22	22
SEE	Bulgaria <sup>b</sup>	10	5	38	51	91	91	51	57
	Romania	23	18	19	24	91	89	51	53
CIS middle income	Kazakhstan <sup>c</sup>	2	2	11	7	36	25	22	15
CIS low income	Armenia	42	39	69	78	93	87	72	70
	Moldova	—	0	—	30	—	93	—	64
	Tajikistan <sup>d</sup>	23	12	62	44	96	93	86	76

Sources: World Bank staff estimates. See appendix table 9 for country-level data and years.

Note: a. 2002 is used instead of 2003; b. 1995 is used instead of 1998; c. 2001 is used instead of 2003; d. 1999 is used instead of 1998; — = not available.

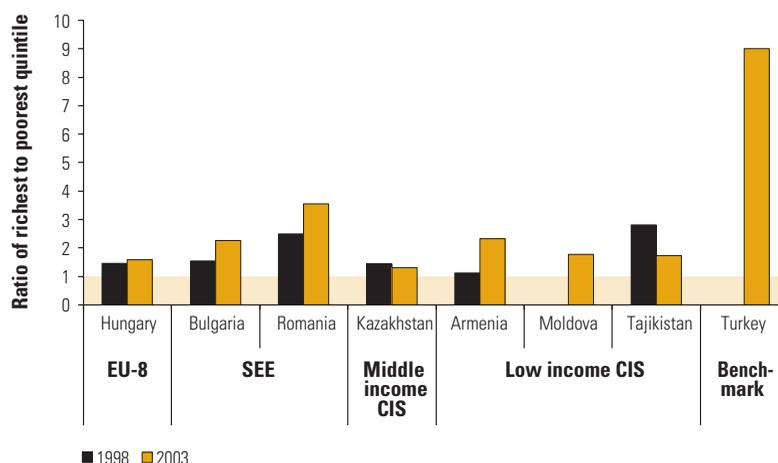
Households in secondary cities were more likely to use dirty fuels in 2003 than they were in 1998. For the six countries for which time-series data are available, the share of households using dirty fuels to heat increased in four countries and decreased in only two: Kazakhstan and Tajikistan. Particularly sharp increases in household reliance on dirty fuels in secondary cities from 1998 to 2003 are seen in Armenia and Bulgaria (9 percent and 13 percent, respectively).

Regardless of location, the poor rely more on solid fuels than the other groups do. As shown in figure 4.20, the ratio of richest households (q5) to poorest households (q1) is greater than 1 for all countries for both years. In Armenia, Bulgaria, and Romania, poor households were noticeably more likely to rely on dirty fuels in 2003 than in 1998. In Hungary and Kazakhstan, inequality in access to clean heat changed little from 1998 to 2003. Only in Tajikistan has inequality decreased, in part because of reviving the district heating network in Dushanbe.

An unexplored dimension of the decaying quality of infrastructure services concerns effects on health and educational outcomes. Anecdotal evidence shows that the deteriorating water systems result in levels of waterborne diseases (for example, hepatitis A) that are significantly higher than in the EU (OECD 2003). In addition, the negative effects of in-house pollution due to the use of solid (and especially dirty) fuels on health status have been well documented in other regions (WHO 2002), and it is expected that similar effects may be emerging in the Region, although studies have not fully explored this issue.

**FIGURE 4.20**

**Poor Households Are Less Likely than Rich Ones to Use Clean Fuels**



Sources: World Bank staff estimates using data from ECA Household Surveys Archive. See appendix table 9 for country-level data and years.

Note: Share of households using clean fuels in the upper quintile divided by that share in the lowest quintile.

## Conclusions

The Region has achieved major reductions in income poverty after 1999, and some of these improvements have been reflected in other dimensions of poverty. But improvements in income alone have not sufficed to reduce the deprivation of affordable access to quality services. Reducing poverty in the nonincome dimensions, it appears, is more of a long-term agenda in which the transformation of the public sector will be critical for several reasons.

First, although the Region's countries put increasing resources into social sectors as their economies improved after 1999, spending in many poorer countries is still limited. Spending levels need to be maintained at adequate levels for sustained improvements in service delivery.

Second, all formerly socialist countries face a critical challenge in adjusting their service delivery systems to the new environment. Reduced fertility, aging population, and emerging risks such as HIV/AIDS pose new obstacles to the effectiveness and quality of services. The inherited structure of service delivery in health care and education spreads limited resources too thinly, reducing the quality of service, particularly for the poor. Improving access to, and affordability of, quality services for the poor hinges on realizing crucial efficiency gains within the existing systems.

Third, countries are beginning to develop effective governance mechanisms that enhance consumers' voice and improve quality of services. So, for example, decentralization experiences are varied, and the results still limited, but certain experiences in education underscore the positive linkages between effective decentralization, local autonomy, and quality of social services. These experiences are worthy of dissemination and replication.

Fourth, the vulnerability of human development outcomes may arise from shocks to health or income or from broader phenomena such as the deterioration of water and gas networks. The lack of insurance or coping instruments at the household level represents a major risk. Developing adequate risk management strategies is critical to helping all people, but particularly the poor, cope with risks. A number of promising policy experiments suggest that even countries with limited resources can improve the ability of households, especially poor households, to manage risk. Working along all four dimensions—fiscal commitment, efficiency gains, improved governance, and better risk management for the poor—will be critical if the public sector is to rise to the challenge of providing affordable access to quality services.

## ANNEX TABLE 1

**Public Expenditures on Health in the Region**

% of GDP

	1994–99	2000	2001	2002
Armenia	2.8	3.2	3.2	—
Azerbaijan	1.0	0.6	—	—
Belarus	4.6	4.6	4.8	—
Bosnia & Herzegovina	3.2	3.1	2.8	—
Bulgaria	4.7	4.0	3.9	—
Croatia	9.0	7.8	7.3	—
Czech Rep.	6.6	6.5	6.7	6.8
Estonia	5.2	4.5	4.3	4.2
Georgia	1.1	0.4	—	—
Hungary	6.0	5.0	5.1	5.5
Kazakhstan	2.1	2.1	1.9	—
Kyrgyz Rep.	—	2.0	1.9	—
Latvia	3.9	3.5	3.4	3.6
Lithuania	4.5	4.4	4.2	4.1
Macedonia, FYR	4.6	4.2	—	—
Moldova	4.2	2.7	2.5	3.2
Poland	4.1	4.0	4.3	4.4
Romania	3.5	4.1	4.2	—
Russian Fed.	3.9	3.7	3.7	—
Serbia & Montenegro	7.2	5.9	6.5	—
Slovak Rep.	5.2	4.9	5.0	5.1
Slovenia	6.9	6.9	7.1	—
Tajikistan	1.2	0.9	1.0	—
Turkey	3.0	4.2	—	—
Turkmenistan	3.5	3.0	3.0	—
Ukraine	3.5	2.9	2.9	—
Uzbekistan	2.9	2.8	2.7	—

Sources: Public expenditure database and IMF fiscal database.

Note: — = not available.

## ANNEX TABLE 2

**Health Care Utilization**

Hospitalization admissions per 100,000

	1994–99	2000	2001	2002
Armenia	6.9	5.1	4.9	6.2
Azerbaijan	6.2	4.8	4.9	4.9
Belarus	26.5	29.3	30.0	29.3
Bosnia & Herzegovina	8.1	8.0	7.8	6.9
Bulgaria	16.7	15.4	15.3	16.5
Croatia	14.4	15.7	15.8	15.7
Czech Rep.	19.9	20.0	20.3	21.1
Estonia	19.2	20.4	19.7	19.1
Georgia	5.8	4.6	4.5	4.6
Hungary	22.3	23.6	23.9	24.6
Kazakhstan	16.1	14.9	15.5	16.3
Kyrgyz Rep.	16.8	15.9	14.5	12.7
Latvia	21.8	22.1	20.7	19.9
Lithuania	22.8	24.7	24.0	23.6
Macedonia, FYR	9.9	9.7	9.0	—
Moldova	19.0	13.7	12.5	13.8
Poland	13.7	15.5	16.4	—
Romania	20.9	22.4	24.4	25.0
Russian Fed.	21.0	22.0	22.5	22.8
Serbia & Montenegro	11.3	—	—	—
Slovak Rep.	19.5	19.9	19.7	19.0
Slovenia	16.0	16.8	16.6	16.4
Tajikistan	11.8	9.1	9.0	9.2
Turkey	6.9	7.8	7.8	8.0
Turkmenistan	14.2	—	—	—
Ukraine	20.4	19.4	19.8	20.0
Uzbekistan	16.0	13.3	13.8	14.0

Source: Official (administrative) health data for country agencies.

Note: — = not available.

## ANNEX TABLE 3

## Doctor-Patient Contact per Person per Year

	1994–99	2000	2001	2002
Armenia	3.5	2.1	1.8	—
Azerbaijan	6.5	5.0	4.9	4.5
Belarus	11.1	11.7	11.6	11.4
Bosnia & Herzegovina	2.7	—	—	2.6
Bulgaria	5.6	—	—	—
Croatia	5.9	7.0	—	—
Czech Rep.	14.8	14.8	14.8	14.8
Estonia	6.2	6.7	6.5	6.4
Georgia	2.1	1.4	1.5	1.6
Hungary	10.7	11.1	11.3	11.9
Kazakhstan	6.2	5.5	5.7	6.2
Kyrgyz Rep.	4.6	4.1	4.0	4.5
Latvia	4.7	4.8	4.8	4.6
Lithuania	7.3	6.3	6.5	6.4
Macedonia, FYR	2.9	3.2	3.0	—
Moldova	8.1	6.5	6.2	6.7
Poland	5.3	5.4	5.5	—
Romania	7.5	5.1	5.4	5.7
Russian Fed.	9.2	9.4	9.5	9.6
Serbia & Montenegro	5.3	—	—	—
Slovak Rep.	14.7	16.3	14.6	14.5
Slovenia	7.1	6.8	6.7	6.4
Tajikistan	3.9	3.7	4.7	4.8
Turkey	1.9	2.4	2.6	—
Turkmenistan	5.9	7.0	6.8	—
Ukraine	9.5	10.0	10.1	10.3
Uzbekistan	7.0	8.4	8.3	8.5

Source: Official (administrative) health data.

Note: — = not available.

## Endnotes

1. The measurement of infant and maternal mortality rates in the Region's countries, particularly in those of the Former Soviet Union, is still affected by the different definition of a "live birth" in the previous system, the number of deaths at home, the lack of access to registration, and negative incentives to register deaths (particularly in rural areas). These explain the existing discrepancies between official statistics and data collected from surveys such as the Demographic and Health Survey (DHS). Notwithstanding these limitations, data suggest that, in some EU-8 countries, maternal mortality rates are comparable to EU-15 levels (about 5–6 maternal deaths per 100,000 live births) (Bos and others 2002; Bonilla-Chacin, Murrugarra, and Temourov 2002; World Bank 2003m).
2. The idea is that while in Central Asia the *total* number is 12,000, in Ukraine 12,000 is the number of *new* cases (incidence vs. prevalence).

3. See Briceño, Estache, and Shafik (2004) for a review of quality of infrastructure services in developing countries.
4. The data used are the TIMSS for 1995 and 1999. The microdata at the student, teacher, and school levels for 2003 were not available when this report was written. This section draws from Murrugarra and Sethi (2005). Results for eighth and fourth grades are similar; this section reports eighth grade because of its broader time coverage.
5. TIMSS defines an internationally comparable minimum score based on the minimum level of skills required in eighth grade.
6. See Fiszbein (2001).
7. See Zeikate (2004) for a detailed discussion of the decentralization processes in health and education in the Region's countries.
8. The decomposition divides the variation of mathematics scores into four blocks (individual, teacher, school, and household background), using mean or conditional quantile regression. Once the variation of scores has been estimated at different points of the distribution, each component is the combination of the characteristics and returns for those students in each part of the score distribution. This mimics the use of quantile regression in the decomposition of factors underlying the wage distribution, as applied in Dolado and Llorens (2004).
9. These are the age-standardized rates (ASRs) for populations between 15 and 44.
10. These estimates may differ from official statistics because people may seek attention from private or even informal providers who may not be included in official records. To the extent that most health care is provided at facilities that are publicly organized, this is not a major issue.
11. See Wagstaff and van Doorslaer (2001) for a methodological discussion about estimating the impoverishing effects of health expenditures.
12. Informal payments in Armenia are those that are not considered as the "stipulated" (official) cost in the household survey (World Bank 2002a).
13. Figures for 1989 are from the 1989 Soviet census. Figures for 2002 are based on staff calculations from the household survey data.



## Prospects for Poverty Reduction

This chapter examines the prospects for poverty reduction in the Region. Obviously, how overall growth rates are sustained—and accelerated—will determine the extent of poverty reduction. Given country differences in the elasticity of poverty reduction to growth, the poverty impact from growth will be variable across countries. This chapter asks three questions. First, given the progress that countries in the Region have made, what level of growth rate would generate sustained poverty reduction in the future? Second, given public policies already being implemented, what else needs to be done to promote growth with poverty reduction? Third, how does the future agenda for poverty reduction differ across countries or groups of countries?

### **Alternative Scenarios for Growth, Poverty Reduction, and Inequality**

*Medium-term outlook.* One should begin with some simple projections of poverty rates in the medium term (up to 2007). For growth rates, the country-specific projections for personal consumption from the World Bank's *Global Economic Prospects 2005* are used. Using the survey data for the latest available year, one then multiplies everyone's consumption by the same growth rate and compares it with the poverty

line. Assuming that households in all parts of the income distribution benefit uniformly, poverty is projected to fall in the Region from 12 percent in 2003 to 8 percent in 2007, at an annual rate of 8.5 percent a year, or by about 21 million (figure 5.1).

The key variable underpinning these projections is household private consumption, which is projected to grow by about 6 percent a year between 2003 and 2007. The elasticity of the poverty headcount to growth in average per capita consumption is therefore relatively low (a little more than 1.3), reflecting the increasing concentration of the poor in the low-income countries in the Region, where the efficiency of growth in reducing poverty is not high and medium-term growth prospects are below the average of the Region.

In the low income CIS group, the average poverty rate is projected to fall from its 2003 level of 47 percent to around 36 percent by 2007, at an annual rate of about 6.5 percent a year. On the other hand, in the middle income CIS group, poverty is projected to fall from 8 percent of the population in 2003 to 2.8 percent by 2007, implying an annual rate of poverty reduction of more than 20 percent. Poverty is projected to reach almost zero in the EU-8, but will still affect around 5 percent of the population in SEE.

Nevertheless, by 2007, according to these projections, some 40 million people will remain poor. Thus poverty will not disappear, but together with economic vulnerability will affect 30 percent of the population. Faster growth could lead to faster reduction of poverty rates. Sustained economic growth is hence a crucial component of any poverty alleviation strategy.

The evidence presented in chapter 2, however, points out that a worsening of the income distribution would undermine a positive impact of growth and significantly reduce the efficiency of growth in reducing poverty. Although it is difficult to discern general trends in inequality over time for a given country, chapter 2 presented evidence that reductions of inequality observed in CIS countries were driven by a unique combination of factors and are unlikely to continue at the same pace. Nevertheless, even the scenario of unchanged inequality offers improvement in poverty rates in the medium term (as shown by figure 5.1).

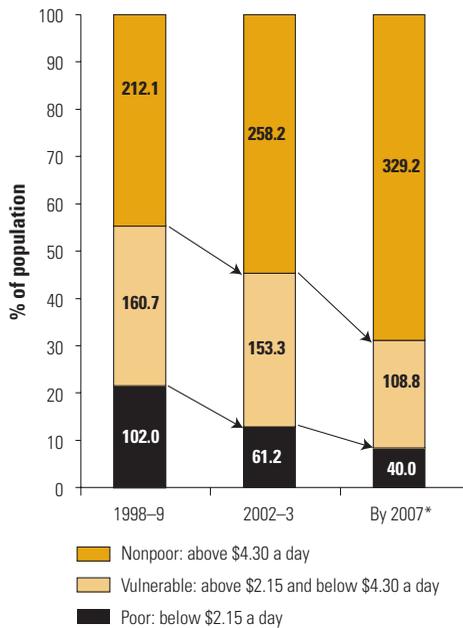
But are the projected reductions in poverty rates sufficient? For this, one needs to see what the longer-term objectives and vision for poverty reduction are. The discussion turns to this subject next.

*Long-term scenarios* contain a vision for poverty reduction in the Region. To assess whether a given rate of poverty reduction is sufficient, one needs to take a broader and a longer-term perspective. The Millennium

FIGURE 5.1

### Population of the Region by Poverty Status, 1990–2002, and Outlook for 2007

Projections



Sources: World Bank staff estimates using data from ECA Household Surveys Archive; outlook for 2007 – staff estimates.

Note: The projection is based on country-specific growth rates and uses the most recent survey data.

Development Goals (MDGs) present such an internationally agreed target for poverty reduction (box 5.3). The first one (MDG1) is to reduce absolute poverty by half by 2015, compared with its level in 1990. Obtaining strictly comparable figures on poverty is difficult, but using external sources, one can arrive at a set of rough estimates of poverty and vulnerability at the country level circa 1990.<sup>1</sup> Choosing 2015 as the time horizon for these projections gives a longer-term perspective and a clearly defined goal. Although this general vision is shared by most nations, countries interpret various targets in a way that makes them more relevant for their level of development and aspirations. In particular, for countries in the Region, a poverty line of \$2 a day (or, more precisely, \$2.15 a day) would appear to be more appropriate as a standard of material deprivation than the \$1 a day (\$1.075) currently embodied in MDG1.

Using poverty rates from 1990, one can establish a target for each country in the Region with regard to absolute poverty (at \$2.15 per day) by 2015 (table 5.1). Halving poverty rates in the poorest CIS countries would mean achieving by 2015 a poverty rate (weighted by

**BOX 5.1****EU Accession and Poverty Reduction Objectives**

Countries in the Region that recently joined the EU (the Czech Republic, Estonia, Latvia, Lithuania, Poland, Hungary, Slovenia, and the Slovak Republic), that are about to join the EU (Bulgaria and Romania), or that are in the Stabilization and Association Process with the EU (the Balkan countries) have a clear framework for aligning their policy objectives with the common social agenda of EU. Its key features are listed below.

At the European Council of Lisbon in 2000, the European Union member states and the European Commission outlined steps to make the EU the world's most competitive economy by 2015 and adopted a new approach to promoting social cohesion across the EU. Specifically, it laid out six key objectives:

1. Promote employment and employability through active labor market measures to help those who have the most difficulty in entering the labor market and a mutually reinforcing system of social protection, lifelong learning, and labor market policies
2. Ensure adequate social protection systems, including minimum income schemes, for all to have a sufficient income for a life with dignity and effective work incentives for those who can work
3. Increase the access of the most vulnerable and those most at risk of social exclusion to decent housing conditions, to quality health and long-term care services, and to lifelong learning opportunities, including to cultural activities

population) of about 14 percent, which is substantially below the current poverty incidence of around 52 percent in 2002–3. For the middle income CIS and SEE countries, the target poverty rates would be close to 1.6 percent and 0.2 percent, respectively. (In statistical terms, these rates are not distinguishable from zero.) Thus the goal for these countries can be stated simply as the elimination of absolute poverty. For the EU-8 countries, which had already achieved by 2002–3 an absolute poverty incidence of 2.3 percent (again in statistical terms not very different from zero), a more meaningful target is reducing the size of the vulnerable population—about 25 percent—and preventing poverty from reemerging (see box 5.1).

Using these differentiated, MDG-related targets, what would it take to achieve these goals for poverty reduction? Table 5.1 reports the average annual growth rates that would be required before 2015 to achieve these differentiated targets, assuming no worsening of the distribution (that is, similar growth rates for the poor and nonpoor alike). This table also reports actuals and projected growth rates for

4. Prevent early exit from schools and formal education and training and facilitate the transition from school to work, in particular of young people leaving school with low qualifications
5. Eliminate poverty and social exclusion among children as a key step to combat the intergenerational inheritance of poverty, with a particular focus on early intervention and early education initiatives that identify and support children and poor families
6. Reduce the levels of poverty and social exclusion and increase labor market participation of immigrants and ethnic minorities to the same levels as the majority population

The EU also identified a number of monitorable indicators. Every two years, each member state must submit a National Action Plan (NAP) to the European Commission, laying out how it intends to fulfill progress on 18 agreed-on “social inclusion indicators” that focus on social outcomes. Primary indicators include poverty rate, inequality indexes, regional employment rates, long-term unemployment rate, prevalence of jobless households, number of early school leavers not in further education/training, life expectancy at birth, and self-defined health status by income level.

From these sets of objectives and indicators, it is very clear that poverty reduction remains in the center of policy making in the new member states and that both the absolute poverty reduction goals discussed in this report and the implied inequality targets are in line with the broader set of goals accompanying European integration. If anything, EU accession results in a tighter set of requirements than these country-level simulations and scenarios.

*Sources:* Council of the European Union 2004; and Atkinson, Marlier, and Nolan 2004.

the period 2002–7, showing that despite recent progress, many countries in the Region are facing a real challenge of poverty reduction. Especially in the poorest CIS countries, growth rates required to achieve needed progress in poverty reduction are significantly above the projected range. Even for the EU-8, more realistic (and challenging) targets would imply the need to accelerate growth rates. Only for the middle income CIS group and SEE are the projected growth rates close to what is needed to eliminate absolute poverty by 2015.

But if the political vision and ambition in these countries go well beyond exceeding the welfare levels observed in the past before the breakup of the Soviet block, then accelerated and shared growth would be needed for all groups of countries. A forward-looking agenda could, for example, aim at reducing the risk of reemergence of poverty by reducing the incidence of economic vulnerability to zero (table 5.2) or, with European income convergence in mind, at achieving levels of poverty no higher than those observed in the poorest EU member states today (table 5.3). Both of these visions would suggest a signifi-

TABLE 5.1

### Annual Growth Rates of Private Consumption Needed to Achieve Poverty Reduction by 2015, MDG-Related Targets

Countries	Growth rate required to reach targets, GDP weighted	Actual/projected growth rates 2002–07, GDP weighted	Target, MDG-related	Definition of Poverty	Target poverty rate, population weighted,	Current poverty rate, population weighted
Low income CIS	5.6%	3.9%	Reduce by 1/2 country's poverty rate in 1990	Absolute poverty (\$2.15)	13.8%	52.3%
Middle income CIS	4.3%	6.8%	Eliminate absolute poverty	Absolute poverty (\$2.15)	1.6%	8.0%
SEE	3.4%	5.4%	Eliminate absolute poverty	Absolute poverty (\$2.15)	0.2%	11.4%
EU-8	5.9%	4.3%	Eliminate economic vulnerability	Vulnerability (\$4.30)	0.0%	24.6%

Source: Staff estimates.

TABLE 5.2

### Annual Growth Rates of Private Consumption Needed to Achieve Poverty Reduction by 2015, Country-Specific Targets Focused on Economic Vulnerability

Countries	Growth rate required to reach targets, GDP weighted	Actual/projected growth rates 2002–07, GDP weighted	Specific target related	Current state in reaching target (poverty rate)
Low income CIS	12.0%	3.9%	Eliminate absolute poverty (\$2.15)	52.3%
Middle income CIS	9.7%	6.8%	Eliminate economic vulnerability (\$4.30)	39.6%
SEE	10.8%	5.4%	Eliminate economic vulnerability (\$4.30)	55.3%
EU-8	6.6%	4.3%	Reduce poverty to half the incidence in the poorest EU-15 member today (10.5%)	36.6%

Source: Staff estimates.

TABLE 5.3

### Annual Growth Rates of Private Consumption Needed to Achieve Poverty Reduction by 2015, Country-Specific Targets with European Vision

Countries	Growth rate required to reach targets, GDP weighted	Actual/projected growth rates 2002–07, GDP weighted	Specific target related to country level of development	Current state in reaching target (poverty rate)
Low income CIS	12.0%	3.9%	Eliminate absolute poverty (\$2.15)	52.3%
Middle income CIS	8.0%	6.8%	Reduce poverty to the incidence in the poorest EU-15 country today (21%)	62.4%
SEE	9.9%	5.4%	Reduce poverty to the incidence in the poorest EU-15 member today (21%)	65.8%
EU-8	6.6%	4.3%	Reduce poverty to half the incidence in the poorest EU-15 member today (10.5%)	36.6%

Source: Staff estimates.

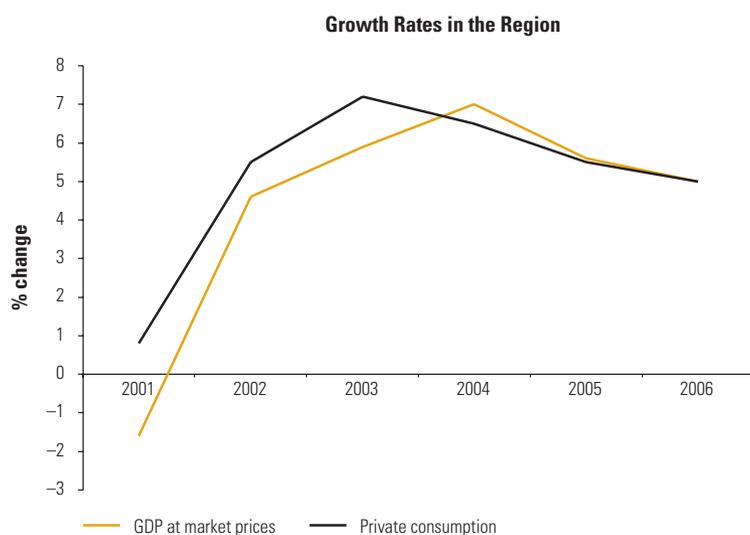
cant acceleration of growth rates. In fact, they call for a tripling of growth rates in the low income CIS countries and almost a doubling of growth rates in the SEE. They also suggest a significant growth acceleration in both the EU-8 and the middle income CIS group. Given the assumption of unchanged income distribution, this suggests that the gains from this growth need to be equitably shared in the population.

### Patterns of Growth: Implications for Growth and Inequality

The recent evidence suggests that poverty reduction has been driven largely by a consumption boom. Growth rates for private consumption exceeded GDP growth rates in the Region for the initial economic recovery (figure 5.2). Now, for various reasons (such as needed correction of external account imbalances in SEE or debt burdens in some poor CIS countries), consumption growth rates are likely to slow down and even lag GDP growth rates.

What would this development imply for patterns of growth? International experience suggests that in fast-growing economies, higher GDP growth is driven by increased investment and exports (see figure 5.2 for growth rate projections for the Region). This suggests that to achieve the objective of reducing poverty, the countries of the Region need to step up even more aggressively the potential engines of economic growth and encourage new investments and net exports.

**FIGURE 5.2**  
**Trends from Global Projections (Percentage Changes)**



Source: World Bank 2005b.

*Inequality dynamics.* Although the simulations presented in tables above assumed distributionally neutral growth, what would happen if the distribution actually worsens? Growth incidence curves presented in chapter 2 show that the growth process in the Region triggered complex distributional changes. In some countries, they were associated with increase of inequality; in other countries, with inequality reduction. But there were usually systematic differences between the growth rates of consumption achieved by the poor and the nonpoor. Chapter 2 argues that the observed periods of strongly pro-poor growth were driven by the exceptional circumstances and may not be continued in the future. Box 5.2 presents evidence of how, for instance, through the depletion of social capital, the poor may be unlikely to take full advantage of new growth opportunities. What does it imply for projected growth required at the level of the national economy to generate a desired change in poverty?

The simplest way to think about the growth rates presented in tables 5.1, 5.2, and 5.3 is to take them as the growth rates in real consumption that those groups of the population who are currently poor need to achieve. Thus, if growth rates of the poor systematically deviate from the consumption of the rest of the population, it would have implications for both the required overall growth rate and the level of inequality. For Poland and Romania, for example, the growth rate

## BOX 5.2

### **Depleted Social Capital of the Poor Limits Opportunities**

Social capital in the form of networks of information exchange and reciprocity helps people to reach out to new opportunities and to weather difficult times. Although inherently difficult to measure and follow over time, a large body of qualitative evidence from the Region suggests that the social capital of the poor has withered because of not only ruptured workplace networks and unemployment but also the inability of the poor to maintain communications and reciprocity. This is due to a variety of reasons.

In some cases, geographical isolation, coupled with limited improvements in the standard of living, has meant that the social capital of the poor has come to be largely confined to people in similar circumstances. For example, in rural Bulgaria, poverty, unemployment, and lack of maintenance of decayed roads have weakened social cohesion. Trust and social activities are limited to close family members. Community organizations hardly exist, and villages lack leaders able to take initiatives for community development. The loosening of social bonds has also been aggravated by the depopulation and aging of depressed rural communities as young families and youth migrate to cities (Blackstone and Agency of Socioeconomic Analysis 2004).

among the poor (vulnerable) in 1999–2002 averaged less than half of the average growth rate. One can therefore simulate what such a scenario with unequally shared benefits from growth would imply.

For Poland, for example, that would imply achieving an 11 percent overall growth rate, instead of 6.5 percent, to meet the basic target reported in table 5.1 (eliminate economic vulnerability). Other national targets in the context of EU would require even higher growth rates—much higher in fact than the economy was able to sustain over the past five years. For inequality, that would imply worsening Gini coefficients to a level of 0.46—not entirely implausible, but a level that would put Poland on par with the most unequal Latin American societies. In Romania, assuming the growth rates of the poor to be one-half of the national average, that would imply that the needed growth rate to achieve a complete elimination of absolute poverty by 2015 would be 8 percent a year. The Gini coefficient would worsen to 0.35—a level that is quite conceivable, given the observed inequality dynamics. In Russia, reversal of pro-poor growth would imply the need to sustain a 9-percent-per-year growth rate of mean private consumption until 2015 and see inequality worsen again to 0.37, the highest level observed during Russia's economic transition.

Thus, for middle income CIS countries, SEE, and the EU-8, worsening of inequality so significant as to reverse completely gains from

In others, large-scale migration has meant that the poor have yet to build up the social capital necessary to seek better living conditions. Albania, for example, has seen large-scale migration of rural populations from the impoverished northeast portion of the country. Despite the physical accessibility of improved educational services, however, these populations have far less access to good-quality schools than do wealthier local families, who use their social networks to enroll their children in the better schools (Dudwick and Shahriari 2000).

Low social capital offers a partial explanation of why certain households, groups, or communities are less likely than others to benefit from socioeconomic opportunities. Depletion of social capital in the closed networks accessible to the poor goes hand in hand with long-term poverty. As these factors work together to reinforce each other in a vicious cycle, they often work to make poverty resistant to improved job opportunities or to improved physical access to education and medical care.

*Sources:* Blackstone and Agency of Socioeconomic Analysis 2004; Dudwick and others 2004; and Dudwick and Shahriari 2000.

growth seems rather implausible, but given past trends it cannot be fully ruled out.

But where reversal of pro-poor growth may have disastrous implications is in the poorer CIS economies. Because the poor constitute a very sizable share of the population in these countries, if they fail to fully take part in the growth process, that would mean dramatic changes in the distribution and failure to achieve the needed poverty reduction. In Moldova, for example, that would imply stepping up the growth rate to 9 percent annually to just halve the absolute poverty by 2015 (compared with 1990), but the implied change in inequality would drive the Gini coefficient up to 0.57! For Armenia, the Kyrgyz Republic, or Tajikistan, results in inequality increase are similar. Among those countries, only Tajikistan has actually recently experienced rapid growth accompanied by an increase in inequality.

The scenario of worsening inequality due to inequitable growth is an entirely plausible proposition for the middle income CIS group, the EU-8, and SEE and less plausible, but extremely worrying, for the low income CIS countries. Because the growth rates it implies are very high and probably not achievable, going along this path would most likely mean that the poverty reduction targets will not be achieved by 2015. Thus, a serious change in policies is required not only to ensure rapid and accelerated growth but also to prevent inequality from rising.

### **Achieving Progress in Nonincome Dimensions**

The scenarios of poverty reduction discussed above deal only with material poverty. Ending deprivation in other noneconomic dimensions is also a challenging task. This challenge is perhaps best understood in the prospects of meeting nonincome MDGs (box 5.3). Low income CIS countries face a particularly difficult challenge, but in the middle income CIS countries, SEE, and even the EU-8, the nonincome MDGs are still relevant because a number of countries are vulnerable on the health-related goals and because disaggregations of national-level data by region, ethnic group, or gender identify pockets where the targets are less likely to be achieved.

The child and maternal mortality MDGs represent a challenge in many CIS countries, including the middle income CIS group. Progress with the under-five mortality rate may be limited because utilization rates at secondary hospitals are often lower than international averages and there are concerns about quality and out-of-pocket payments acting as barriers to care. Regarding the maternal mortality rate, poverty, distance, and poorly performing hospital networks

**BOX 5.3****Nonincome Dimensions of Poverty and Achieving the MDGs in the Region**

The Millennium Development Goals (MDGs) grew out of the agreements and resolutions of world conferences organized by the United Nations (UN) over the past decade. Brought together as a set of “International Development Goals” in 1996, they have since been refined and are now widely accepted as the framework for measuring development progress. At the Millennium Summit in September 2000, the 189 states of the United Nations reaffirmed their commitment to working toward a world of peace and security for all—a world in which sustaining development and eliminating poverty would have the highest priority. Signed by 147 heads of state, the Millennium Declaration was passed unanimously by the members of the UN General Assembly. The first seven goals are directed at reducing poverty in all its forms: hunger; a lack of income, education, and health care; gender inequality; and environmental degradation. Although each goal is important, collectively they form a comprehensive and mutually reinforcing approach to alleviating poverty. (The MDGs are more relevant to some countries than others in the Region.)

- **The EU-8 is the least challenged of the Region’s subregions by the nonincome dimensions of poverty.** Most countries have met, or are likely to meet, the nonincome MDGs, except for the Baltics, where on current trends it does not appear that the spread of HIV/AIDS will be effectively combated.
- **The nonincome dimensions of poverty are likely to challenge some countries in SEE.** It is not clear that countries such as Bulgaria and Romania will be able to combat the spread of HIV/AIDS. Romania may also struggle to meet the water access MDG because only 16 percent of the sizable rural population is assessed to have access to an improved water source.
- **The nonincome dimensions of poverty, particularly related to health, are likely to challenge the middle income CIS countries.** None of these countries is assessed as likely to be able to combat the spread of HIV/AIDS. The targets for reductions in child mortality and maternal mortality may also not be achieved in some countries. It should be pointed out, however, that because of the age and epidemiological profile of these countries, proportionately higher gains in life expectancy would accrue from reducing adult mortality through the control of noncommunicable diseases than from achieving targets related to the MDGs.
- **The low income CIS countries are most severely challenged on nonincome dimensions of poverty.** Most MDGs are *unlikely* to be met in these countries; indeed, only the MDG regarding attaining gender equity in schooling is on track.

(Box continues on the following page.)

## BOX 5.3 (continued)

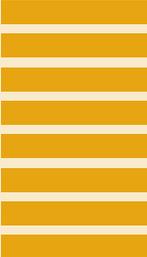
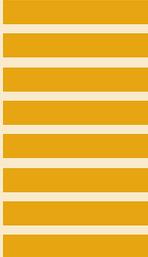
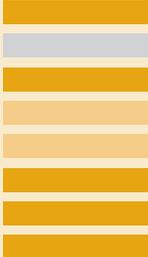
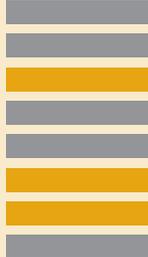
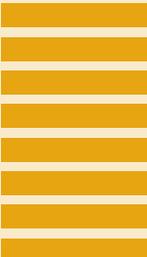
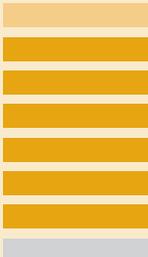
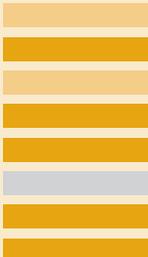
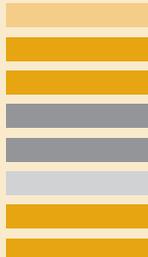
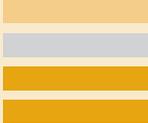
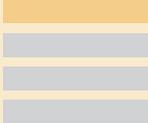
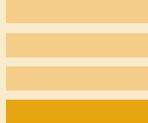
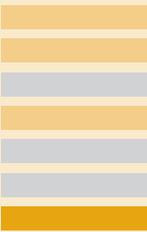
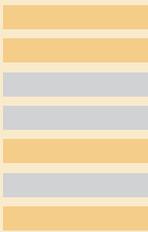
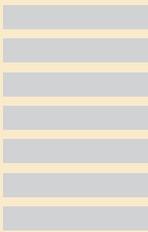
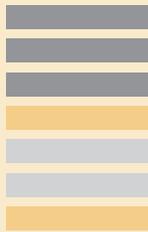
## Prospects of Regional Countries Achieving the Global MDGs

	MDG1 Reduce poverty	MDG2 Increase school enrollment	MDG3 Increase equality in school
<b>EU 8</b>			
Czech Rep.	Likely	Maybe	Likely
Estonia	Likely	Likely	Likely
Hungary	Likely	Likely	Likely
Latvia	Likely	Maybe	Likely
Lithuania	Likely	Likely	Likely
Poland	Likely	Likely	Likely
Slovak Rep.	Likely	Maybe	Likely
Slovenia	Likely	Likely	Likely
<b>SEE</b>			
Albania	Maybe	Likely	Likely
Bosnia & Herzegovina	No data	No data	Likely
Bulgaria	Maybe	Likely	Likely
Croatia	Likely	Maybe	Likely
Macedonia, FYR	Likely	Likely	Maybe
Romania	Maybe	Maybe	Likely
Serbia & Montenegro	No data	Maybe	Likely
Turkey	Maybe	Maybe	Unlikely
<b>Middle income CIS</b>			
Belarus	Likely	Likely	Likely
Kazakhstan	Maybe	Likely	Likely
Russian Fed.	Likely	Likely	Likely
Ukraine	Likely	Likely	Likely
<b>Lower Income CIS</b>			
Armenia	Maybe	Likely	Likely
Azerbaijan	Likely	Maybe	Likely
Georgia	Unlikely	Unlikely	Likely
Kyrgyz Rep.	Maybe	Maybe	Likely
Moldova	Maybe	Unlikely	Likely
Tajikistan	Unlikely	Unlikely	Unlikely
Uzbekistan	Unlikely	Likely	Likely

## Key

- **Likely** MDG target likely to be achieved
- **Maybe** Too hard to tell whether MDG target will be met or not
- **Unlikely** MDG target unlikely to be achieved.
- **No data** Inadequate data to predict whether or not MDG target will be met

Source: World Bank 2005c.

MDG4 Reduce child mortality	MDG5 Reduce maternal mortality	MDG6 Reverse HIV/AIDS & TB incidence	MDG7 Increase water access
			
			
			
			

inhibit progress toward this goal and, in some cases (such as Georgia), maternal deaths are increasing rather than decreasing.

The HIV/AIDS MDG represents a challenge in all subregions. Although absolute numbers may be lower than in other parts of the world, the Region is seeing one of the most rapidly growing epidemics in the world. There is a pressing need to improve the effectiveness of disease control through epidemiological and behavioral surveillance systems that can identify the status and trends of HIV infection and its determinants. Denial, stigma, and the institutional challenges of providing services to marginalized and vulnerable subpopulations, such as injecting drug users and persons with disabilities, need to be addressed to combat the spread of HIV/AIDS in the Region.

Access to water and sanitation is also an issue in most parts of the Region outside the EU-8. Low investment in, and poor maintenance of, water infrastructure significantly reduced access to sustainable, improved, and safe drinking water since 1990, as well as access to improved or adequate sanitation. Drinking water frequently does not meet biological and chemical standards, supply may be irregular, and there have been outbreaks of waterborne diseases in many countries.

As chapter 4 shows, arresting trends toward worsening quality of public services, declining affordability, and exclusion of the poor will require changing the current institutional setup of providing health, education, and infrastructure services. Undertaking such reforms often meets harsh resistance from coalitions of those who benefit from the status quo. Engineering policy change in these areas may prove to be easier in the environment of a rapidly growing economy that generates enough resources to compensate losers than in a more constrained environment. Thus, accelerated shared growth may be an imperative not only for the direct benefits it provides in poverty reduction but also for the indirect impact in opening windows of opportunity to reform the provision of social services.

## **Conclusion**

Countries of the Region need to accelerate shared growth for continued poverty reduction. Targets for reducing poverty and vulnerability need to be differentiated by country groups, given their current income levels. The low income CIS group needs to generate growth of more than 5 percent a year (at the minimum) to be able to reach even modest targets. Setting more ambitious targets of poverty elimination would require equitable and sustainable growth at rates in excess of 10 percent. But even in the middle-income countries, reduc-

ing poverty and economic vulnerability requires growth rates in the range of 6–8 percent, above what is currently forecast for these economies. And all this requires unchanged income distribution; with any worsening of the distribution, even higher growth rates would be needed.

## The Role for Public Policy

It is clear from the above that accelerated and shared growth, along with reform of public service delivery and better targeting of social programs, will be key to making progress on both income and non-income dimensions of poverty. It is also important to be able to monitor progress in poverty reduction. Within these four areas, what are the priority actions for public policy?

### Accelerating Shared Growth

It is difficult—based on the experience of the past five years—to overemphasize the importance of raising and sustaining high rates of growth for poverty reduction. As the simulations in overview table 1 suggest, future growth is essential for poverty reduction. The EU-8 is already well placed to take advantage of the new economic opportunities and market integration provided by EU accession. Enhanced competition and the mobility of both products and factors of production that EU accession provides will likely become a dynamic source of growth in the future. This is also true, but perhaps to a more limited extent, for countries with the prospect of accession. But for low and middle income CIS countries that do not yet have such an external driver for change, domestic catalysts remain crucial. Good economic governance and responsible leadership must take advantage of the relatively good economic times to put into place policies and institutions that would enhance growth.

Understanding the policies and institutions that lead to strong and sustained rates of growth is therefore a first step in reducing poverty. Although this report has less to say on factors that drive growth—which is not the focus of this study—the pursuit of sound economic policies are a necessary precondition. These include sound monetary and fiscal policies (reflected in, for example, moderate-size government and low inflation), a climate conducive for investment, a relatively well-developed financial system, and trade openness. Countries of the Region are, with few exceptions, relatively well integrated into world markets, although more can be done (World Bank Forthcoming-e).

However, beyond these broad issues around promoting growth, the diagnosis in this report points to a number of areas where more could be done either to increase the assets of the poor or to create greater returns from their assets. These relate to (a) further reforms of the enterprise sector, (b) reforms to agriculture, and (c) promoting opportunities for those in lagging towns and regions. The report considers each in turn.

*Further reforms of the enterprise sector.* The failure to reform the enterprise sector not only in the CIS but also in SEE and parts of the EU-8 is an important underlying cause of poverty in the Region. Differences in income (consumption) between poor and nonpoor are due to several factors such as household dependency, labor force participation, earnings, and other factors (access to social transfers). However, the most important factor by far is *earnings*, with earnings per employed substantially lower in poor than nonpoor households. The education profile of workers in poor households helps explain part of the earnings gap. The analysis of earnings functions suggests that a worker with primary education faces a wage disadvantage of 20–40 percent across countries of the Region, compared with a worker with secondary education (Yemtsov, Mete, and Cnobloch 2005). Gender is another source of wage differentials in the Region. But even when controlling for the main observable characteristics that distinguish poor and nonpoor households, one is still left with a large “unexplained” gap in earnings, which is a key determinant of poverty. This unexplained gap is greater than that suggested by estimates from other regions (see, for example, Vandycke 2001; also Munich et al. 2005). One reason for this large unexplained gap is that two observationally equivalent workers in the Region may have very different pay rates, depending on which type of firm they work in.

Encouraging the growth of new, more productive firms and strengthening the financial discipline for existing enterprises continues to be important. The typical economy of former socialist countries continues to face significant productivity differences across old, restructured, and new firms *within* the same sector (World Bank 2002h). New firms are typically the most productive, reflecting not just the more efficient use of resources but also the relative dynamics of different kinds of firm and the very different policy environment in which they function. For example, old firms are subject to relatively soft budget constraints; restructured firms face harder terms, but still carry the legacy of former methods of organization and management; while new firms—which face hard budget constraints—are able and forced to adopt best practices. Many of the poor are trapped in the old, unre-

structured, low-productivity firms. The role of productivity differentials at the micro level, which can in turn be related to a number of institutional factors, is unique to the transition process and is a very important factor underlying the phenomenon of the working poor. Reform of the enterprise sector and of the business climate as a whole to create a level playing field across all firms and—in particular—to encourage the entry and growth of new firms is thus an important factor for equalizing the returns to labor and reducing poverty.

*Boosting agriculture growth and productivity.* Many of the poor in the Region are in rural areas, where poverty is proving more resistant to growth than in urban areas. Agriculture is the main activity in rural areas; thus, stimulating agricultural growth is crucial for poverty reduction. Because many of the Region's countries have completed their land reforms, poverty reduction from this type of reform can be expected to be limited in the future. It is worth pointing out, however, that where land reforms have been implemented, especially where initial conditions favor labor-intensive cultivation (for example, low income CIS), land distribution resulted in significant one-time productivity and income gains to rural households. These gains are no different from what was experienced outside the Region (for example, in China in the late 1970s and in Vietnam in the mid-1980s). Indeed, the sharp reduction in rural poverty in the Kyrgyz Republic over the period of this study may be partly attributed to this factor.

The more capital-intensive nature of agriculture in other parts of the Region means that where incomes have grown, factors other than land distribution have been important. In many EU-8 countries (for example, the Czech Republic, Estonia, Hungary, and the Slovak Republic), large-scale privatized farms have experienced rapid productivity growth in large part through labor shedding. But nonfarm growth and a generous social safety net have absorbed excess labor and supported income growth and poverty reduction. In contrast, much of the reduction in rural poverty in the middle income CIS countries (for example, Kazakhstan and Russia) in recent years is due primarily to greater overall liquidity and growth in the economy, which have pushed up agricultural wages and income. Productivity gains have been relatively weak because of limited land reforms and remaining weaknesses in agriculture markets. SEE countries have also failed to see strong productivity growth. This is due to incomplete farm restructuring on account of deficiencies in land markets stemming from the restitution process and imperfections in input and credit markets.

Identifying and addressing the key market imperfections in input and output markets are essential for enabling self-employed farmers to lift themselves out of poverty. This is true for all countries. In particular, the integration of rural areas into national credit markets is critical for further investments and productivity growth in agriculture. More broadly, improving the investment climate in rural areas is very important. Increasing evidence shows that investments in food processing, agribusiness, trade, and retail companies play a crucial role in helping small farmers overcome input and output market imperfections, in helping them upgrade the quality of their products, and in accessing markets (World Bank 2005a). It is also important to promote land reforms, where they are lagging (for instance, in middle income CIS countries), and improve land markets (for instance, in several SEE countries) to facilitate land restructuring. Integration of the rural poor into national labor markets, either through rural off-farm employment or by improving access to urban labor markets and adequate social safety nets, will be crucial for sustained income growth and poverty reduction, particularly in the middle income CIS and SEE countries. Emphasis on rural service delivery and infrastructure is also critical, especially in the low income CIS, not only for its instrumental role in raising rural incomes but also as an aspect of poverty that warrants attention in its own right.

*Promoting opportunities in lagging regions.* Countries in the Region face substantial differences in poverty rates between urban and rural areas and between capital cities and smaller towns. This is not just the case with large countries such as Russia or Ukraine but also with small countries such as Hungary or the Kyrgyz Republic. Although some differentiation is only to be expected, countries need to consider whether, and to what extent, spatial and regional inequalities risk perpetuating intergenerational poverty and inequality traps and act as a drag on economic growth. To the extent that there are implications for equity or efficiency or both, countries need to ask what more can be done to address regional disparities.

Most countries seek to address regional inequalities through the maintenance of a stable macroeconomic environment, the creation of a level playing field for businesses, social safety nets, and fiscal transfers for targeted programs in lagging regions. But more can be done.

First, countries need to enhance labor mobility. When people move to economic nodes that promise a higher expected income, it helps to reduce spatial income disparities. This could be through internal or external migration. Unfortunately, data on internal migration are scarce, but anecdotal stories suggest that the lack of access to housing

in destination areas—itself a result of inadequate housing policy development—credit constraints, and difficulties in accessing benefits and other entitlements and social services in the new location pose a serious constraint to people seeking opportunities to improve their livelihoods. That people are willing to move is evident, for instance, through the high migration from low income CIS countries such as Armenia and Moldova to neighboring EU countries and to Russia. Job-search assistance is also known to be highly cost-effective in matching workers to jobs. Adoption of appropriate policies to encourage movement, supported by the development of urban housing markets and policies, credit markets, and entitlement reform can provide a strong stimulus to inter- and intraregional mobility and help improve income levels in relatively poorer areas while also boosting competition, productivity, and growth in destination areas.

Second, in countries with decentralized fiscal systems, fiscal transfers from the center to lagging regions have to be part of the overall package of measures to address regional disparities and promote equalization. In the EU-8, regional disparities are the focus of regional policies promoted by the EU. These provide large transfers to impoverished regions for rural infrastructure, among other things. Although the evidence is mixed on the results of such policies in reducing regional inequalities (Boldrin and Canova 2001; Funck and Pizzati 2003), the scale of such investments may also not be replicable in other parts of the Region for fiscal and other reasons. Different transfer mechanisms could be used such as transfer formulas that provide weights for both equity and efficiency considerations. There may also be a role for introducing competitive allocations to support innovative schemes to improve local economic and social conditions, especially those with strong local ownership. Transfers may also be used to improve performance standards in service delivery, especially in the middle income CIS countries and SEE, where budget systems and administrative capacity is stronger. In addition to paying for much-needed improvements, such transfers can also generate demonstration effects for successful policies.

Third, investments in human capital have to be an integral part of a strategy to boost economic opportunities for those in the lagging regions. In particular, existing spatial inequalities in access to public services and quality of services provided need to be addressed as a priority.

### **Strengthening Public Service Delivery**

Ensuring access and quality of education and health care is critical to promoting opportunity for the poor. However, to improve access and

quality, it is essential to improve accountability in these sectors. The Region's countries inherited a good network of education and health services, and the erosion in access (or utilization) that had been observed during the 1990s has been partially reversed. However, much remains to be done. Although low levels of spending are an issue, more so in education than in health care, only a few countries spend less than is warranted, given levels of income. Thus, going forward, most countries will need to operate within the available resource envelope. Reforms will therefore have to focus on improving the quality and efficiency of public spending.

*Enhancing education quality and equity.* In education, the low income CIS group needs to stem the decline in primary enrollments and quality of education, in particular by ending the situation in which staff are underpaid and complementary expenditures (on textbooks, heating, and repairs) are underfinanced, while at the same time employment and, in some cases, facilities remain well above standards common in much richer countries. In addition, some countries may need to ensure greater equity in education spending across subnational regions (for example, the Kyrgyz Republic). Ensuring access to primary education is much less an issue outside the low income CIS countries. Here the main issue is secondary education, where quality and relevance to market demand are often in question. Governance reforms that both strengthen government accountability for outcomes as well as increase participation and voice will be essential to improving outcomes. Lessons from the experience of the EU-8 in raising quality certainly point in this direction. In particular, decentralization of services to allow for a greater role for both school administrators and parents has an important role to play in stemming declines in quality.

*Strengthening access to, and quality of, health care.* In health care, low-income countries suffer from having to provide for a range of services when budget resources are limited, but even the available allocations are not spent wisely. This is reflected in the large share of household contributions in total health spending. Improving utilization among the poor is closely linked to financing and quality issues. Tough decisions are required on the size of the basic package and a major reallocation of expenditure—and greater accountability for its use—to improve access to, and quality of, care (World Bank 2005c). To be sure, public budgets are limited, but the failure to fund a basic package of services for all citizens is much more a result of the failure of citizens to exercise their voice and the ability of politicians to remain

largely unresponsive to poorly expressed demands than resource limitations per se. The available allocations are not spent wisely because of the failure of compacts between politicians and providers to create and sustain an environment of incentives in which providers are induced to serve the poor and needy. To improve matters, accountability relationships between politicians and citizens need to become more effective (through such means as more organized voice power of citizens, citizens' report cards, and informed voting), and the accountability relationships between politicians and providers need to be strengthened (through such means as clarifying responsibility, aligning incentives between policy maker as principal and provider as agent, and better enforcement of contracts between organizational and front-line providers). Countries such as Armenia have shown that even with limited resources and high poverty rates, improvements in key dimensions such as affordability can be made, albeit at a moderate scale.

At the other end of the spectrum, the EU-8 is struggling to maintain the easy access to a wide range of health services in a context of rising costs (driven up both by aging populations and costlier medical technology). Many countries, like the Slovak Republic, are responding to this situation by reducing the scope of services covered by social health insurance and introducing formal patient copayments in a bid to reduce demand; others, like Estonia, have been fairly successful in finding efficiency gains through reducing hospital beds. Clearly, further efficiency-enhancing mechanisms will need to be found to control expenditures. More direct attention on quality of services is also warranted, given the growing affluence and expectations of the population. Many countries may need to look to the private sector for financial contributions and managerial expertise to take some pressure off public provision and improve service delivery.

*Managing reform of utilities.* A looming issue in all countries in the Region is the likely social impact of the increase in the price of utilities that will need to be undertaken to attract much-needed investment in the sector. The Region inherited a large network of infrastructure services, including power, water, gas, district heating, and other municipal services, much of which is eroding from lack of maintenance. Service quality is extremely poor in the low income CIS countries, and even within richer countries there are large disparities between service quality for the poor and the nonpoor. The infrastructure needs of the poor are unlikely to be met without reform of the utilities sector to bring it to a financially self-sustaining basis, which would encourage much-needed upkeep and maintenance of

viable infrastructure and improvements in service quality. The EU-8 may well be able to look to the private sector for financial contributions and managerial expertise to improve service delivery. However, in the CIS and SEE, the private sector may well not invest because of regulatory and other uncertainties. Whatever the model, the public sector has a key role to play, either as a regulator or as a provider of services, in improving financial performance and service quality.<sup>2</sup>

Improving financial performance will involve raising tariffs, which—except for power, where there has been some movement toward cost recovery, and possibly water in the EU-8—are well below cost recovery levels. Further movement toward full cost recovery in power is expected to have a limited impact on poverty, except in the poorest countries. However, across-the-board increases in the full range of utilities is expected to have a more serious impact on poverty (World Bank Forthcoming-b). The social impact of tariff increases will need to be factored into the sequencing and pace of reforms in the event of across-the-board reforms in a range of utilities. Where the social safety net is adequate, it can be expected to mitigate the impact on the poor. However, where social safety nets are relatively thin, as for example in the low income CIS group, other options are worthy of consideration. For utilities that can be metered, life-line tariffs can serve as a useful temporary cushion; however, where life-lines are not practical (as, for example, in sectors where consumption cannot be measured), reforms would need to be calibrated to affordability.

### **Enhancing Social Protection**

*Strengthening the social safety net.* Social safety nets are typically judged using three criteria: coverage, targeting, and adequacy. As shown previously, the system of public transfers in the Region has an important role to play in reducing poverty. Evidence on trends, where available, suggests that these programs cover the poor increasingly well. In EU-8 countries such as Hungary, nearly 100 percent of the poor receive public transfers of one sort or the other. Many SEE countries also come close to this level of coverage. Coverage is lower in the CIS, but even in the poorest CIS countries, coverage rates are high, exceeding 50 percent of all poor. These levels compare favorably with coverage rates elsewhere. Where data on targeting performance of poverty-focused programs are available, they suggest that targeting performance is improving, albeit at slower rates than one would have hoped. Adequacy varies from the most generous schemes in the EU-8 to the least generous in the low income CIS countries.

Given their importance for poverty reduction and the broad improvements over time, it should be clear that countries need to maintain ongoing social insurance and social assistance reforms, which are largely designed to improve sustainability, and to enhance coverage and targeting of the poor within the available resource envelope. In the low income CIS group, the main constraint will continue to be the fiscal means to cover the population adequately. In the middle income CIS group and SEE, although there is more fiscal space for social protection, there is also greater resistance to reforms, as suggested (for example) by the difficulties with the monetization of privileges in Russia. Although the objective of the reforms is not in question, the difficulties in implementation serve as a useful reminder of the importance of sequencing with other social and economic reforms, the need to protect the most vulnerable groups, and an appropriate communications strategy to explain the benefits of reforms. Where systems are more generous, as for example in parts of SEE and the EU-8, a balance will need to be struck between the need for social protection and labor market incentives.

*Strengthening targeted interventions for marginalized groups and minorities.* Marginalized groups—typically with tenuous links to the labor market—are often the hardest to reach and require targeted interventions. This may be in the form of assistance in cash or in-kind (such as education, health, or housing), depending on the nature of the group. For the long-term unemployed or nonparticipants, active labor market programs can be particularly relevant. But evidence from successful training programs suggests that these should be targeted, offered on a selective basis, with clear links to potential employers, and in collaboration with the private sector. It is important to bear in mind that there is limited evidence of successful retraining programs from the low income CIS group. Another group that may require targeted interventions is minorities. In this case, interventions may need to be integrated across many fronts. For example, in the Roma minority of the EU-8 and SEE, governments are taking a holistic approach to ending persistent exclusion by setting goals in four areas—education, employment, health, and housing. Other minorities may require a different approach. The elderly, especially those who are very aged or living alone, may also require special interventions. Many countries make supplementary cash benefits available to them. Other options include provision of assisted living services. For most marginalized groups, however, additional assistance, whether in cash or kind, need not be provided by the public sector alone. Civil society organizations, community-based groups, and other organizations

could also be encouraged to come into the sector under the overall direction of the government.

*Ensuring adequate minimum wages.* Minimum wages are an important policy instrument for enhancing the income security of the poor. These can help provide a floor to income, but need to be kept at a reasonable level. In this context, the large real increases in the CIS in recent years have brought minimum wages closer to subsistence levels. However, future increases in minimum wages need to be considered carefully, so as not to become so high that they have negative effects on growth and employment, with adverse impacts on poverty. Where variations in regional income and labor market profiles are large, governments may need to consider setting region-specific minimum wages, which may help improve the employability of certain groups of workers (such as younger workers and those in lagging regions). This is an issue particularly in the EU-8 and SEE, where minimum wages represent a relatively high proportion of the average wage and the adverse impact of common minimum wages is particularly noticeable. For example, the relatively high minimum wage is found to constrain employment opportunities for the low-skilled in countries such as Lithuania and Poland.

### **Monitoring Progress on Poverty**

Despite great progress with improving the quality and accessibility of poverty data, there remain significant outstanding challenges. Countries need good survey data to monitor changes in poverty and to evaluate the impact of specific policy actions on the poor. This report documents huge progress achieved in collecting up-to-date high-quality data across the Region. The previous report on poverty (World Bank 2000a) relied on a single survey for many countries and could produce an estimate of poverty over time for only three countries. With full data sets closed to users outside statistical offices, the report also had to rely on partial data. Since then, many countries have started implementing regular surveys that periodically collect representative data on income and nonincome dimensions of living standards. In addition, data are provided openly to researchers for the purposes of study and policy evaluation. These improvements are not only confined to EU-8 countries (for example, Hungary) but also cover SEE (for example, Romania), middle income CIS countries (for example, Kazakhstan), and low income CIS countries (for example, Georgia and Moldova).

Despite this progress, many outstanding challenges remain. First, improvements to data quality and availability are very recent, and for

many countries in the Region, reliable data on poverty changes can be obtained for only a few recent years. The efforts in collecting data need to be maintained. Second, survey coverage and response rates have fallen over time in all countries; and there is a need to strengthen the technical capacity of statistical offices to curb this trend and deal with it appropriately. Third, wide gaps exist in data collection on the nonincome dimensions of poverty: there are practically no attempts to gauge trends in the quality of health care and infrastructure services, and even indicators of access are not consistently collected. Given the changing nature of poverty with the increasing role of nonincome components, this gap is the most worrying. Fourth, not all countries have opened their data sets to researchers, undermining the effective use of public funds spent on data collection and monitoring. These areas—keeping up with periodic surveys to provide comparable data, collecting information on nonincome dimensions, and opening up access to survey data—are priorities for action to ensure adequate information support for poverty reduction efforts.

## Conclusions

The countries in the Region have made significant progress in reducing poverty in the past five years. More than 40 million people moved out of poverty during 1998–2003. Much of this poverty reduction derives from the growth rebound in the CIS countries. But poverty and vulnerability still remain a significant problem: more than 60 million are poor, and more than 150 million are vulnerable. Most of the poor are the working poor. Many others face deprivations in access and quality of public services. Regional inequalities both between and within countries are large. The highest levels of absolute poverty are found in poor countries of Central Asia and the South Caucasus, but most of the Region's poor and vulnerable are in middle-income countries.

Notwithstanding the tremendous heterogeneity among countries in the Region, reducing poverty and vulnerability requires an acceleration of shared growth, strengthening of public service delivery, better targeting of social protection, and regular monitoring of progress in poverty reduction across the Region. While much is being done, a number of areas deserve further attention. In promoting accelerated shared growth, there is a need to (a) further reform the enterprise sector to encourage the release of resources from the old, less-productive sectors to the new, more-productive sectors; (b) boost agricultural growth and productivity, especially by addressing remaining imperfections in input and output

markets, and integrating rural areas into the rest of the economy with regard to capital markets, credit markets, and services; and (c) promote greater opportunity in lagging regions. Public service delivery needs to be improved through increasing the accountability of government and the voice and participation of citizens. This is essential to improving access and quality of social services, which are not only important in their own right but also of instrumental value in helping the poor move out of poverty. There is also the continuing need to further strengthen the social safety net to meet the challenges of restructuring economies. Finally, monitoring progress on poverty reduction on a regular basis needs good-quality data sets that are publicly available.

The analysis in this report is based on an extensive multiyear effort to put together a comparable database on the income and nonincome dimensions of poverty in the Region. Data by country for all available years on the different dimensions of poverty are presented in the appendix to the study. It is hoped that this database, these tables, and the accompanying analyses, combined with the attempt to benchmark the former socialist countries in the Region with other international comparators (Colombia, Turkey, and Vietnam), will prove to be a useful resource both within and outside the Bank. At the same time, the data-gathering efforts point to a number of shortcomings in the data, not only in basic consumption and income measures but also in access to, and quality of, public services. It is hoped by bringing them to the public eye, this publication will begin a process whereby these shortcomings can be addressed.

## Endnotes

1. Data issues are discussed in detail in Atkinson and Micklewright (1992).
2. Improving the financial performance of utilities would, in many countries, also have the added value of reducing macroeconomic risks from the quasi-fiscal liabilities of the utilities.

# Appendix

## A. Data and Methodology

### Data: Regional Household Survey Archive

To arrive at the internationally comparable assessment of poverty, this report uses primary unit record data from recent household surveys to construct a comparable indicator of living standards across all countries in the Region.

The comparable indicator of living standards created for this study is described in detail below. Based on the indicator, the study team calculated poverty and inequality data and a set of indicators presented in this appendix (B. Key Poverty Indicators, tables 1–10) and used throughout the book.

All data are taken from household-level surveys implemented in the Region's countries during 1997–2003. Survey names, years, and basic characteristics are shown in chart 1). The data of the surveys included in the analyses are nationally representative. To ensure representativeness, most countries, with a few exceptions (Bosnia and Herzegovina, Kosovo), rely on the most recent census of the population as a sampling frame and use random multistage sampling techniques. Some of the surveys, such as the Russian Longitudinal Monitoring Survey (RLMS) and Bosnia and Herzegovina's Living

Standards Measurement Study (LSMS) are implemented as panels designed to follow the same households over time.

Countries differ substantially in sample sizes used (as revealed by chart 1). Those that intend to collect regionally representative information have larger samples than countries that aim at representativeness by location types only (urban-rural). None of the surveys used relies on simple one-stage random samples, so everywhere sampling weights have to be used to arrive at the estimates based on surveys.

Survey data were available for 23 countries, although the data do not span the entire period of 1998–2003 in all countries. Those that do have reasonably comparable data over time spanning the entire period are grouped into cluster A on chart 1 and used as the main source for the dynamic analysis in this book. Overall, there are 10 countries for which data are available and comparable (see discussion of comparability in this appendix, “Comparable Consumption Aggregate”) over the entire period under review, 1998–2003.

Several countries are represented by a single survey (year) or by surveys that are not sufficiently comparable to assess trends in poverty over time: Albania, Azerbaijan, and Serbia and Montenegro. To widen the coverage of the study, the team also relied on data that cover a shorter period, but provide useful information with regard to poverty profile or coverage of nonincome dimensions of poverty (cluster B, chart 1). The countries not covered are Croatia, the Czech Republic, the Slovak Republic, Slovenia, Turkmenistan, and the UN Mission in Kosovo (UNMIK) (cluster C, chart 1). Some of these are not covered based on the assessment of their household survey data as inaccurate: in addition to design flaws in the Czech Republic and Slovak Republic, the response rates to Household Budget Surveys deteriorated to the extent that their representativeness is questioned (EC 2004). Other countries (Croatia, Slovenia, Turkmenistan) make access to data extremely cumbersome and are not willing to provide access to the entire data sets—a precondition to construct a comparable welfare aggregate. Finally, for UNMIK, many auxiliary data necessary to carry out international comparisons (such as reliable price indexes, or PPP exchange rates) are not available, which preclude the use of data for comparison purposes.

Finally, three countries were used as benchmarks (Colombia, Turkey, and Vietnam), and the surveys used are also listed in cluster D on chart 1. The choice of these countries was based on several factors. First, it was important to have a broad geographic coverage. Second, benchmark countries had to have comparable levels of living standards to the Region’s countries and some systemic features of the economies that resemble transition settings. Third, survey data had to

be easily available and include variables necessary to create consumption aggregates (see next section). The team of the World Bank *World Development Report 2005* helped to identify such data and kindly provided access to them. Turkey, being the only nontransition country in the Region, was an automatic choice; in fact, its geopolitical and economic situation is very similar to CEE countries. Vietnam, a country in East Asia transiting to a market economy from a planned system, was identified as a good comparator to the poorest countries in the Region. Colombia, with its large informal sector and dependence on natural resources, was a good match for the middle income CIS group.

The previous regional report on poverty, *Making Transition Work for Everyone* (World Bank 2000a), relied on a single survey data set for many countries and could produce an estimate of poverty over time for only three countries (Hungary, Poland, and Russia); it also had to use partial data, with full data sets closed to any users outside statistical offices. In some countries, there was no option but to rely on non-representative data (Albania, Azerbaijan), and data for some countries were missing (Bosnia and Herzegovina, Serbia and Montenegro).

Since the end of the 1990s, many countries in the Region have moved to ongoing surveys that periodically (normally every month or quarter) collect representative data on income and nonincome dimensions of living standards. Because such data collection is often too costly, some countries rely on one-time comparable surveys conducted every three to five years. In both cases, data generated can be used to monitor poverty over time. In addition, countries in the Region started to use collected survey data better by providing open access to researchers trying to understand poverty and its causes and to assess public policies. Not only did the middle-income countries in the EU-8 (such as Hungary) achieve the greatest improvements in collecting data and providing open access but also some countries in SEE (such as Bosnia and Herzegovina and Romania), middle income CIS countries (Kazakhstan), and even low income CIS countries (Georgia and Moldova).

However, many countries continue to lag behind the leaders in both adequacy and openness of data, as reflected by the survey description provided on chart 1. Some countries are still struggling to start continuous data collection on living standards, or they change the survey design too often to make any comparisons over time (Albania, Azerbaijan, Serbia and Montenegro, Turkmenistan, and UNMIK). Some countries recently introduced new standards in data collection (following recommendations of the Statistical Office of the European Communities [Eurostat]), and the new surveys are not comparable

with the previously collected data (Bulgaria, Croatia, Estonia, and FYR Macedonia). There are countries in which household surveys of living standards suffer from extremely low response rates, to the point of making them not fully representative (the Slovak Republic). Unfortunately, most countries in the Region still do not provide open access to household survey data. They either impose many restrictions on data users and require significant access fees or simply treat household survey data as closed-access information that is not available outside statistical offices, even in the anonymized form.

Normally, survey data sponsored by international agencies are open-access information. Such data sets (in the chart, labeled “Open”) are simply downloadable through the Internet free of charge or with a minimum fee (after provision of sufficient information on the user). Of course, as with any data set in the public domain, all personal information that would allow identification of individual respondents is removed from such data sets. The Household Budget Survey (HBS) can also be open access and easily accessible to any individual or organization, either by a request that is reviewed by the staff of the statistical office and payment of service fees (in the chart, labeled “Limited”), or it can be restricted to a narrow set of users, sometimes exclusively to statistical offices. Some of the data sets included in the study are not freely available; the World Bank used these data with the permission of the countries’ authorities solely for the comparative poverty data analysis presented in this report (in the chart, labeled “Restricted”). None of the data sets used in this report will be disseminated to any user, given the confidentiality and rights restrictions on most of them.

Countries differ in types of household data available. In most countries, there are official household surveys that collect information on expenditures and incomes. Such detailed surveys of household budgets, with limited information on other aspects of well-being, are classified as Expenditure and Income (EI) Surveys (Household Budget Surveys, in a narrow sense). Nevertheless, such one-topic surveys also normally collect detailed labor market information alongside information on the characteristics of household members and household conditions. Other nonincome indicators are not normally included in such surveys. If they are included, and information on the health status of household members, their social participation, and access to education is also collected, these are classified as Integrated (IN) Surveys. Multi-topic design is a standard inherent feature of a different type of survey, designed and implemented as part of the Living Standards Measurement Study (LSMS) of the World Bank (see [www.worldbank.org/lsms](http://www.worldbank.org/lsms) for details). Several countries in the Region undertook LSMS surveys

and rely on them for poverty monitoring (Albania, Bosnia and Herzegovina, Tajikistan), but the mainstream approach is clearly the use of the HBS integrated with additional modules to capture nonmonetary aspects of living standards.

The LSMS survey and the HBS rely on two different approaches and types of instrument to collect detailed expenditure and income information from households: the LSMS survey is a recall questionnaire asking a household to remember all expenditures over a certain period (usually the past quarter); the HBS is a diary of purchases and incomes that a household has to fill in daily over a certain period (usually two weeks). Sometimes these two types of instrument are combined within the same survey. It is clear that the nature of the data collected by each of the instruments will differ. Unfortunately, few studies are available that compare the relative strengths and weaknesses of both instruments to assess possible biases in each type of data (all of these studies are from outside the Region), so they are treated as comparable.

The recall data are normally collected by an integrated type of survey supported by the World Bank: the LSMS program, with some degree of standardization and common features of data collection. LSMS surveys are particularly prevalent in the developing countries. The HBS programs across transition countries have benefited from large flows of international technical assistance (Eurostat and the World Bank being particularly active), also with a useful unification and standardization.

Notwithstanding the progress achieved in data quality and accessibility, chart 1 documents significant gaps. First, improvements to data quality and availability are very recent, and for many countries in the Region, reliable data on poverty changes could be obtained for only a few recent years. The efforts in collecting data should be maintained to provide policy makers with data on the evolution of poverty and inequality in the future. The survey coverage and response rates have universally fallen in all countries, and there is a need to strengthen the technical capacity of statistical offices to curb this trend and deal with it appropriately.

Second, this report documents wide gaps in data collection on non-income dimensions of poverty: there are practically no attempts to gauge trends in the quality of health, education, and infrastructure services, and even indicators of access are not consistently collected. Many countries rely on one-topic surveys, and integrated survey design is not yet mainstreamed. Moreover, there is a worrying tendency in some countries to move away from multitopic design to a narrowly focused Expenditure and Income Survey. Given the chang-

ing nature of poverty with the increasing role of nonincome components, this gap is the most worrying with regard to collecting relevant and useful data.

Finally, not all countries have disseminated their data and opened data sets to researchers, undermining the effective use of public funds spent on data collection and monitoring. These areas—keeping up with period surveys providing comparable data, collecting information on nonincome dimensions, and opening up access to survey data—are priorities for action to ensure adequate information support for poverty reduction efforts.

### **Comparable Consumption Aggregate**

To examine poverty and inequality, one needs a measure of material well-being. Ideally, this measure should correspond as closely as possible to the way a person experiences his or her standard of living. It is natural to think that a person's standard of living, or material well-being, is a function of all goods and services consumed by that person.

But how can one compare different individuals consuming different quantities of various goods? Economic theory allows one to rank levels of well-being using the cost (monetary value) of the consumption bundle consumed in a given period. In theory, any welfare measure should include all of the factors (including health, leisure, social capital, and other desiderata) that contribute to welfare. In practice, however, because of measurement and valuation difficulties, the focus in microdata analysis is on only material well-being, using information on consumption of goods and services by a household. Even such "simple" measures are, in practice, quite complicated to capture well, and there is debate as to whether income or consumption is the preferable measure (see Deaton and Zaidi 2002).

*Income* is often considered to be the preferred measure because it is an indicator of the "potential" to enhance welfare (including nonmaterial aspects such as leisure). Income data are used by Eurostat to compile EU statistics on poverty and social inclusion, using the integrated survey model that is intended to provide comparable data within the EU: the European Community Household Panel (ECHP) and the European Community Statistics on Income and Living Conditions (EU-SILC).

However, measuring income suffers from several defects, both in theory and in practice. First, income can be highly volatile, whereas consumption can be, and is, more readily smoothed by individuals. This smoothing makes consumption a better indicator of welfare than income, because it more accurately represents the welfare level of an

## CHART 1

## Data Sources

Country	Survey Name	Year	Access Policy	Type	Sample
<b>A. Countries with Extended Time Series of Comparable Household Data</b>					
Armenia	Integrated Living Conditions Survey	2003	Limited	IN	4,600 hh
	Integrated Living Conditions Survey	2001	Limited	IN	4,037 hh
	LSMS-Integrated Survey	1998/99	Limited	IN	3,600 hh
Belarus	Household Income and Expenditure Survey	1998–2002	Restricted	EI	4,882 hh
Georgia	Integrated Survey of Georgian Households	2000–2003	Open	IN	2,800 hh
	Survey of Georgian Households	1996–1999	Open	EI	2,800 hh
Hungary	Household Budget Survey	1998–2002	Open	EI	10,200 hh
Lithuania	Household Budget Survey	1998–3	Limited	EI	7,111 hh
Moldova	Household Budget Survey	2003	Open	IN	4,592 hh
	Household Budget Survey	1998–2002	Open	IN	6,159 hh
Poland	Household Budget Survey	1998–2002	Limited	EI	31,708 hh
Romania	Family Budget Survey	1998–2003	Open	IN	32,000 hh
Russian Fed.	Household Budget Survey	1997–2002	Restricted	EI	49,000 hh
	RLMS (9-11 rounds)	2002, 01, 1998	Open	IN	3-4,000 hh
Tajikistan	Living Standards Survey (LSMS)	2003	Open	IN	4,160 hh
	Living Standards Survey (LSMS)	1999	Open	IN	2,000 hh
<b>B. Countries with Limited Time Series</b>					
Albania	Living Standards Survey (LSMS)	2002	Open	IN	3,600 hh
Azerbaijan	Household Budget Survey	2002–3	Restricted	EI	8,157 hh
Bosnia & Herzegovina	Living in BiH Panel	2004	Open	IN	3,000 hh
	BiH Living Standards Survey	2001	Open	IN	5,402 hh
	Household Budget Survey	2003	Limited	IN	3,000 hh
Bulgaria	Integrated Household Survey	2001	Limited	IN	2,633 hh
	Living Standards Survey (LSMS)	1995,1997	Open	IN	2,322 hh
	Household Budget Survey	2000–3	Limited	EI	4,600 hh
Estonia	Household Budget Survey	2001–2003	Limited	EI	12,000 hh
Kyrgyz Rep.	Household Budget Survey	2001–3	Limited	IN	2,857 hh
	Household Budget Survey	2000	Limited	IN	1,894 hh
Latvia	Household Budget Survey	2002–3	Limited	EI	3,600 hh
Macedonia, FYR	Household Budget Survey	2002–3	Restricted	EI	4,100 hh
	Household Budget Survey	1996–2000	Restricted	EI	1,025 hh
Serbia & Montenegro	Serbia Living Standards Survey	2002–3	Limited	IN	6,400 hh
Ukraine	Household Budget Survey	2002–3	Restricted	EI	9,646 hh
Uzbekistan	Household Budget Survey	2001–3	Restricted	EI	9,600 hh
<b>C. Countries with Outdated or Limited Availability (Not Used in this Report)</b>					
Croatia	Household Budget Survey	On going	Restricted	EI	3,123 hh
Czech Rep.	Household Budget Survey	On going	Restricted	EI	3,650 hh
Slovak Rep.	Household Budget Survey	On going	No Access	EI	1,640–4,700 hh
Slovenia	Household Budget Survey	On going	No access	EI	2,577 hh
Turkmenistan	Living Standards Measurement Study	1998	Open	IN	2,099hh
UNM Kosovo	Household Budget Survey Kosovo	2003	Restricted	EI	2,800 hh
	Living Standards Survey (LSMS)	2000	Open	IN	2,880 hh
<b>D. Benchmark Countries</b>					
Colombia	National Survey of Living Standards	2003	Open	IN	23,000 hh
Turkey	Household Income and Consumption				
	Expenditure Survey	2002	Restricted	EI	9,555 hh
Vietnam	Vietnam Living Standards Survey	1997/98	Open	IN	6,000 hh

Note: Types of survey: EI- Expenditure and Income survey; IN- integrated surveys, Access Policy: Open – data are downloadable for free or limited fee from the statistical office with minimum restraints; Limited – policy provides access to data or sets of data to researchers or organizations meeting certain criteria; Restricted- data were made available only to the World Bank/selected agencies on exceptional basis; No access – no access to data from outside statistical office.

individual at any given time. In transition economies, people are paid very irregularly, with several months of wage arrears being common. In this context, relatively steady consumption-based welfare measures give a more accurate picture than often erratic income-based measures.

Second, regardless of the measure, it is essential that it be comprehensive, that no aspect of income or consumption be omitted. Otherwise, erroneous conclusions may be drawn about the numbers and characteristics of the poor. If, for example, the value of home-produced food were omitted from an income aggregate (total income measure), then rural populations would look much poorer than they actually are. Or if a consumption aggregate is constructed using only monetary expenditures, those who receive in-kind benefits from employment would look poorer than they actually are.

Measurement problems are more severe in transition countries for income than for consumption. Income underreporting is common for many reasons, including sometimes because survey respondents are not willing to fully disclose illegal or semilegal income sources. Experience in many countries showed that households were not willing to provide information on unregistered businesses and informal sector activities. Repeatedly, practical experience suggests that the quality of consumption-based data obtained from households is better than the quality of income-based data. At the top end of the income distribution, households tend to underreport their income, reflecting a lack of faith in the confidentiality of the survey, concerns about the tax authority, complexity of earnings that would lengthen an interview, and the like. At the other end of the income distribution, the problem is less one of willingness to provide accurate data and more one of inability to do so. Households engaged in informal activities or with household businesses of a subsistence nature often cannot separate out what is "household" income and what is "business income," thus undermining the reliability of the data collected.

This specificity of countries in the Region with regard to quality of income data collected through the regular surveys is recognized by Eurostat and by the countries themselves, which continue to use consumption expenditure to monitor poverty. It also raises an important question about whether the EU-SILC will provide credible and comparable data on the context of poverty in transition economies for the new EU member states.

In summary, given the difficulties of defining a total welfare measure, the problems noted above with income-based measurement, and the practices of countries in the Region to measure poverty, this report relies on measuring welfare here with consumption.

*Consumption* is being used as a measure of well-being in most poverty assessments undertaken in the Region over the past five years (14 countries covered) and is accepted as the main base to monitor poverty officially in a number of countries (for example, in Armenia, Bulgaria, the Kyrgyz Republic, and FYR Macedonia).

*Making Transition Work for Everyone*, the previous regional report on poverty and inequality (World Bank 2000a), relied on any welfare indicator (for example, income where consumption was not available) supplied with the data to carry out the analysis. This study follows a different approach: it re-creates consumption aggregates from unit record data, using the same set of rules and definitions (see appendix, A. Data and Methodology, chart 2). Why was it deemed necessary?

There are significant differences in the details of how aggregates of consumption expenditures are constructed in different countries. The list of items included in consumption expenditures differs across countries (for example, inclusion or exclusion of purchases of durables). The procedure for imputing the value of goods and services consumed in-kind (housing, flow of services from durables, or own food production) differs a great deal. The treatment of outliers is also strikingly different. Finally, different versions of price indexes to correct for regional and intertemporal prices are applied.

All of these differences in procedures to construct consumption aggregates imply that some part of observed differences in outcomes could be attributed to differences in procedure and that only to some extent do they reflect real differences. Of course, data comparability depends not only on consistency of processing the data but also on underlying data quality, which may differ. Clearly this aspect was beyond the control of the team, but to the extent that it was possible to set up the data in the most comparable way, it is reflecting a standard approach to international comparative studies. For example, the Luxembourg Income Study (LIS), which relies on income survey data to carry out social welfare comparisons between OECD countries, relies on a set of strictly and uniformly defined rules to construct an income aggregate.

In relying on uniformly defined consumption of goods and services by a household as the measure of living standards, there were a number of conceptual and practical issues that needed to be addressed.

First, unlike food, consumer durables and housing are consumed over a long time. It is customary, therefore, to include the imputed value of the consumption flow associated with the possession of consumer durables (including housing), but exclude the expenditure on

## CHART 2

## Structure of Consumption Aggregate Constructed, Percentage

COICOP Divisions	Included components, structure						
	Food, beverages, tobacco I, II	Clothing III	Utilities (w/o rent) IV	Furnishings <sup>a</sup> V	Transport and communication <sup>a</sup> VII,VIII	Education IX	
Albania 2002	61.7	4.5	10.8	4.3	7.3	1.6	
Armenia 2003	72.3	5.5	6.2	2.3	4.1	5.1	
Azerbaijan 2003	64.3	7.6	6.0	3.1	6.8	1.0	
Belarus 2002	68.1	7.6	6.0	2.8	6.1	1.3	
Bulgaria 2002	58.7	3.5	18.3	1.1	7.3	4.7	
Georgia 2003	67.7	5.5	5.7	2.7	10.7	1.9	
Estonia 2003	42.2	7.4	16.0	3.1	12.0	1.8	
Hungary 2002	38.7	7.0	16.2	6.7	15.1	1.6	
Kazakhstan 2003	60.5	8.5	10.2	3.5	6.9	2.0	
Kyrgyz Rep. 2003	65.0	11.9	8.2	0.5	6.1	1.6	
Latvia 2003	41.0	8.5	13.5	2.8	16.0	1.4	
Lithuania 2003	44.5	10.3	14.9	2.8	15.6	1.1	
Macedonia, FYR 2003	54.2	8.9	12.0	3.6	11.6	0.3	
Moldova 2003	66.4	9.0	12.4	2.5	3.5	0.8	
Poland 2002	39.8	6.4	19.7	3.3	13.5	1.5	
Romania 2003	57.8	6.4	15.6	2.2	10.1	1.0	
Russian Fed. 2002	55.8	13.7	8.0	2.3	6.9	1.1	
Serbia 2002	60.8	5.9	13.0	3.7	8.1	1.2	
Tajikistan 2003	71.2	5.4	6.4	3.3	4.8	4.1	
Ukraine 2003	72.2	6.0	9.9	1.0	4.5	1.3	
Uzbekistan 2003	72.3	6.8	1.6	2.6	9.6	0.3	
Colombia 2002	41.1	6.9	8.5	4.6	14.7	6.3	
Turkey 2002	38.8	7.3	14.2	3.8	12.9	1.7	
Vietnam 1998	56.0	6.3	3.4	5.7	3.8	5.5	

Note: a = excluding durables; b = at 2000 PPP, top and bottom coded; c = ratio to total consumption aggregate; — = not available.

the purchase of these goods. However, for the Region, data availability limits the application of this approach to all countries. The authors did not, therefore, include estimates of flow of services of durables, nor have they added in durable purchases or rents. Catastrophic health expenditures were excluded from the estimate of current consumption on similar grounds.

Second, when consumption is used as a measure of well-being, higher consumption should indicate a higher level of well-being. For most consumption items, this correspondence is reasonable; however, for some categories such as health expenditures, this correspondence is questionable. As a result, health expenditures were not included as a part of consumption (Deaton and Zaidi 2002).

Third, given the significance of spatial differences, the authors adjusted for spatial price differences, employing survey-data-based Paasche price indexes using the same set of information in all coun-

Included components, structure				Excluded components, ratios			
	Hotels & restaurants XI	Recreation and other <sup>a</sup> X, XII	All components	Total consumption, \$ per capita <sup>b</sup>	Health <sup>c</sup> VI	Rent <sup>c</sup>	Durables <sup>c</sup>
	2.9	6.8	100	1,388.00	7.7	0.6	—
	1.2	3.2	100	913.72	11.5	—	0.8
	5.2	6.0	100	1,429.84	3.5	0.5	7.5
	1.5	6.6	100	2,704.13	2.3	—	1.7
	0.0	6.4	100	2,248.00	3.1	0.7	0.6
	1.7	4.0	100	972.89	5.7	0.3	1.3
	3.5	14.0	100	2,752.61	4.1	1.2	7.3
	3.1	11.6	100	2,890.00	4.4	0.9	8.1
	0.7	7.7	100	1,476.00	2.4	0.2	3.6
	1.0	5.6	100	708.00	1.6	0.5	2.6
	5.7	11.1	100	3,401.00	3.8	0.9	8.1
	2.4	8.4	100	2,762.00	4.7	0.0	10.0
	3.3	6.1	100	3,171.00	3.2	0.1	4.1
	0.8	4.6	100	1,045.81	4.8	1.0	4.4
	2.0	13.8	100	2,611.00	5.5	4.4	6.1
	1.5	5.4	100	1,624.00	3.0	0.3	1.6
	2.5	9.6	100	2,179.00	2.4	0.8	11.0
	1.2	6.1	100	1,992.98	8.0	1.0	1.6
	0.6	4.3	100	670.00	5.8	0.2	—
	1.6	3.5	100	2,496.30	2.8	0.4	2.5
	3.3	3.5	100	1,042.00	3.0	—	0.6
	4.6	13.3	100	4,398.00	2.9	5.9	4.0
	3.0	18.3	100	1,816.00	2.8	3.8	9.1
	5.9	13.4	100	1,078.00	18.0	0.2	18.8

tries (see Deaton and Zaidi [2002] for a detailed discussion; also see Price Deflators section below).

Fourth, households in the Region cope with poverty by relying on an array of nonmarket strategies, including producing their own food and engaging in reciprocal exchange with other households and institutions. A consistent approach was used in assigning a *monetary value* to these components of consumption. Median local prices were relied on to impute the value of in-kind food consumption from own agricultural activities, and households' own estimations of the value of gifts and transfers in-kind for food and nonfood items were used.

Fifth, the same procedure, which conforms to methods used in other international household survey data depositories (such as the Luxembourg Income Study), was used to clean the data of outliers across all data sets. The data are "bottom-coded" at 1 per cent of per capita mean real consumption and "top-coded" at 10 times the median

of household consumption, following a similar approach to income survey data proposed by Gottschalk and Smeeding (1997, 661). This procedure limits the effect of extreme values at either end of the distribution. The final data set excludes all records with zero consumption. This decision is consistent with Atkinson and Micklewright (1995) and with the method used and recommended by the LIS Key Figures reported on the LIS Web site (<http://www.lisproject.org/>).

Because the authors have followed a consistent approach across all data sets, they are reasonably confident that differences across countries in the final consumption measure are due to differences in the primary data and are not due to the method of aggregation. The basic descriptive statistics for all countries covered (latest available year) are presented in chart 2.

The constructed consumption aggregate produces a ranking that fits closely with the macroeconomic data (see appendix, B. Key Poverty Indicators, table 1 for GDP per capita data). Richer countries tend to have lower food shares. The excluded rent, being a small component, makes little effect on the ranking of households (note that utilities included in the consumption are large, reflecting the climatic and infrastructure features of the Region). Finally, food share behaves in a standard fashion across deciles of the distribution, falling with higher welfare. (Full details on consumption aggregates' components are provided on the dedicated Web site: <http://www.worldbank.org/eca/>.)

All these features show the validity of the approach chosen to construct a measure of living standards. Some countries stand out somewhat, and the comparability may not be fully taken for granted. For example, Ukraine has a food share comparable to the poorest countries in the Region, yet its consumption per capita measured at PPP puts the country solidly in the middle-income range. Vietnam, on the other hand, has a rather low food share, which would imply a higher living standard than suggested by other data. However, these peculiarities, while important, are not in themselves undermining the comparability of consumption *aggregates*.

There are also some persistent differences between countries in the consumption aggregate as measured by different types of survey; for example, education and health expenditures seem to have much higher shares and ratios in the LSMS surveys than in the HBS. Given that the information on these types of expenditure is collected in LSMS surveys in a contextual section (that is, in a module on the use of education services) and with much longer recall periods than in the HBS, it is not a surprising outcome. The ongoing research project conducted by the LSMS group intends to answer the question about the effect of different designs of data collection instruments on the welfare indicators.

The constructed estimate of consumption has several shortcomings that reflect some persistent data problems in the Region. Over time, there has been a considerable deterioration in response rates in many countries. Countries deal with this problem in different ways, which may have (as yet unknown) implications for survey-based poverty and inequality measures. There are other issues (reliability of diaries versus recall estimates and so forth) that are behind the research and are less evident, but affect the quality of data.

This is the first time to the authors' knowledge that comparable consumption aggregates have been constructed for countries in the Region.

### **Poverty Lines and Purchasing Power Parity**

This report uses an *absolute* concept of poverty, which is consistent with a large body of literature from both outside and within the World Bank, in which poverty is seen as the inability to meet basic material needs. Although the notion of basic needs differs across countries, it can be reasonably well defined as the current cost of the subsistence consumption basket. In practically all countries in the Region, one finds groups of the population unable to meet such basic needs. This group, and the group who are "nearby" in income terms, are the focus of this book.

The alternative measure of deprivation—*relative* poverty—has also been used in the literature. It is also a mainstay of the official poverty and social exclusion statistics used by the European Commission to monitor the situation in the EU member states (see Atkinson, Marlier, and Nolan 2004). However, the difficulties that it creates for monitoring differences across countries and changes over time within countries, combined with the still relatively fragile economic situation in many countries of the Region, make the authors favor the absolute poverty approach. The noncomparability of poverty lines based on the relative concept is also admitted by the EC and Eurostat (Dennis and Guio 2003).

An absolute poverty line, as the name implies, attempts to establish the value of consumption that a person needs to stay out of poverty, regardless of time and place. Clearly there are difficulties with doing this. The first widely accepted global poverty estimates, produced by the World Bank's *World Development Report 1990*, chose a poverty line measured in 1985 purchasing power parity (PPP). Chen and Ravallion (2001) have since updated these numbers, using an expanded database of household surveys based on 1993 PPP exchange rates for consumption.

This report uses the most recent PPP numbers from 2000, as reported in OECD (2003). The report uses data from most countries in the Region

and provides PPP exchange rates between national currencies and the euro. The report also provides the PPP conversion factor from the euro to U.S. dollars of 2000. Thus, these data can be used to convert national currencies to U.S. dollars of 2000, based on their PPP for that year. To make it comparable and relevant for global poverty monitoring, the 2000 U.S. dollars are then converted to the 1993 ones, using the U.S. consumer price inflation index. The final set of factors then represents the amount of national currency needed to buy a bundle of consumer goods that one dollar in 1993 would have bought. To get current value for the survey years, national inflation rates (CPI) are used to inflate (deflate) these 2000 exchange rates.

Some countries excluded from OECD (2003) (such as Bosnia and Herzegovina) were estimated based on the PPP from neighboring countries and exchange rates. PPP data for some came from EBRD (Sanfey and others 2004), and data for Albania have been estimated based on the 1996 PPP set.

More recent data on PPP are more relevant for the transition economies of the Region because they reflect contemporary (in many cases, liberalized) prices, as opposed to the administered prices of the past rounds of international price comparison surveys. Using 2000 PPPs also provides more plausible estimates of absolute poverty (see chapter 1, annex 1 for a detailed discussion). For example, it is highly implausible that poverty in Uzbekistan is negligible (which is the impression that one gets using the 1993 and 1996 PPPs). Errors can also go the other way (that is, overstate poverty), as appears to be the case when the 1993 PPP is used for Georgia. In addition to issues with relative prices, Georgia experienced one of the worst hyperinflations in its history in 1993, which would have made measurement of prices problematic.

On one hand, the total poverty headcount for the Region does not change much whether one uses 1993 PPP or 2000 PPP; however, individual country assessments are affected. On the other hand, 1996 PPP, with few exceptions—Bulgaria, Estonia, and Lithuania—produces a lower poverty count than 2000 PPP.

The use of 2000 PPP has additional drawbacks. The OECD (2003) reported both consumption and GDP PPP euro exchange rates, but conversion from euros to dollars were provided only for GDP numbers. The choice was made to use GDP 2000 PPP figures (which are also more easily available for countries outside the Region) as a baseline. The full set of the PPP exchange rate estimates used for this study is provided on the dedicated Web site: <http://www.worldbank.org/eca/>.

There is some arbitrariness inherent in setting the level of poverty lines. The absolute poverty line attempts to gauge a standard in a way that is comparable across time and space (Ravallion 1994). The World

Bank often uses \$1 a day for cross-country comparisons, which (in 1985 PPPs) was chosen around 1990 because it was the most typical poverty line among the low-income countries (later updated to \$1.075 a day, using 1993 PPPs). None of the Region's countries was considered when coming up with this estimate. This \$1-a-day poverty line has since come to be regarded as providing the absolute minimum standard of living.

Much has changed since 1990, particularly in the Region. Comparing national poverty lines for a group comprising countries of the Region, outside the Region, and in the EU, one sees that, as elsewhere in the world, there is a close correlation in the Region between the average standard of living and the national minimum needs definition (see box 1.1 for a detailed discussion). However, no country in the Region has a poverty line close to \$1 a day. On the contrary, the lowest poverty lines cluster around the \$2 mark. (See appendix B, table 2.)

The study therefore uses \$2 a day (or, more accurately, \$2.15, which is exactly double \$1.075) as an absolute poverty line for the purposes of this report. The study also uses a higher poverty line (\$4.30 a day) as a proximate vulnerability threshold to identify households that are not suffering absolute material deprivation, but are vulnerable to poverty. Although it seems somewhat arbitrary, it does bear some relation to empirically observed vulnerability to poverty. Analysis of panel data from the Region suggests that households with per capita consumption at least twice the poverty line face less than a 50 percent chance of becoming poor in the foreseeable future (World Bank 2002).

To provide data comparable to other regions and test for robustness of findings based on a single estimated PPP, the study also calculated a full set of poverty indexes (reported in appendix B, Key Poverty Indicators, table 2). For the 1993 and 1996 PPP revisions, they are provided for any interested reader on <http://www.worldbank.org/eca/>. There one can also find estimated poverty rates for the Region and benchmark countries with \$1-a-day international poverty lines not reported in this book.

## Price Deflators

In the cases in which data were collected over a long period of time, it was also necessary to adjust for changes in prices over time. Quarterly CPI (IMF) indexes were used to compute real values.

This measure ignores the differential impact of price increases on the poor and nonpoor. No price indexes for low-income groups are routinely available in the Region that would allow this study to address this issue.

Regional price differences can cause the same bundle of goods to be more expensive in one region than in another. However, the difference in expenditure caused by these regional price differences does not reflect differences in material well-being. Hence, these regional price differences need to be corrected.

As discussed in Deaton and Zaidi (2002), the Paasche price index offers a most reliable way to measure spatial price differences. Note that this index involves not only the prices faced by a household in relation to the reference prices but also its expenditure pattern, something that is not true of a Laspeyres index. The distinction is an important one: to convert total expenditure into the welfare index, the price index must be tailored to the household's own demand pattern, a demand pattern that varies with the household's income, demographic composition, location, and other characteristics. The reference prices are the median of the prices observed from all households. Based on these deflators estimated for each household, an indicator of regional price levels is calculated, which is then aggregated (using the median) to the regional level in each country.

The resulting indexes usually range within 0.9–1.1 of the national price level. Because nonfood prices are usually not available for the Region's countries from statistical offices and unit values for nonfood are normally not collected by household surveys, the spatial price deflator is based entirely on differences in food prices. This clearly is an issue but given data limitations, nothing can be done to deal with it.

### **Equivalence Scales**

Consumption data from household surveys are collected at the level of the household rather than of the individual; however, to determine the welfare levels of people, total household consumption must be divided among household members. Consumption cannot, however, be explicitly assigned to individual household members using the data. Instead, an adjustment based on some allocation rule must be imposed to attribute their share of a household's resources to individuals within the household.

One such allocation rule is simply to divide total household consumption by the number of household members. This yields per capita consumption. This report relies on per capita measure of consumption, and, as discussed in Deaton and Zaidi (2002), it is a reasonable choice. This is the most commonly applied method, and it implies that all family members receive an equal share of household resources. For some findings that are sensitive to the equivalence-of-

scale assumptions (especially demographic profiles), the robustness checks have been carried out, and the results reported in the study.

## Poverty Indexes

The sections that follow describe a set of poverty indicators to assess the extent of the deprivation of individuals in the income dimension.

### *Measuring Poverty (appendix B. Key Poverty Indicators, table 2)*

The simplest and most commonly used measure of poverty is the headcount index, which is given by the fraction of individuals with equivalent consumption below the poverty line (Foster, Greer, and Thorbecke 1984).<sup>1</sup> This measure, however, does not show whether the poor are only slightly below the poverty line or whether their consumption falls substantially short of the poverty line. The headcount measure also does not reveal whether all the poor are about equally poor or whether some are very poor and others just below the poverty line.

To examine these three dimensions of poverty—headcount, short-fall, and inequality among the poor—an FGT class of poverty measures is used. This class is described by the following equation:

$$P(\alpha) = \frac{1}{n} \sum_{i=1}^n \left[ \max \left( \frac{z - c_i}{z}, 0 \right) \right]^\alpha$$

where  $\alpha$  is parameter (explained below),  $z$  is the poverty line,  $c_i$  is consumption of individual  $i$ , and  $n$  is the total number of individuals.

If one sets  $\alpha$  equal to 0,  $P(0)$ , or the *poverty headcount index*, is obtained.  $P(0)$  simply measures the fraction of individuals below the poverty line.

If one sets  $\alpha$  equal to 1,  $P(1)$ , or the *poverty deficit*, is obtained. The poverty deficit is a poverty measure that takes into account how far the poor, on average, are below the poverty line. One can show the following equation:

$$P(1) = P(0) * (\text{Average Deficit})$$

in which the average deficit is the amount, measured as a percentage of the poverty line, by which the consumption of the poor on average fall short of the poverty line.

Finally, if one sets  $\alpha$  equal to 2,  $P(2)$ , sometimes also called the *severity of poverty* or *FGT(2)*, is obtained. This poverty measure also

takes into account whether some of the poor are deeper into poverty than others.

In this presentation of the poverty results in the appendix, B. Key Poverty Indicators, table 2, the authors rely on the headcount index, P(1), and P(2) indexes.

***Measuring Inequality (appendix, B. Key Poverty Indicators, table 2)***

Because inequality has many aspects, there are many ways to measure it. This report relies mainly on two types of inequality measure: quintile shares and Gini coefficients.

Quintile shares are straightforward indicators of inequality that are easy to interpret because they depict the share of total consumption that goes to each of the 20 percent groups of equal size ranked by per capita consumption. The report uses the share of the bottom 20 percent in the total consumption. Quintiles are used to construct tables on nonincome dimensions to highlight socioeconomic differences by income groups.

Quintile shares do not reflect what happens in other parts of the distribution. To address this shortcoming, the Gini coefficient is also used. It is given by the following equation:

$$G = \frac{2}{\mu n^2} \sum_{i=1}^n \left( r_i - \frac{n+1}{2} \right) c_i,$$

in which there are  $n$  individuals indexed by  $i$ , their consumption per capita is given by  $c_i$ , and mean consumption is denoted by  $\mu$  and in which  $r_i$  is household's  $i$  rank in the consumption ranking (that is, for the household with lowest consumption,  $r_i$  equals 1, while for the household with the highest consumption,  $r_i$  equals  $n$ ). The Gini coefficient is bounded between 0 and 1, with 0 indicating absolute equality and 1 indicating absolute inequality. The Gini coefficient is especially sensitive to changes in inequality in the middle of the consumption distribution.

**Poverty Profiles Characteristics**

Identifying the key characteristics of the poor is an important first step in understanding causes of poverty. Because poverty in the Region is a multifaceted phenomenon, the multiple poverty profiles show simple correlations between household and individual characteristics and poverty and the contribution of each group to total poverty (structure of poverty).

***Regional Characteristics (appendix, B. Key Poverty Indicators, table 3)***

All surveys used in the analysis are representative by urban-rural location or by the size of the population center, because these normally form the strata for survey samples. In several countries, surveys are also conducted to produce representative data by regions. Capital cities are often distinguished as a “region.” In countries where samples are representative by region (note that definition of a *statistical* region differs from that of an *administrative* one), poverty statistics could also be computed by these regions. Given the importance of spatial dimensions of poverty as produced in this report, poverty indexes are reported for both poverty line (\$2.15 at 2000 PPP) and vulnerability to poverty line (\$4.30 at 2000 PPP) on panels A and B. To give a sense of the variation of poverty across regions and the concentration of poverty in the poorest regions, maximum and minimum poverty rates and contribution to national poverty are presented for countries where data allow this breakdown. Names of the poorest and richest regions are given for reference.

***Demographic Dimension of Poverty (appendix, B. Key Poverty Indicators, table 4)***

The table reports both the poverty rates and contributions to the national poverty by age groups, gender, and number of children in a family. Age groups are defined based on the common age brackets and use the age of respondents at the time of the survey.

***Education Dimension of Poverty (appendix, B. Key Poverty Indicators, table 5)***

To make sure that those in the compulsory education process are not influencing the distribution (because computation of completed level may be problematic for them), the table uses only individuals above 15 years old. It classifies the detailed educational categories that differ across countries into a set of standard classifications (a simplified version of the International Standard Classification of Education [ISCED] 1997) proposed by Sullivan and Smeeding (1997). It distinguishes five levels of education: persons without education or with incomplete primary education, those with completed primary only, those with general secondary, those with specialized (vocational or technical) secondary, and those with university education.

***The Labor Market Profile of Poverty (appendix, B. Key Poverty Indicators, table 6)***

To construct labor market indicators, the labor section of the house-

hold surveys are used. Sometimes they are detailed enough to build employment and unemployment categories, following the ILO definitions. In other cases, they rely entirely on respondents' self-identification. Employment is normally defined in Household Expenditure and Income Surveys in a very inclusive way: all types of gainful activity over the reference period (usually a month, but sometimes even a year) are considered as employment, however short that work period was. The table is built for all individuals above 15 years old. In addition, those above 65 years old are considered outside the working age and reported as "retired." Classification into self-employment or wage (salaried) employment is based on the type of job in the primary occupation of a household member. All unpaid family workers reporting work for a family farm or business are classified as "self-employed."

### **Nonincome Poverty Indicators**

Different aspects of poverty—income and nonincome—interact and reinforce each other in ways that often exacerbate the deprivation that poor people face. Poor health outcomes and low educational achievement not only decrease well-being but also limit people's income-earning potential.

Defining poverty as multidimensional, however, also raises the question of how to measure these different dimensions. There are no strict and agreed-on standards that would fit every country. This report uses the survey data and other sources of information to obtain individual or household-level measures of deprivation in the following dimensions: education, health, housing, and infrastructure.

To see whether deprivation in these dimensions is different across groups, all four tables highlight spatial differences (reporting value of indexes by location). They also show the correlation between poverty in the monetary dimension with the nonincome space by reporting nonincome indicators for the top and bottom quintiles.

#### ***The Profile of Poverty: Health Dimension (appendix, B. Key Poverty Indicators, table 7)***

Only a few surveys in the Region allow the construction of health indicators. The most common question is about a health condition over the reference period (which differs across countries) serious enough to limit daily activities. This indicator (morbidity rate) is reported by groups described above. The use of services is computed for those with a health condition as a share of respondents that used formal medical services (clinics, hospitals, private doctors) to take care of their illness in a reference period. There are significant differences

across countries in the length of the reference period; hence, large differences in the value may be partly ascribed to these design features.

***The Profile of Poverty: Education Dimension (appendix, B. Key Poverty Indicators, table 8)***

Surveys allow construction of basic enrollment rates (for two age groups), which are reported by quintiles and locations.

***The Profile of Poverty: Infrastructure Dimension (appendix, B. Key Poverty Indicators, table 9)***

Two indicators are selected: access to water (connection to a water pipe) and use of clean fuels (electricity, liquid fuels, and gas) for heating. The use of dirty fuels (coal and firewood) is shown to have significant health effects. Overall, there is no consistently collected information on the quality of infrastructure services (with a few exceptions discussed in the report). This is a major gap in the data.

***The Profile of Poverty: Housing Dimension (appendix, B. Key Poverty Indicators, table 10)***

Housing dimension is reported as the ownership rights on the dwelling the household is residing in (thus a reflection of inequality in asset ownership), and the measure of quality is determined by reporting the share of population living in overcrowded dwellings (with more than three persons per room or with a total living space per person of less than six square meters).

## **Endnote**

1. The exposition of the poverty and inequality measures is phrased in equivalent consumption, but the same measures could be applied to equivalent income.

## B. KEY POVERTY INDICATORS

TABLE 1

### Macroeconomic Environment

Country	Year	Population	GDP growth	GDP per capita, 2000 PPP	Inflation (CPI, annual % change)	Government expenditure, total (% of GDP)	Real wages index, 1998 = 1.00
Albania	2002	3,150,265	5	4,113	5.2	—	—
Armenia	1998/99	3,162,500	5	2,206	4.65	—	1.06
Armenia	2001	3,086,704	10	2,669	3.1	—	1.25
Armenia	2002	3,067,953	13	3,019	1.1	—	1.38
Armenia	2003	3,055,630	14	3,468	4.6	—	1.46
Azerbaijan	2002	8,172,000	11	3,096	2.8	—	1.93
Azerbaijan	2003	8,233,000	11	3,417	2.2	—	2.29
Belarus	1998	10,069,000	8	4,369	73.0	30.37	1.00
Belarus	1999	10,035,000	3	4,527	294.0	30.86	1.07
Belarus	2000	10,005,000	6	4,802	168.6	28.90	1.20
Belarus	2001	9,970,260	5	5,043	61.1	29.58	1.56
Belarus	2002	9,925,000	5	5,331	42.6	—	1.68
Bosnia & Herzegovina	2001	4,057,056	4	5,378	3.2	58.8	—
Bosnia & Herzegovina	2004	4,158,000	6	6,267	0.4	50	1.87
Bulgaria	1995	8,400,000	3	6,285	62.1	40.96	—
Bulgaria	2001	7,910,000	4	6,585	7.5	34.38	1.08
Bulgaria	2003	7,823,000	4	7,304	2.3	—	1.20
Estonia	2000	1,369,500	8	10,253	4.0	29.52	1.14
Estonia	2001	1,364,000	6	11,064	5.8	28.02	1.21
Estonia	2002	1,358,000	7	11,907	3.6	—	1.30
Estonia	2003	1,353,000	5	12,790	1.3	—	1.40
Georgia	1997	5,320,000	11	1,725	7.1	17.32	—
Georgia	1998	5,307,000	3	1,755	3.6	15.16	1.00
Georgia	1999	5,289,000	3	1,814	19.2	14.98	1.02
Georgia	2000	5,262,000	2	1,880	4.0	12.26	1.05
Georgia	2001	5,224,000	5	2,040	4.7	10.93	1.32
Georgia	2002	5,177,000	5	2,169	5.6	12.35	1.50
Georgia	2003	5,126,000	11	2,445	4.8	—	1.58
Hungary	1998	10,114,000	5	11,503	14.3	43.99	1.00
Hungary	1999	10,068,000	4	12,010	10.0	43.42	1.02
Hungary	2000	10,024,000	5	12,705	9.7	41.37	1.06
Hungary	2001	10,187,000	4	13,105	9.2	41.45	1.14
Hungary	2002	10,159,000	3	13,391	5.3	—	1.28
Kazakhstan	2001	14,909,200	14	5,206	8.4	14.63	1.34
Kazakhstan	2002	14,875,000	10	5,672	5.8	—	1.49
Kazakhstan	2003	14,878,100	9	6,302	6.4	—	1.60
Kyrgyz Rep.	2000	4,915,000	5	1,560	18.7	18.00	0.90
Kyrgyz Rep.	2001	4,955,000	5	1,599	6.9	17.73	1.00
Kyrgyz Rep.	2002	5,003,900	0	1,570	2.1	—	1.14
Kyrgyz Rep.	2003	5,052,000	7	1,654	3.1	—	1.25
Latvia	2002	2,338,000	6	8,922	1.9	—	1.13
Latvia	2003	2,321,000	7	9,702	2.9	—	1.19
Lithuania	1998	3,555,000	7	8,464	5.1	29.38	1.00
Lithuania	1999	3,531,000	-2	8,384	0.8	30.58	1.05
Lithuania	2000	3,505,000	4	8,716	1.0	27.34	1.03

TABLE 1 (continued)

Country	Year	Population	GDP growth	GDP per capita, 2000 PPP	Inflation (CPI, annual % change)	Government expenditure, total (% of GDP)	Real wages index, 1998 = 1.00
Lithuania	2001	3,482,000	6	9,313	1.3	26.08	1.02
Lithuania	2002	3,469,000	7	9,955	0.3	—	1.07
Lithuania	2003	3,454,000	9	11,055	-1.2	—	1.17
Macedonia, FYR	2002	2,038,000	1	6,257	1.8	—	1.03
Macedonia, FYR	2003	2,049,000	3	6,419	1.2	—	1.07
Moldova	1998	4,299,000	-7	1,337	7.7	35.86	1.00
Moldova	1999	4,288,000	-3	1,294	39.3	29.71	0.87
Moldova	2000	4,278,000	2	1,290	31.3	29.58	0.89
Moldova	2001	4,270,000	6	1,332	9.8	22.80	1.08
Moldova	2002	4,255,000	8	1,420	5.2	25.52	1.31
Moldova	2003	4,237,600	6	1,426	11.7	—	1.51
Poland	1998	38,666,152	5	9,159	11.8	35.19	1.00
Poland	1999	38,658,000	4	9,529	7.3	33.24	1.28
Poland	2000	38,648,000	4	9,935	10.1	32.72	1.30
Poland	2001	38,251,000	1	10,125	5.5	34.65	1.33
Poland	2002	38,232,000	1	10,299	1.9	—	1.36
Romania	1998	22,503,000	-5	5,751	59.1	33.33	1.00
Romania	1999	22,457,990	-1	5,699	45.8	35.06	1.00
Romania	2000	22,443,000	1	5,715	45.7	34.09	1.01
Romania	2001	22,132,000	5	6,098	34.5	30.40	1.12
Romania	2002	21,803,000	4	6,476	22.5	—	1.15
Romania	2003	21,744,000	5	6,875	15.3	—	1.25
Russian Fed.	1997	147,304,000	1	6,427	14.8	0.00	1.15
Russian Fed.	1998	146,899,008	-5	6,244	27.7	26.14	1.00
Russian Fed.	1999	146,308,992	6	6,642	85.7	21.68	0.78
Russian Fed.	2000	145,555,008	10	7,242	20.8	22.89	0.94
Russian Fed.	2001	144,752,000	5	7,559	21.5	24.63	1.13
Russian Fed.	2002	144,070,800	5	7,993	15.8	—	1.31
Serbia & Montenegro	2002	8,160,000	4	—	21.2	—	1.53
Tajikistan	1999	6,160,000	4	740	27.5	12.41	1.06
Tajikistan	2003	6,304,700	10	1,045	16.4	—	1.67
Ukraine	2002	48,717,300	5	4,719	0.8	—	1.38
Ukraine	2003	48,355,700	9	5,188	5.2	—	1.61
Uzbekistan	2000/01	24,808,500	4	1,539	26.1	—	1.67
Uzbekistan	2002	25,271,000	4	1,604	27.3	—	1.93
Uzbekistan	2003	25,590,000	4	1,648	10.2	—	1.98
Colombia	2003	44,584,000	4	6,331	7.13	—	—
Turkey	2002	69,626,000	8	6,145	45.0	—	1.36
Vietnam	1998	76,520,000	6	1,855	7.27	20.34	1.00

Source: WDI 2005.

Note: — = not available.

**TABLE 2**  
**Main Poverty and Inequality Indicators**

Country	Year	Poverty indices, \$PPP 2.15/day			Poverty indices, \$PPP 4.30/day		
		Poverty rate P0	Poverty depth P1	Poverty severity P2	Poverty rate P0	Poverty depth P1	Poverty severity P2
Albania	2002	24	5	2	71	28	14
Armenia	1998/99	58	19	8	92	49	30
Armenia	2001	59	19	9	91	50	31
Armenia	2002	55	17	7	91	48	28
Armenia	2003	50	14	5	93	46	26
Azerbaijan	2002	5	1	0	74	19	7
Azerbaijan	2003	4	1	0	70	17	6
Belarus	1998	9	2	1	48	15	6
Belarus	1999	7	2	1	42	13	5
Belarus	2000	6	1	0	38	11	4
Belarus	2001	4	1	0	27	7	3
Belarus	2002	2	0	0	21	5	2
Bosnia & Herzegovina	2001	5	1	0	40	10	4
Bosnia & Herzegovina	2004	4	1	0	35	9	4
Bulgaria	1995	3	1	1	20	6	3
Bulgaria	2001	10	3	1	36	13	6
Bulgaria	2003	4	1	0	33	9	4
Estonia	2000	4	1	0	26	7	3
Estonia	2001	4	1	0	28	8	3
Estonia	2002	4	1	0	27	8	3
Estonia	2003	5	1	0	26	8	3
Georgia	1997	45	18	10	80	42	26
Georgia	1998	42	16	9	80	40	25
Georgia	1999	50	20	11	84	45	29
Georgia	2000	53	22	12	86	48	31
Georgia	2001	55	22	12	88	49	32
Georgia	2002	49	19	10	84	45	28
Georgia	2003	52	21	11	85	46	30
Hungary	1998	1	0	0	20	4	1
Hungary	1999	1	0	0	19	4	1
Hungary	2000	1	0	0	18	4	1
Hungary	2001	1	0	0	13	3	1
Hungary	2002	0	0	0	12	2	1
Kazakhstan	2001	31	9	31	73	32	73
Kazakhstan	2002	26	7	26	71	29	71
Kazakhstan	2003	21	5	21	66	25	66
Kyrgyz Rep.	2000	78	32	78	97	61	97
Kyrgyz Rep.	2001	74	29	74	97	59	97
Kyrgyz Rep.	2002	73	28	73	97	59	97
Kyrgyz Rep.	2003	70	24	70	96	56	96
Latvia	2002	3	1	0	18	5	2
Latvia	2003	3	1	0	17	5	2
Lithuania	1998	3	1	0	24	6	3
Lithuania	1999	3	1	0	25	7	3
Lithuania	2000	4	1	0	29	8	3
Lithuania	2001	4	1	0	29	8	3
Lithuania	2002	4	1	0	30	8	3
Lithuania	2003	4	1	0	24	7	3

Country	Year	Inequality indices		Mean per capita annual consumption in local currency	\$PPP 2.15 in local currency, annual	National poverty line in local currency, annual
		Gini coefficient (per capita)	Share of the lowest 20%			
Albania	2002	0.3194	8	96,518	54,553	58,359
Armenia	1998/99	0.3208	8	141,940	128,484	140,584
Armenia	2001	0.3249	8	143,828	131,800	143,783
Armenia	2002	0.3102	9	151,498	133,250	145,364
Armenia	2003	0.2850	10	162,286	139,379	152,051
Azerbaijan	2002	0.1812	13	2,026,126	1,150,929	1,478,966
Azerbaijan	2003	0.1822	13	2,143,867	1,176,639	1,512,004
Belarus	1998	0.2908	9	38,983	16,699	27,263
Belarus	1999	0.2994	8	167,415	65,796	107,417
Belarus	2000	0.2933	8	475,632	176,741	288,544
Belarus	2001	0.3008	8	902,610	284,730	464,845
Belarus	2002	0.2918	9	1,399,101	406,025	662,869
Bosnia & Herzegovina	2001	0.2634	9	2,687	1,064	2198
Bosnia & Herzegovina	2004	0.2951	9	3,026	1,077	—
Bulgaria	1995	0.3261	8	52,249	14,070	20,287
Bulgaria	2001	0.3368	7	1,496	522	753
Bulgaria	2003	0.2774	9	1,562	565	815
Estonia	2000	0.3386	7	21,384	6,023	14,953
Estonia	2001	0.3323	8	21,709	6,372	15,890
Estonia	2002	0.3350	7	22,800	6,602	16,900
Estonia	2003	0.3301	7	23,457	6,687	17,167
Georgia	1997	0.4041	5	586	415	543
Georgia	1998	0.3855	6	614	430	562
Georgia	1999	0.3936	6	655	512	670
Georgia	2000	0.3970	6	646	533	697
Georgia	2001	0.3825	6	646	558	729
Georgia	2002	0.3901	6	763	589	770
Georgia	2003	0.3906	6	765	617	807
Hungary	1998	0.2498	10	261,938	81,765	219,572
Hungary	1999	0.2589	10	294,765	89,942	241,530
Hungary	2000	0.2540	10	322,988	98,666	264,958
Hungary	2001	0.2510	10	390,509	107,743	289,334
Hungary	2002	0.2496	10	417,447	113,346	304,379
Kazakhstan	2001	0.3458	7	67,472	40,178	37,876
Kazakhstan	2002	0.3297	8	74,844	42,548	40,111
Kazakhstan	2003	0.3183	8	85,163	45,271	42,678
Kyrgyz Rep.	2000	0.2993	9	6,578	8,322	7,548
Kyrgyz Rep.	2001	0.2902	9	7,390	8,897	8,069
Kyrgyz Rep.	2002	0.2924	9	7,663	9,083	8,238
Kyrgyz Rep.	2003	0.2761	10	8,445	9,365	8,494
Latvia	2002	0.3403	7	982	236	416
Latvia	2003	0.3503	7	1,051	243	437
Lithuania	1998	0.3029	8	4,524	1,348	2,822
Lithuania	1999	0.3035	8	4,503	1,359	2,845
Lithuania	2000	0.3057	8	4,298	1,373	2,873
Lithuania	2001	0.3052	8	4,286	1,391	2,911
Lithuania	2002	0.3050	8	4,285	1,395	2,919
Lithuania	2003	0.3251	8	4,850	1,378	2,884

(Table continues on the following page.)

TABLE 2 (continued)

## Main Poverty and Inequality Indicators

Country	Year	Poverty indices, \$PPP 2.15/day			Poverty indices, \$PPP 4.30/day			
		Poverty rate P0	Poverty depth P1	Poverty severity P2	Poverty rate P0	Poverty depth P1	Poverty severity P2	
Macedonia, FYR	2002	4	1	0	23	7	3	
Macedonia, FYR	2003	4	1	0	24	7	3	
Moldova	1998	67	29	16	93	56	38	
Moldova	1999	79	37	22	96	64	46	
Moldova	2000	77	35	19	96	62	44	
Moldova	2001	70	29	15	94	57	39	
Moldova	2002	56	20	10	90	48	30	
Moldova	2003	43	13	5	85	41	23	
Poland	1998	2	0	2	23	5	2	
Poland	1999	2	0	2	25	6	2	
Poland	2000	2	0	2	26	6	2	
Poland	2001	2	0	2	26	7	2	
Poland	2002	3	0	3	27	7	3	
Romania	1998	14	3	3	63	21	9	
Romania	1999	19	4	4	69	25	12	
Romania	2000	20	5	5	72	26	13	
Romania	2001	16	4	4	64	22	10	
Romania	2002	16	4	4	62	22	10	
Romania	2003	12	3	3	58	19	9	
Russian Fed.	1997	10	3	1	41	14	7	
Russian Fed.	1998	13	4	1	46	17	8	
Russian Fed.	1999	21	6	3	59	24	12	
Russian Fed.	2000	17	5	2	54	20	10	
Russian Fed.	2001	11	3	1	47	16	7	
Russian Fed.	2002	9	2	1	41	13	6	
Serbia & Montenegro	2002	6	1	1	42	12	5	
Tajikistan	1999	91	45	26	100	71	53	
Tajikistan	2003	74	30	15	96	59	40	
Ukraine	2002	3	1	0	31	8	3	
Ukraine	2003	1	0	0	22	5	2	
Uzbekistan	2000/01	54	19	54	89	48	89	
Uzbekistan	2002	42	12	42	86	41	86	
Uzbekistan	2003	47	14	47	86	43	86	
Colombia	2003	6	2	0	24	8	4	
Turkey	2002	20	6	2	58	23	12	
Vietnam	1998	41	10	4	85	39	21	

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: P0 reported in %. P1 and P2 are multiplied by 100. — = not available.

Country	Year	Inequality indices		Mean per capita annual consumption in local currency	\$PPP 2.15 in local currency, annual	National poverty line in local currency, annual
		Gini coefficient (per capita)	Share of the lowest 20%			
Macedonia, FYR	2002	0.3678	6	73,520	17,784	59,881
Macedonia, FYR	2003	0.3732	6	72,735	17,997	58,644
Moldova	1998	0.3710	6	1,368	1,454	1,359
Moldova	1999	0.3653	7	1,536	2,026	1,894
Moldova	2000	0.3500	7	2,095	2,660	2,487
Moldova	2001	0.3571	7	2,674	2,920	2,730
Moldova	2002	0.3449	8	3,482	3,072	2,872
Moldova	2003	0.3280	8	4,573	3,432	3,208
Poland	1998	0.2960	9	4,967	1,467	2,592
Poland	1999	0.3024	9	5,236	1,574	2,781
Poland	2000	0.3050	8	5,722	1,733	3,062
Poland	2001	0.3072	8	6,039	1,828	3,230
Poland	2002	0.3197	8	6,199	1,863	3,291
Romania	1998	0.2736	9	5,311,954	2,736,291	3,372,638
Romania	1999	0.2834	9	7,100,299	3,989,513	4,917,307
Romania	2000	0.2820	9	9,979,185	5,812,720	7,164,516
Romania	2001	0.2862	9	14,849,780	7,818,109	9,636,274
Romania	2002	0.2939	8	18,767,966	9,577,183	11,804,435
Romania	2003	0.2878	9	22,797,434	11,013,761	13,575,100
Russian Fed.	1997	0.3527	7	6,417,704	2,276,173	3,059,599
Russian Fed.	1998	0.3694	6	7,760	2,907	3,907
Russian Fed.	1999	0.3566	7	11,412	5,398	7,256
Russian Fed.	2000	0.3488	7	14,961	6,521	8,765
Russian Fed.	2001	0.3392	7	20,256	7,922	10,648
Russian Fed.	2002	0.3381	7	25,467	9,173	12,331
Serbia & Montenegro	2002	0.2920	9	85,313	33,593	44,940
Tajikistan	1999	0.2890	8	147,001	253,064	245,296
Tajikistan	2003	0.3274	8	519	608	589
Ukraine	2002	0.2736	9	2,551	891	1,691
Ukraine	2003	0.2681	10	2,982	937	1,779
Uzbekistan	2000/01	0.3549	7	103,091	87,324	—
Uzbekistan	2002	0.3260	8	178,741	132,397	—
Uzbekistan	2003	0.3545	7	193,781	145,902	—
Colombia	2003	0.4877	4	2,645,884	472,157	—
Turkey	2002	0.3932	6	1,436,459,264	620,648,442	916,489,450
Vietnam	1998	0.3110	9	2,443	1,779	1,794

TABLE 3

## Panel A (Based on 2.15 \$ PPP) Poverty Profile: Spatial Dimension

Country	Year	Poverty rate (%), \$PPP 2.15/day				Regional poverty rates (%), \$PPP 2.15/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Albania	2002	16	19	18	27	32 (Mountain)	16 (Tirana)
Armenia	1998/99	58	66	62	52	77 (Shirak)	35 (Tavush)
Armenia	2001	55	64	60	59	74 (Tavush)	27 (Siunik)
Armenia	2002	48	67	57	51	81 (Shirak)	40 (Siunik)
Armenia	2003	35	57	46	57	70 (Armavir)	35 (Yerevan)
Azerbaijan	2002	5	7	6	5	..	..
Azerbaijan	2003	4	8	6	3	..	..
Belarus	1998	8	11	10	7	12 (Gomel)	7 (Minsk)
Belarus	1999	5	9	8	6	10 (Vitebsk)	5 (Minsk)
Belarus	2000	3	8	7	4	8 (Mogilev)	3 (Minsk)
Belarus	2001	2	5	4	3	5 (Gomel)	2 (Minsk)
Belarus	2002	1	3	2	2	4 (Vitebsk)	1 (Minsk)
Bosnia & Herzegovina	2001	3	5	5	5	—	—
Bosnia & Herzegovina	2004	2	6	4	4	—	—
Bulgaria	1995	3	3	3	4	—	—
Bulgaria	2001	0	8	10	17	—	—
Bulgaria	2003	0	5	6	6	—	—
Estonia	2000	2	5	4	6	—	—
Estonia	2001	3	4	4	6	—	—
Estonia	2002	2	5	4	5	—	—
Estonia	2003	4	5	5	5	—	—
Georgia	1997	34	42	38	52	63 (Guria)	34 (Tbilisi)
Georgia	1998	35	41	38	47	59 (Samtskhe-Javakheti)	35 (Tbilisi)
Georgia	1999	44	51	48	52	61 (Samtskhe-Javakheti)	39 (Adjara)
Georgia	2000	46	53	50	57	80 (Samtskhe-Javakheti)	42 (Samegrelo)
Georgia	2001	40	60	51	60	72 (Samtskhe-Javakheti)	40 (Tbilisi)
Georgia	2002	32	54	43	56	68 (Kakheti)	32 (Tbilisi)
Georgia	2003	32	50	41	62	67 (Kakheti)	32 (Tbilisi)
Hungary	1998	1	1	1	2	..	..
Hungary	1999	1	1	1	1	..	..
Hungary	2000	1	1	1	2	..	..
Hungary	2001	0	1	1	1	..	..
Hungary	2002	0	0	0	0	..	..
Kazakhstan	2001	7	25	24	40	54 (Jambyl)	7 (Astana)
Kazakhstan	2002	5	19	18	35	44 (Kyzylorda)	5 (Almaty)
Kazakhstan	2003	2	14	13	31	39 (South_Kaz)	2 (Astana)
Kyrgyz Rep.	2000	55	79	68	84	94 (Naryn)	55 (Bishkek)
Kyrgyz Rep.	2001	50	77	65	79	96 (Naryn)	50 (Bishkek)
Kyrgyz Rep.	2002	49	72	62	79	94 (Naryn)	49 (Bishkek)
Kyrgyz Rep.	2003	42	68	57	77	95 (Naryn)	37 (Chui)
Latvia	2002	1	3	2	4	—	—
Latvia	2003	1	3	2	5	—	—
Lithuania	1998	1	3	2	5	—	—
Lithuania	1999	1	3	2	7	—	—
Lithuania	2000	1	2	2	9	—	—
Lithuania	2001	3	3	3	8	—	—
Lithuania	2002	1	3	2	9	—	—
Lithuania	2003	1	2	1	8	—	—

Country	Year	Contribution to poverty (%), \$PPP 2.15/day				Regional contributions poverty (%), \$PPP 2.15/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Albania	2002	8	25	33	67	49 (Central)	8 (Tirana)
Armenia	1998/99	28	34	62	38	28 (Yerevan)	2 (Vayots D)
Armenia	2001	26	34	60	40	26 (Yerevan)	2 (Siunik)
Armenia	2002	26	35	62	38	26 (Yerevan)	3 (Vayots Dzor)
Armenia	2003	20	34	54	46	20 (Yerevan)	3 (Vayots Dzor)
Azerbaijan	2002	33	25	57	43	..	..
Azerbaijan	2003	11	45	56	44	..	..
Belarus	1998	14	62	76	24	22 (Gomel)	11 (Grodno)
Belarus	1999	11	64	75	25	20 (Gomel)	9 (Grodno)
Belarus	2000	9	72	80	20	19 (Mogilev)	9 (Minsk)
Belarus	2001	10	66	76	24	20 (Gomel)	10 (Minsk)
Belarus	2002	7	67	75	25	22 (Vitebsk)	3 (Grodno)
Bosnia & Herzegovina	2001	11	49	60	40	—	—
Bosnia & Herzegovina	2004	7	53	60	40	—	—
Bulgaria	1996	12	47	59	41	—	—
Bulgaria	2001	0	42	42	58	—	—
Bulgaria	2003	0	60	60	40	—	—
Estonia	2000	14	45	59	41	—	—
Estonia	2001	20	39	60	40	—	—
Estonia	2002	16	48	64	36	—	—
Estonia	2003	24	42	66	34	—	—
Georgia	1997	19	26	46	54	25 (Imereti)	4 (Samtskhe-Javakheti)
Georgia	1998	22	27	50	50	23 (Imereti)	4 (Guria)
Georgia	1999	23	28	52	48	23 (Tbilisi)	4 (Guria)
Georgia	2000	22	27	48	52	22 (Tbilisi)	5 (Guria)
Georgia	2001	18	29	47	53	18 (Tbilisi)	4 (Guria)
Georgia	2002	17	28	45	55	18 (Imereti)	5 (Samtskhe-Javakheti)
Georgia	2003	15	23	39	61	17 (Imereti)	3 (Swaneti)
Hungary	1998	12	30	43	57	..	..
Hungary	1999	17	37	53	47	..	..
Hungary	2000	11	36	47	53	..	..
Hungary	2001	4	43	46	54	..	..
Hungary	2002	13	52	65	35	..	..
Kazakhstan	2001	1	43	44	56	21 (South_Kaz)	1 (Astana)
Kazakhstan	2002	1	40	40	60	21 (South_Kaz)	1 (Astana)
Kazakhstan	2003	0	36	36	64	26 (South_Kaz)	0 (Astana)
Kyrgyz Rep.	2000	11	19	30	70	27 (Osh)	5 (Talas)
Kyrgyz Rep.	2001	10	20	31	69	28 (Osh)	5 (Talas)
Kyrgyz Rep.	2002	10	19	29	71	29 (Osh)	5 (Talas)
Kyrgyz Rep.	2003	9	19	28	72	31 (Osh)	6 (Talas)
Latvia	2002	17	39	56	44	—	—
Latvia	2003	11	34	45	55	—	—
Lithuania	1998	15	27	42	58	—	—
Lithuania	1999	12	27	39	61	—	—
Lithuania	2000	14	17	32	68	—	—
Lithuania	2001	24	17	41	59	—	—
Lithuania	2002	13	19	31	69	—	—
Lithuania	2003	10	18	28	72	—	—

(Table continues on the following page.)

TABLE 3 (continued)

## Panel A (Based on 2.15 \$ PPP) Poverty Profile: Spatial Dimension

Country	Year	Poverty rate (%), \$PPP 2.15/day				Regional poverty rates (%), \$PPP 2.15/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Macedonia, FYR	2002	5	3	4	5	—	—
Macedonia, FYR	2003	4	5	5	3	—	—
Moldova	1998	42	70	56	74	—	—
Moldova	1999	57	80	69	85	—	—
Moldova	2000	54	83	69	82	—	—
Moldova	2001	49	78	64	74	—	—
Moldova	2002	33	61	47	61	—	—
Moldova	2003	27	48	37	47	—	—
Poland	1998	1	1	1	2	..	..
Poland	1999	1	1	1	3	..	..
Poland	2000	1	2	2	3	..	..
Poland	2001	1	2	2	3	..	..
Poland	2002	2	2	2	3	..	..
Romania	1998	6	9	8	20	23 (North-East)	6 (Bucharest)
Romania	1999	7	13	12	27	31 (North-East)	7 (Bucharest)
Romania	2000	10	15	14	28	30 (North-East)	10 (Bucharest)
Romania	2001	7	10	9	25	26 (North-East)	7 (Bucharest)
Romania	2002	6	9	8	24	25 (North-East)	6 (Bucharest)
Romania	2003	4	7	6	20	18 (North-East)	4 (Bucharest)
Russian Fed.	1997	1	9	8	14	28 (Tyva Republic)	1 (Moscow)
Russian Fed.	1998	3	13	12	15	75 (Ingushetiya Rep.)	0 (Belgorod oblast)
Russian Fed.	1999	18	20	20	24	45 (Dagestan Rep.)	3 (Belgorod oblast)
Russian Fed.	2000	15	16	15	20	68 (Ingushetiya Rep.)	2 (Belgorod oblast)
Russian Fed.	2001	5	10	10	16	40 (Dagestan Rep.)	1 (Yamalo-Nenetskiy Aut. Reg.)
Russian Fed.	2002	5	7	7	14	39 (Taimyr Aut. Reg.)	0 (St. Petersburg)
Serbia & Montenegro	2002	6	4	4	9	9 (South-East Serbia)	5 (Vojvodina)
Tajikistan	1999	73	90	85	92	—	—
Tajikistan	2003	54	73	67	76	—	—
Ukraine	2002	2	3	3	4	..	..
Ukraine	2003	0	1	1	2	..	..
Uzbekistan	2000/01	24	50	44	60	85 (Kashkadarya)	24 (Tashkent city)
Uzbekistan	2002	11	39	33	47	66 (Kashkadarya)	10 (Tashkent city)
Uzbekistan	2003	4	43	34	55	72 (Syrdarya)	4 (Tashkent city)
Colombia	2003	1	3	3	14	13 (Pacific)	1 (Bogota D.C.)
Turkey	2002	8	21	18	24	39 (SE Anatolia)	8 (Aegean)
Vietnam	1998	3	19	14	48	65 (Rur. N. Mountains & Midlands)	3 (Hanoi and Ho Chi Minh City)

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Latvia, FYR Macedonia, Poland (1998), Romania, Serbia & Montenegro column "Capital" includes some rural dwellings.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie vojvodship, which contains five urban counties—Warsaw, Radom, Plock, Siedlce, Ostroleka.

Russian Federation: data for Ingushetiya Republic is not available for 1999.

Turkey: "Capital" contains estimates for Ankara and Istanbul and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

.. = Negligible; — = not available.

Country	Year	Contribution to poverty (%), \$PPP 2.15/day				Regional contributions poverty (%), \$PPP 2.15/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Macedonia, FYR	2002	33	29	62	38	—	—
Macedonia, FYR	2003	30	42	71	29	—	—
Moldova	1998	11	20	31	69	—	—
Moldova	1999	13	20	32	68	—	—
Moldova	2000	13	21	34	66	—	—
Moldova	2001	13	21	33	67	—	—
Moldova	2002	11	21	31	69	—	—
Moldova	2003	11	20	31	69	—	—
Poland	1998	3	49	52	48	..	..
Poland	1999	4	35	38	62	..	..
Poland	2000	3	42	45	55	..	..
Poland	2001	3	44	47	53	..	..
Poland	2002	6	46	52	48	..	..
Romania	1998	5	31	36	64	29 (North-East)	5 (Bucharest)
Romania	1999	4	32	35	65	28 (North-East)	4 (Bucharest)
Romania	2000	5	34	38	62	25 (North-East)	5 (Bucharest)
Romania	2001	4	27	31	69	27 (North-East)	4 (Bucharest)
Romania	2002	4	26	30	70	27 (North-East)	4 (Bucharest)
Romania	2003	3	23	27	73	25 (North-East)	3 (Bucharest)
Russian Fed.	1997	1	61	62	38	4 (Rostov oblast)	0 (Belgorod oblast)
Russian Fed.	1998	1	67	68	32	5 (Moscow oblast)	0 (Murmansk oblast)
Russian Fed.	1999	5	65	70	30	6 (Moscow oblast)	0 (Kamchatka oblast)
Russian Fed.	2000	5	63	68	32	5 (Moscow)	0 (Krasnoyarsk territory)
Russian Fed.	2001	3	59	62	38	5 (Moscow oblast)	0 (Evenkiyskiy Aut. Reg.)
Russian Fed.	2002	4	54	58	42	6 (Moscow oblast)	0 (Evenkiyskiy Aut. Reg.)
Serbia & Montenegro	2002	19	27	46	54	22 (Vojvodina)	12 (East Serbia)
Tajikistan	1999	5	15	21	79	—	—
Tajikistan	2003	7	18	24	76	—	—
Ukraine	2002	3	59	61	39	..	..
Ukraine	2003	2	54	56	44	..	..
Uzbekistan	2000/01	4	26	30	70	14 (Kashkadarya)	2 (Syrdarya)
Uzbekistan	2002	2	26	28	72	15 (Kashkadarya)	2 (Navoi)
Uzbekistan	2003	1	26	27	73	12 (Andizhan)	1 (Tashkent city)
Colombia	2003	3	31	34	66	23 (Atlantica)	0 (San Andres & Providencia)
Turkey	2002	6	48	54	46	19 (Mediterranean)	5 (Aegean)
Vietnam	1998	0	7	8	92	26 (Rur. N. Mountains & Midlands)	0 (Hanoi and Ho Chi Minh City)

TABLE 3

## Panel B (Based on 4.30 \$ PPP) Poverty Profile: Spatial Dimension

Country	Year	Poverty rate (%), \$PPP 4.30/day				Regional poverty rates (%), \$PPP 4.30/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Albania	2002	63	67	66	75	80 (Mountain)	63 (Tirana)
Armenia	1998/99	91	95	93	91	88 (Siunik)	84 (Tavush)
Armenia	2001	87	94	91	92	98 (Shirak)	53 (Siunik)
Armenia	2002	87	94	91	92	99 (Vayots Dzor)	81 (Siunik)
Armenia	2003	86	94	90	96	100 (Siunik)	86 (Yerevan)
Azerbaijan	2002	72	78	74	74	90 (Nakhchivan)	66 (Sheki- Zagatala)
Azerbaijan	2003	66	74	69	70	84 (Nakhchivan)	62 (Baku)
Belarus	1998	44	52	50	45	53 (Gomel)	44 (Minsk)
Belarus	1999	38	44	42	42	45 (Vitebsk)	38 (Minsk)
Belarus	2000	28	42	39	34	44 (Mogilev)	28 (Minsk)
Belarus	2001	19	32	29	23	30 (Mogilev)	20 (Minsk)
Belarus	2002	14	26	23	18	26 (Brest)	14 (Minsk)
Bosnia & Herzegovina	2001	39	43	37	42	—	—
Bosnia & Herzegovina	2004	21	39	38	33	—	—
Bulgaria	1995	17	18	18	24	—	—
Bulgaria	2001	23	30	29	49	—	—
Bulgaria	2003	20	34	31	36	—	—
Estonia	2000	17	27	23	32	—	—
Estonia	2001	23	27	25	33	—	—
Estonia	2002	21	27	24	32	—	—
Estonia	2003	21	27	24	28	—	—
Georgia	1997	76	79	78	83	91 (Guria)	72 (Adjara)
Georgia	1998	78	78	78	82	86 (Samtskhe-Javakheti)	78 (Tbilisi)
Georgia	1999	84	86	85	84	91 (Guria)	75 (Kvemo Kartli)
Georgia	2000	81	89	85	88	95 (Samtskhe-Javakheti)	81 (Tbilisi)
Georgia	2001	80	92	86	89	92 (Samtskhe-Javakheti)	80 (Tbilisi)
Georgia	2002	73	89	81	87	92 (Guria)	73 (Tbilisi)
Georgia	2003	75	87	81	89	94 (Kvemo Kartli)	75 (Tbilisi)
Hungary	1998	14	18	16	25	25 (Nograd)	10 (Csongrad)
Hungary	1999	14	16	16	26	29 (Baranya)	11 (Csongrad)
Hungary	2000	14	17	16	22	27 (Baranya)	12 (Heves)
Hungary	2001	7	12	10	18	25 (Nograd)	5 (Csongrad)
Hungary	2002	8	11	10	16	20 (Baranya)	5 (Csongrad)
Kazakhstan	2001	40	66	65	82	91 (Jambyl)	40 (Astana)
Kazakhstan	2002	37	63	62	82	90 (South)	37 (Astana)
Kazakhstan	2003	29	57	55	79	90 (South)	29 (Astana)
Kyrgyz Rep.	2000	94	98	96	97	100 (Naryn)	92 (Chui)
Kyrgyz Rep.	2001	92	97	95	98	100 (Naryn)	92 (Bishkek)
Kyrgyz Rep.	2002	93	97	95	98	100 (Naryn)	89 (Chui)
Kyrgyz Rep.	2003	89	96	93	98	100 (Naryn)	88 (Chui)
Latvia	2002	11	19	14	26	—	—
Latvia	2003	7	19	12	27	—	—
Lithuania	1998	15	20	17	40	—	—
Lithuania	1999	14	21	17	42	—	—
Lithuania	2000	18	27	22	44	—	—
Lithuania	2001	17	28	22	46	—	—
Lithuania	2002	16	30	22	47	—	—
Lithuania	2003	11	21	15	42	—	—

Country	Year	Contribution to poverty (%), \$PPP 4.30/day				Regional contributions poverty (%), \$PPP 4.30/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Albania	2002	10	28	38	62	47 (Central)	10 (Tirana)
Armenia	1998/99	27	31	58	42	27 (Yerevan)	2 (Vayots Dzor)
Armenia	2001	27	32	60	41	27 (Yerevan)	2 (Siunik)
Armenia	2002	28	30	58	42	28 (Yerevan)	3 (Vayots Dzor)
Armenia	2003	27	30	58	42	28 (Yerevan)	3 (Vayots Dzor)
Azerbaijan	2002	33	21	54	46	23 (Baku)	5 (Nakhchivan)
Azerbaijan	2003	32	21	53	47	22 (Baku)	5 (Nakhchivan)
Belarus	1998	15	55	70	30	17 (Gomel)	13 (Grodno)
Belarus	1999	14	54	68	32	17 (Gomel)	12 (Mogilev)
Belarus	2000	12	60	72	28	16 (Brest)	12 (Minsk)
Belarus	2001	12	62	73	27	17 (Brest)	12 (Minsk)
Belarus	2002	11	63	74	26	19 (Gomel)	10 (Grodno)
Bosnia & Herzegovina	2001	18	42	60	40	—	—
Bosnia & Herzegovina	2004	12	43	55	45	—	—
Bulgaria	1995	12	48	60	40	—	—
Bulgaria	2001	9	44	53	47	—	—
Bulgaria	2003	8	57	66	34	—	—
Estonia	2000	19	41	60	40	—	—
Estonia	2001	24	39	63	37	—	—
Estonia	2002	23	40	63	37	—	—
Estonia	2003	25	39	64	36	—	—
Georgia	1997	24	27	51	49	24 (Tbilisi)	4 (Guria)
Georgia	1998	26	28	54	46	26 (Tbilisi)	4 (Guria)
Georgia	1999	26	28	54	46	26 (Tbilisi)	4 (Guria)
Georgia	2000	23	28	51	49	23 (Tbilisi)	4 (Guria)
Georgia	2001	22	28	50	50	22 (Tbilisi)	4 (Guria)
Georgia	2002	22	27	49	51	22 (Tbilisi)	4 (Guria)
Georgia	2003	22	25	46	54	22 (Tbilisi)	3 (Swaneti)
Hungary	1998	13	39	52	48	13 (Budapest)	2 (Csongrad)
Hungary	1999	13	39	53	47	13 (Budapest)	2 (Vas)
Hungary	2000	14	43	57	43	14 (Budapest)	2 (Zala)
Hungary	2001	9	41	50	50	12 (Borsod-Abauj-Zemlen)	2 (Csongrad)
Hungary	2002	11	42	54	46	11 (Budapest)	2 (Veszprem)
Kazakhstan	2001	2	49	51	49	17 (South)	2 (Astana)
Kazakhstan	2002	2	48	49	51	28 (South)	2 (Astana)
Kazakhstan	2003	2	46	48	52	20 (South)	2 (Astana)
Kyrgyz Rep.	2000	15	19	34	66	25 (Osh)	4 (Talas)
Kyrgyz Rep.	2001	15	20	34	66	25 (Osh)	4 (Talas)
Kyrgyz Rep.	2002	15	19	34	66	26 (Osh)	4 (Talas)
Kyrgyz Rep.	2003	14	20	34	66	26 (Osh)	4 (Talas)
Latvia	2002	23	34	57	43	—	—
Latvia	2003	16	35	51	49	—	—
Lithuania	1998	24	23	47	53	—	—
Lithuania	1999	22	24	46	54	—	—
Lithuania	2000	24	27	51	49	—	—
Lithuania	2001	23	27	50	50	—	—
Lithuania	2002	21	27	49	51	—	—
Lithuania	2003	19	24	42	58	—	—

(Table continues on the following page.)

TABLE 3 (continued)

## Panel B (Based on 4.30 \$ PPP) Poverty Profile: Spatial Dimension

Country	Year	Poverty rate (%), \$PPP 4.30/day				Regional poverty rates (%), \$PPP 4.30/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Macedonia, FYR	2002	26	20	20	26	—	—
Macedonia, FYR	2003	26	25	24	25	—	—
Moldova	1998	83	93	88	96	—	—
Moldova	1999	88	97	93	98	—	—
Moldova	2000	87	98	93	98	—	—
Moldova	2001	84	97	90	96	—	—
Moldova	2002	75	93	84	93	—	—
Moldova	2003	75	88	81	87	—	—
Poland	1998	9	18	17	32	45 (Przemysl)	9 (Warsaw)
Poland	1999	13	20	19	35	34 (Podkarpackie)	20 (Slaske)
Poland	2000	15	21	21	34	34 (Podkarpackie)	18 (Lodzkie)
Poland	2001	16	22	21	34	34 (Podkarpackie)	20 (Slaske)
Poland	2002	20	22	22	36	35 (Podkarpackie)	22 (Lodzkie)
Romania	1998	47	56	55	72	73 (North-East)	47 (Bucharest)
Romania	1999	55	62	61	79	79 (North-East)	55 (Bucharest)
Romania	2000	59	66	65	81	80 (North-East)	59 (Bucharest)
Romania	2001	53	54	53	77	74 (North-East)	53 (Bucharest)
Romania	2002	46	52	51	75	70 (North-East)	46 (Bucharest)
Romania	2003	41	47	45	72	64 (North-East)	41 (Bucharest)
Russian Fed.	1997	19	41	39	47	84 (Ingushetiya Rep.)	18 (Belgorod oblast)
Russian Fed.	1998	25	48	46	48	91 (Ingushetiya Rep.)	22 (Belgorod oblast)
Russian Fed.	1999	51	58	58	63	89 (Chita oblast)	33 (Tumen oblast)
Russian Fed.	2000	51	52	52	58	92 (Ingushetiya Rep.)	25 (Tumen oblast)
Russian Fed.	2001	37	44	43	56	82 (Dagestan Rep.)	14 (Khanty-Mansiyskiy Aut. Reg.)
Russian Fed.	2002	36	37	37	53	79 (Ingushetiya Rep.)	10 (Yamalo-Nenetskiy Aut. Reg.)
Serbia & Montenegro	2002	36	37	35	51	56 (South-East Serbia)	36 (Belgrade)
Tajikistan	1999	98	99	99	100	—	—
Tajikistan	2003	89	96	93	97	—	—
Ukraine	2002	18	30	29	37	63 (Zakarpatska)	12 (Sevastopol)
Ukraine	2003	11	20	20	28	32 (Rivnenska)	10 (Mykolaivska)
Uzbekistan	2000/01	70	86	82	93	99 (Kashkadarya)	70 (Tashkent city)
Uzbekistan	2002	51	83	75	92	95 (Syrdarya)	51 (Tashkent city)
Uzbekistan	2003	39	83	73	93	99 (Syrdarya)	39 (Tashkent city)
Colombia	2003	8	17	15	47	43 (Pacific)	3 (San Andres & Providencia)
Turkey	2002	34	57	52	67	77 (Eastern Anatolia)	41 (Aegean)
Vietnam	1998	45	71	63	91	96 (Rur. N. Central Coast)	45 (Hanoi and Ho Chi Minh City)

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Latvia, FYR Macedonia, Poland (1998), Romania, Serbia and Montenegro.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie wojewodship, which contains five urban counties—Warsaw, Radom, Plock, Siedlce, Ostroleka.

Russian Fed.: data for Ingushetiya Republic are not available for 1999.

Turkey: "Capital" contains estimates for Ankara and Istanbul, and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

— = not available.

Country	Year	Contribution to poverty (%), \$PPP 4.30/day				Regional contributions poverty (%), \$PPP 4.30/day	
		Capital	Other urban	All urban	Rural	Maximum	Minimum
Macedonia, FYR	2002	31	31	62	39	—	—
Macedonia, FYR	2003	29	38	67	33	—	—
Moldova	1998	15	19	34	66	—	—
Moldova	1999	16	19	36	64	—	—
Moldova	2000	17	20	36	64	—	—
Moldova	2001	16	19	35	65	—	—
Moldova	2002	15	19	35	65	—	—
Moldova	2003	16	19	35	65	—	—
Poland	1998	2	44	46	54	7 (Katowice)	1 (Chelmno)
Poland	1999	4	41	45	55	10 (Wielkopolskie)	3 (Lubuskie)
Poland	2000	5	43	47	53	10 (Mazowieckie)	3 (Lubuskie)
Poland	2001	5	43	48	52	10 (Mazowieckie)	3 (Opolskie)
Poland	2002	6	42	48	52	12 (Mazowieckie)	3 (Lubuskie)
Romania	1998	8	41	49	51	20 (North-East)	8 (Bucharest)
Romania	1999	8	41	49	51	19 (North-East)	8 (Bucharest)
Romania	2000	8	42	50	50	19 (North-East)	8 (Bucharest)
Romania	2001	8	38	46	54	20 (North-East)	8 (Bucharest)
Romania	2002	7	38	46	54	19 (North-East)	7 (Bucharest)
Romania	2003	7	36	43	57	19 (North-East)	7 (Bucharest)
Russian Fed.	1997	3	67	69	31	5 (Moscow oblast)	0 (Magadan oblast)
Russian Fed.	1998	3	69	72	28	5 (Moscow oblast)	0 (Magadan oblast)
Russian Fed.	1999	5	66	71	29	5 (Moscow)	0 (Krasnoyarsk territory)
Russian Fed.	2000	6	66	71	29	6 (Moscow)	0 (Krasnoyarsk territory)
Russian Fed.	2001	5	63	68	32	5 (Moscow)	0 (Evenkiyskiy Aut. Reg.)
Russian Fed.	2002	5	60	66	34	5 (Moscow)	0 (Evenkiyskiy Aut. Reg.)
Serbia & Montenegro	2002	19	35	54	46	25 (Vojvodina)	9 (East Serbia)
Tajikistan	1999	6	15	22	78	—	—
Tajikistan	2003	9	18	26	74	—	—
Ukraine	2002	3	58	61	39	8 (Donetska)	0 (Sevastopol)
Ukraine	2003	3	55	58	42	8 (Donetska)	0 (Sevastopol)
Uzbekistan	2000/01	7	28	35	65	12 (Samarkand)	10 (Bukhara)
Uzbekistan	2002	5	27	32	68	11 (Samarkand)	3 (Navoi)
Uzbekistan	2003	4	28	32	68	12 (Fergana)	3 (Navoi)
Colombia	2003	5	42	48	52	27 (Atlantica)	0 (San Andres & Providencia)
Turkey	2002	9	46	55	45	19 (Marmara)	9 (Aegean)
Vietnam	1998	4	13	17	83	18 (Rur. Mekong River Delta)	4 (Hanoi and Ho Chi Minh City)

**TABLE 4**  
**Poverty Profile: Demographic Dimension**

Country	Year	Poverty rate by age (%), \$PPP 2.15/day			Poverty rate by gender of HH head (%), \$PPP 2.15/day		Poverty rate by number of children in HH (%), \$PPP 2.15/day		
		Children (<16 y.o.)	Adults (17–65)	Elderly (>65 y.o.)	Male	Female	No children	One or two	Three
Albania	2002	30	21	19	18	13	5	17	43
Armenia	1998/99	62	56	54	52	54	40	56	67
Armenia	2001	64	58	57	54	55	43	59	70
Armenia	2002	59	53	52	50	51	41	55	63
Armenia	2003	54	49	47	46	42	34	48	65
Azerbaijan	2002	6	5	5	4	3	1	4	8
Azerbaijan	2003	5	4	4	3	2	1	4	6
Belarus	1998	11	7	6	6	8	7	10	26
Belarus	1999	9	6	5	6	6	5	8	22
Belarus	2000	8	4	3	4	5	4	7	28
Belarus	2001	4	3	2	3	3	3	4	15
Belarus	2002	3	2	1	1	2	1	2	10
Bosnia & Herzegovina	2001	6	4	5	4	2	3	4	10
Bosnia & Herzegovina	2004	—	—	—	4	3	3	5	—
Bulgaria	1995	6	3	3	2	3	2	2	26
Bulgaria	2001	13	7	5	5	5	3	7	36
Bulgaria	2003	8	4	2	3	3	2	5	28
Estonia	2000	6	4	3	3	4	3	5	11
Estonia	2001	6	4	3	3	4	3	5	10
Estonia	2002	6	4	3	3	4	3	6	8
Estonia	2003	6	5	4	4	5	4	5	8
Georgia	1997	49	43	44	41	37	33	44	57
Georgia	1998	49	40	41	38	35	30	43	59
Georgia	1999	56	48	48	43	42	37	48	72
Georgia	2000	60	51	51	48	46	38	53	74
Georgia	2001	62	53	53	50	47	39	55	79
Georgia	2002	55	47	50	44	45	38	50	66
Georgia	2003	57	49	53	46	45	39	51	71
Hungary	1998	3	1	0	1	1	0	1	7
Hungary	1999	2	1	0	1	0	0	1	5
Hungary	2000	3	1	0	1	0	0	1	5
Hungary	2001	2	1	0	1	0	0	1	4
Hungary	2002	1	0	0	—	—	0	0	42
Kazakhstan	2001	38	29	18	26	18	9	25	54
Kazakhstan	2002	33	24	14	22	14	7	21	49
Kazakhstan	2003	28	19	11	18	10	5	17	46
Kyrgyz Rep.	2000	85	74	71	75	55	40	72	93
Kyrgyz Rep.	2001	82	70	62	72	55	37	69	90
Kyrgyz Rep.	2002	81	68	53	70	50	29	69	91
Kyrgyz Rep.	2003	80	66	51	67	36	20	64	90
Latvia	2002	4	3	2	2	2	2	2	7
Latvia	2003	5	3	2	2	2	1	3	13
Lithuania	1998	4	2	1	1	2	1	3	8
Lithuania	1999	6	3	2	2	3	1	3	13
Lithuania	2000	7	3	2	3	3	1	4	17
Lithuania	2001	7	4	2	3	3	2	4	14

Country	Year	Structure of poverty by age (%), \$PPP 2.15/day			Structure of poverty by gender of HH head (%), \$PPP 2.15/day		Structure of poverty by number of children in HH (%), \$PPP 2.15/day		
		Children (<16 y.o.)	Adults (17–65)	Elderly (>65 y.o.)	Male	Female	No children	One or two	Three
Albania	2002	41	52	7	91	9	9	48	43
Armenia	1998/99	34	59	8	72	28	27	49	24
Armenia	2001	30	61	9	73	27	34	49	17
Armenia	2002	29	62	9	72	28	33	52	15
Armenia	2003	29	63	8	73	27	31	53	16
Azerbaijan	2002	37	57	7	79	21	13	48	39
Azerbaijan	2003	34	58	8	87	13	12	55	33
Belarus	1998	31	56	13	39	61	72	27	1
Belarus	1999	30	55	15	40	60	72	26	1
Belarus	2000	30	56	14	39	61	73	26	1
Belarus	2001	26	59	15	46	54	76	24	1
Belarus	2002	27	57	16	41	59	76	23	1
Bosnia & Herzegovina	2001	27	60	13	84	16	50	35	15
Bosnia & Herzegovina	2004	—	—	—	77	23	90	10	—
Bulgaria	1995	33	56	12	73	27	48	31	21
Bulgaria	2001	31	58	11	77	23	40	41	18
Bulgaria	2003	30	63	7	72	28	43	46	11
Estonia	2000	28	61	11	41	59	53	38	9
Estonia	2001	28	62	10	43	57	52	41	7
Estonia	2002	27	62	11	47	53	52	42	6
Estonia	2003	22	63	15	44	56	63	34	4
Georgia	1997	25	62	13	67	33	45	44	10
Georgia	1998	25	61	14	68	32	47	43	10
Georgia	1999	24	63	13	66	34	50	41	9
Georgia	2000	26	62	12	65	35	42	48	10
Georgia	2001	24	62	13	67	33	42	48	10
Georgia	2002	22	63	15	66	34	47	45	8
Georgia	2003	24	62	14	69	31	45	45	10
Hungary	1998	44	52	4	76	24	25	41	34
Hungary	1999	44	50	6	81	19	39	31	30
Hungary	2000	46	53	1	88	12	20	48	32
Hungary	2001	48	50	1	95	5	4	59	37
Hungary	2002	66	56	2	—	—	19	24	57
Kazakhstan	2001	37	58	4	63	37	18	52	30
Kazakhstan	2002	37	59	5	61	39	17	54	29
Kazakhstan	2003	37	59	4	63	37	14	54	31
Kyrgyz Rep.	2000	42	53	5	73	27	16	48	36
Kyrgyz Rep.	2001	42	53	4	70	30	14	49	36
Kyrgyz Rep.	2002	41	55	4	72	28	13	54	33
Kyrgyz Rep.	2003	41	55	4	79	21	11	54	36
Latvia	2002	27	63	10	38	62	55	35	10
Latvia	2003	31	61	8	35	65	41	46	13
Lithuania	1998	36	58	6	41	59	30	56	15
Lithuania	1999	41	52	7	47	53	25	54	21
Lithuania	2000	39	54	7	46	54	32	47	20
Lithuania	2001	36	59	5	48	52	37	47	16

(Table continues on the following page.)

TABLE 4 (continued)

## Poverty Profile: Demographic Dimension

Country	Year	Poverty rate by age (%), \$PPP 2.15/day			Poverty rate by gender of HH head (%), \$PPP 2.15/day		Poverty rate by number of children in HH (%), \$PPP 2.15/day		
		Children (<16 y.o.)	Adults (17–65)	Elderly (>65 y.o.)	Male	Female	No children	One or two	Three
Lithuania	2002	7	4	3	3	3	2	4	17
Lithuania	2003	6	3	2	2	3	2	3	14
Macedonia, FYR	2002	6	4	2	3	1	1	4	9
Macedonia, FYR	2003	6	4	2	3	2	1	4	9
Moldova	1998	74	65	64	63	58	52	68	83
Moldova	1999	85	76	79	77	68	66	80	94
Moldova	2000	84	74	77	74	65	64	79	92
Moldova	2001	78	67	71	67	58	57	73	87
Moldova	2002	66	52	54	51	45	39	60	80
Moldova	2003	53	40	38	38	32	27	47	68
Poland	1998	3	1	0	1	1	0	1	6
Poland	1999	4	1	1	1	1	0	1	7
Poland	2000	4	2	1	1	1	0	2	7
Poland	2001	5	2	1	2	1	0	2	9
Poland	2002	5	2	1	2	2	0	2	9
Romania	1998	22	12	7	9	8	4	12	43
Romania	1999	29	17	11	13	12	7	18	55
Romania	2000	32	18	10	14	12	7	20	61
Romania	2001	27	14	9	11	10	6	14	58
Romania	2002	26	14	8	11	9	5	14	54
Romania	2003	21	11	7	8	7	4	11	47
Russian Fed.	1997	13	9	8	10	7	4	10	25
Russian Fed.	1998	18	12	11	12	9	6	14	32
Russian Fed.	1999	26	19	20	19	16	12	22	43
Russian Fed.	2000	21	15	17	15	12	9	17	40
Russian Fed.	2001	—	—	—	—	—	—	—	—
Russian Fed.	2002	13	8	8	9	6	4	9	27
Serbia & Montenegro	2002	7	5	8	6	5	5	5	18
Tajikistan	1999	92	90	89	88	87	61	84	92
Tajikistan	2003	76	72	72	69	61	39	61	78
Ukraine	2002	6	3	1	2	2	1	4	19
Ukraine	2003	2	1	1	1	1	0	2	5
Uzbekistan	2000/01	58	51	48	50	39	20	42	63
Uzbekistan	2002	45	40	35	38	27	15	33	49
Uzbekistan	2003	50	45	40	43	29	15	38	56
Colombia	2003	8	4	5	4	4	2	3	11
Turkey	2002	29	16	14	14	16	5	12	41
Vietnam	1998	49	36	37	38	30	20	32	59

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: — = not available.

Country	Year	Structure of poverty by age (%), \$PPP 2.15/day			Structure of poverty by gender of HH head (%), \$PPP 2.15/day		Structure of poverty by number of children in HH (%), \$PPP 2.15/day		
		Children (<16 y.o.)	Adults (17–65)	Elderly (>65 y.o.)	Male	Female	No children	One or two	Three
Lithuania	2002	35	57	8	49	51	39	42	18
Lithuania	2003	35	56	9	41	59	45	38	16
Macedonia, FYR	2002	34	61	6	92	8	16	55	28
Macedonia, FYR	2003	34	60	6	87	13	18	55	27
Moldova	1998	31	60	9	66	34	44	46	10
Moldova	1999	29	60	11	67	33	48	44	8
Moldova	2000	28	60	12	66	34	52	40	7
Moldova	2001	28	59	13	65	35	53	41	6
Moldova	2002	29	58	13	62	38	50	44	7
Moldova	2003	28	60	12	63	37	47	45	7
Poland	1998	51	46	3	69	31	14	37	49
Poland	1999	51	46	4	63	37	10	40	50
Poland	2000	46	51	3	61	39	15	44	40
Poland	2001	46	52	2	65	35	17	42	42
Poland	2002	43	55	2	58	42	17	46	37
Romania	1998	38	57	5	78	22	29	46	25
Romania	1999	35	59	7	77	23	34	46	20
Romania	2000	35	59	6	79	21	32	49	20
Romania	2001	35	59	7	77	23	33	46	21
Romania	2002	35	58	7	76	24	33	47	20
Romania	2003	35	58	7	76	24	34	45	21
Russian Fed.	1997	34	60	6	38	62	28	60	12
Russian Fed.	1998	32	61	7	35	65	32	58	10
Russian Fed.	1999	29	63	8	32	68	38	56	6
Russian Fed.	2000	29	63	9	32	68	38	55	8
Russian Fed.	2001	—	—	—	—	—	—	—	—
Russian Fed.	2002	30	63	8	32	68	34	58	8
Serbia & Montenegro	2002	14	55	31	64	36	81	16	3
Tajikistan	1999	48	48	4	83	17	5	26	69
Tajikistan	2003	45	51	4	82	18	8	30	62
Ukraine	2002	38	57	5	48	52	20	62	18
Ukraine	2003	34	57	8	42	58	27	63	10
Uzbekistan	2000/01	45	52	4	81	19	7	37	56
Uzbekistan	2002	42	54	4	82	18	8	40	52
Uzbekistan	2003	42	55	4	83	17	7	44	49
Colombia	2003	49	46	5	71	29	13	36	51
Turkey	2002	47	49	4	89	11	12	38	50
Vietnam	1998	45	49	6	78	22	13	43	44

**TABLE 5**  
**Poverty Profile: Education Dimension**

Country	Year	Poverty rate by education (%), \$PPP 2.15/day (adults, >15 y.o.)				
		None/ unfinished primary	Primary/ basic	Secondary general	Secondary special	Tertiary
Albania	2002	12	27	14	11	3
Armenia	1998/99	56	58	57	55	41
Armenia	2001	69	62	61	56	44
Armenia	2002	48	57	58	51	40
Armenia	2003	63	58	52	47	35
Azerbaijan	2002	8	6	4	5	4
Azerbaijan	2003	8	5	4	4	3
Belarus	1998	7	11	10	8	4
Belarus	1999	6	9	8	7	3
Belarus	2000	4	6	6	5	2
Belarus	2001	4	5	4	3	1
Belarus	2002	2	3	2	2	0
Bosnia & Herzegovina	2001	5	6	4	2	5
Bosnia & Herzegovina	2004	—	—	—	—	—
Bulgaria	1995	7	4	1	0	1
Bulgaria	2001	16	9	2	3	1
Bulgaria	2003	14	5	2	1	0
Estonia	2000	8	6	4	4	1
Estonia	2001	4	6	4	4	1
Estonia	2002	6	6	4	4	1
Estonia	2003	8	7	3	5	1
Georgia	1997	—	—	—	—	—
Georgia	1998	44	48	44	38	30
Georgia	1999	54	55	51	51	38
Georgia	2000	59	59	55	53	41
Georgia	2001	62	62	57	55	40
Georgia	2002	61	57	51	49	33
Georgia	2003	66	62	56	48	33
Hungary	1998	2	1	0	1	0
Hungary	1999	2	1	0	0	0
Hungary	2000	2	1	0	0	0
Hungary	2001	1	1	0	0	0
Hungary	2002	1	0	0	0	0
Kazakhstan	2001	25	32	36	24	13
Kazakhstan	2002	23	27	31	19	9
Kazakhstan	2003	19	22	26	14	7
Kyrgyz Rep.	2000	80	75	80	69	56
Kyrgyz Rep.	2001	67	71	75	67	49
Kyrgyz Rep.	2002	66	72	74	62	48
Kyrgyz Rep.	2003	92	65	74	57	41
Latvia	2002	14	4	3	1	0
Latvia	2003	7	5	3	2	0
Lithuania	1998	4	4	3	...	1
Lithuania	1999	4	4	4	...	1
Lithuania	2000	5	4	4	...	1
Lithuania	2001	7	5	5	...	1
Lithuania	2002	7	6	4	...	1
Lithuania	2003	8	5	2	4	0

Country	Year	Structure of Poverty by Education (%), \$PPP 2.15/day (adults, >15 y.o.)				
		None/ unfinished primary	Primary/ basic	Secondary general	Secondary special	Tertiary
Albania	2002	1	77	13	8	1
Armenia	1998/99	2	23	44	19	12
Armenia	2001	3	15	44	26	13
Armenia	2002	2	14	48	25	12
Armenia	2003	2	14	49	25	11
Azerbaijan	2002	3	20	47	21	10
Azerbaijan	2003	2	21	47	21	10
Belarus	1998	16	13	27	37	7
Belarus	1999	8	18	32	35	6
Belarus	2000	8	16	32	38	6
Belarus	2001	12	17	28	37	6
Belarus	2002	8	24	29	35	3
Bosnia & Herzegovina	2001	32	7	46	5	11
Bosnia & Herzegovina	2004	—	—	—	—	—
Bulgaria	1995	61	24	7	4	4
Bulgaria	2001	51	28	5	14	2
Bulgaria	2003	41	39	6	12	2
Estonia	2000	2	35	17	41	4
Estonia	2001	1	40	19	36	4
Estonia	2002	1	40	18	38	3
Estonia	2003	1	38	14	43	4
Georgia	1997	—	—	—	—	—
Georgia	1998	5	11	43	30	11
Georgia	1999	5	11	42	22	20
Georgia	2000	6	11	42	22	20
Georgia	2001	5	12	43	21	18
Georgia	2002	6	11	45	20	18
Georgia	2003	6	14	45	18	16
Hungary	1998	25	43	3	28	1
Hungary	1999	30	46	1	23	0
Hungary	2000	26	49	1	24	0
Hungary	2001	24	56	2	18	1
Hungary	2002	35	33	5	28	0
Kazakhstan	2001	7	15	43	29	7
Kazakhstan	2002	8	17	43	27	5
Kazakhstan	2003	7	16	45	26	5
Kyrgyz Rep.	2000	2	13	54	22	9
Kyrgyz Rep.	2001	1	14	52	24	9
Kyrgyz Rep.	2002	2	15	56	18	10
Kyrgyz Rep.	2003	1	16	56	18	9
Latvia	2002	7	52	22	18	0
Latvia	2003	2	55	22	19	2
Lithuania	1998	49	34	11	...	11
Lithuania	1999	44	37	14	...	14
Lithuania	2000	39	42	14	...	14
Lithuania	2001	40	42	14	...	14
Lithuania	2002	47	37	11	...	11
Lithuania	2003	6	49	27	16	3

(Table continues on the following page.)

TABLE 5 (continued)

## Poverty Profile: Education Dimension

Country	Year	Poverty rate by education (%), \$PPP 2.15/day (adults, >15 y.o.)				
		None/ unfinished primary	Primary/ basic	Secondary general	Secondary special	Tertiary
Macedonia, FYR	2002	0	5	2	0	1
Macedonia, FYR	2003	2	4	3	2	1
Moldova	1998	70	75	68	58	40
Moldova	1999	83	84	79	73	53
Moldova	2000	81	81	77	70	54
Moldova	2001	72	76	70	63	41
Moldova	2002	59	61	55	46	28
Moldova	2003	46	47	42	33	18
Poland	1998	1	2	0	1	0
Poland	1999	2	2	0	1	0
Poland	2000	2	3	1	2	0
Poland	2001	1	3	0	2	0
Poland	2002	2	3	1	2	0
Romania	1998	17	15	8	9	1
Romania	1999	23	22	12	14	1
Romania	2000	24	23	13	15	1
Romania	2001	23	20	8	11	1
Romania	2002	22	19	7	11	1
Romania	2003	18	16	5	8	1
Russian Fed.	1997	...	7	8	6	3
Russian Fed.	1998	...	14	17	13	8
Russian Fed.	1999	...	17	19	15	10
Russian Fed.	2000	...	14	15	12	7
Russian Fed.	2001	—	—	—	—	—
Russian Fed.	2002	...	7	8	6	3
Serbia & Montenegro	2002	11	7	1	4	1
Tajikistan	1999	91	91	91	88	79
Tajikistan	2003	75	76	75	63	50
Ukraine	2002	2	3	3	...	9
Ukraine	2003	2	2	1	...	0
Uzbekistan	2000/01	57	51	58	43	30
Uzbekistan	2002	46	40	45	33	20
Uzbekistan	2003	48	44	52	37	24
Colombia	2003	13	7	2	0	0
Turkey	2002	29	17	7	6	1
Vietnam	1998	43	37	31	...	50

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Kyrgyz Rep.: individuals reporting incomplete higher education are included in "secondary general" category. Lithuania 1998–2002; Ukraine, Vietnam: separation of secondary education into secondary general and secondary special was not possible. Russian Federation 1997–2000: "Primary/basic" includes individuals with none/unfinished primary education; 2002: only 5 people reported to have "none/unfinished primary" education.  
 — = not available.  
 ... = negligible.

Country	Year	Structure of Poverty by Education (%), \$PPP 2.15/day (adults, >15 y.o.)				
		None/ unfinished primary	Primary/ basic	Secondary general	Secondary special	Tertiary
Macedonia, FYR	2002	0	76	22	0	1
Macedonia, FYR	2003	0	63	32	2	2
Moldova	1998	17	24	34	19	6
Moldova	1999	16	24	34	20	7
Moldova	2000	15	26	35	18	7
Moldova	2001	14	26	36	17	6
Moldova	2002	14	28	38	15	5
Moldova	2003	14	30	40	10	5
Poland	1998	3	46	3	48	1
Poland	1999	3	47	2	47	0
Poland	2000	3	47	3	46	1
Poland	2001	1	49	2	47	1
Poland	2002	1	49	3	46	1
Romania	1998	26	32	23	18	1
Romania	1999	25	34	22	19	1
Romania	2000	23	33	23	21	0
Romania	2001	27	36	17	20	1
Romania	2002	27	38	15	20	1
Romania	2003	26	39	14	20	0
Russian Fed.	1997	...	7	43	40	11
Russian Fed.	1998	...	7	40	40	13
Russian Fed.	1999	...	6	38	40	16
Russian Fed.	2000	...	6	40	40	14
Russian Fed.	2001	...	—	—	—	—
Russian Fed.	2002	...	5	46	38	12
Serbia & Montenegro	2002	41	28	2	28	1
Tajikistan	1999	13	18	46	17	6
Tajikistan	2003	7	20	58	9	6
Ukraine	2002	2	34	6	—	6
Ukraine	2003	3	35	5	—	5
Uzbekistan	2000/01	5	16	57	16	5
Uzbekistan	2002	4	16	56	19	5
Uzbekistan	2003	3	15	59	18	5
Colombia	2003	25	57	18	0	0
Turkey	2002	33	60	5	1	0
Vietnam	1998	50	11	0	...	0

TABLE 6

## Poverty Profile: Labor Market

Country	Year	Poverty rate by labor market status (%), \$PPP 2.15/day (adults, >15 y.o.)					
		Wage employee	Self-employed	Unemployed	Retired	Student	Inactive in working age
Albania	2002	13	24	31	16	12	23
Armenia	1998/99	49	45	67	60	50	60
Armenia	2001	47	52	69	59	53	62
Armenia	2002	45	51	63	52	45	57
Armenia	2003	38	53	51	49	43	54
Azerbaijan	2002	4	...	3	5	4	7
Azerbaijan	2003	3	...	3	5	4	6
Belarus	1998	7	6	17	7	8	13
Belarus	1999	6	6	13	6	7	10
Belarus	2000	5	4	12	4	5	9
Belarus	2001	3	3	7	3	4	7
Belarus	2002	2	2	5	2	2	4
Bosnia & Herzegovina	2001	2	3	8	4	2	6
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	1	0	10	3	0	10
Bulgaria	2001	2	4	16	4	2	17
Bulgaria	2003	2	2	12	3	2	11
Estonia	2000	2	2	12	4	5	7
Estonia	2001	3	2	11	3	4	9
Estonia	2002	2	1	12	3	5	8
Estonia	2003	3	2	10	4	6	8
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	38	47	56	56	44	54
Georgia	2000	45	51	58	58	46	60
Georgia	2001	44	54	61	59	47	61
Georgia	2002	39	49	49	52	40	53
Georgia	2003	—	—	—	—	—	—
Hungary	1998	—	—	—	—	—	—
Hungary	1999	—	—	—	—	—	—
Hungary	2000	1	0	0	1	0	1
Hungary	2001	0	0	3	0	1	3
Hungary	2002	0	0	1	0	0	1
Kazakhstan	2001	19	35	39	19	29	37
Kazakhstan	2002	16	29	37	15	25	33
Kazakhstan	2003	12	24	31	13	21	30
Kyrgyz Rep.	2000	—	—	—	—	—	—
Kyrgyz Rep.	2001	—	—	—	—	—	—
Kyrgyz Rep.	2002	56	80	75	54	69	75
Kyrgyz Rep.	2003	49	81	69	54	67	76
Latvia	2002	1	3	9	2	2	6
Latvia	2003	1	3	9	2	2	8
Lithuania	1998	2	...	6	1	2	4
Lithuania	1999	2	...	8	2	2	6
Lithuania	2000	3	...	8	2	2	5
Lithuania	2001	3	...	11	2	3	7
Lithuania	2002	3	...	6	4	4	8
Lithuania	2003	1	6	9	2	3	7

Country	Year	Structure of poverty by labor market status (%), \$PPP 2.15/day (adults, >15 y.o.)					
		Wage employee	Self-employed	Unemployed	Retired	Student	Inactive in working age
Albania	2002	12	41	11	13	3	20
Armenia	1998/99	23	21	17	17	5	17
Armenia	2001	20	14	21	21	6	18
Armenia	2002	21	15	20	21	6	17
Armenia	2003	20	18	15	20	7	20
Azerbaijan	2002	54	...	0	17	3	29
Azerbaijan	2003	46	...	0	21	6	27
Belarus	1998	50	5	10	21	6	8
Belarus	1999	50	6	8	21	5	10
Belarus	2000	51	5	9	20	5	11
Belarus	2001	46	4	8	22	5	14
Belarus	2002	44	5	11	21	7	13
Bosnia & Herzegovina	2001	9	7	10	24	4	47
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	21	2	30	29	0	18
Bulgaria	2001	10	3	41	23	2	21
Bulgaria	2003	17	10	24	16	3	30
Estonia	2000	28	2	23	20	11	17
Estonia	2001	30	1	22	16	10	20
Estonia	2002	27	1	23	17	14	19
Estonia	2003	35	1	15	19	14	16
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	20	41	10	15	7	7
Georgia	2000	20	44	8	13	7	8
Georgia	2001	18	46	9	12	7	7
Georgia	2002	17	38	9	12	6	18
Georgia	2003	—	—	—	—	—	—
Hungary	1998	—	—	—	—	—	—
Hungary	1999	—	—	—	—	—	—
Hungary	2002	46	2	0	0	1	51
Hungary	2001	16	0	21	6	9	48
Hungary	2002	17	0	31	19	6	28
Kazakhstan	2001	22	27	20	11	11	10
Kazakhstan	2002	23	28	17	11	12	10
Kazakhstan	2003	25	27	13	11	13	10
Kyrgyz Rep.	2000	—	—	—	—	—	—
Kyrgyz Rep.	2001	—	—	—	—	—	—
Kyrgyz Rep.	2002	28	38	5	9	13	7
Kyrgyz Rep.	2003	24	37	4	10	15	9
Latvia	2002	19	5	34	25	7	10
Latvia	2003	23	7	31	19	5	14
Lithuania	1998	61	...	15	8	5	11
Lithuania	1999	53	...	20	11	5	11
Lithuania	2000	56	...	20	10	6	8
Lithuania	2001	50	...	23	9	7	10
Lithuania	2002	47	...	18	11	10	13
Lithuania	2003	18	19	17	16	11	19

(Table continues on the following page.)

TABLE 6 (continued)

## Poverty Profile: Labor Market

Country	Year	Poverty rate by labor market status (%), \$PPP 2.15/day (adults, >15 y.o.)					
		Wage employee	Self-employed	Unemployed	Retired	Student	Inactive in working age
Macedonia, FYR	2002	2	1	6	2	...	6
Macedonia, FYR	2003	2	2	5	2	...	6
Moldova	1998	62	67	72	65	62	76
Moldova	1999	74	81	78	79	71	80
Moldova	2000	71	82	85	76	68	76
Moldova	2001	63	74	71	70	65	67
Moldova	2002	47	59	71	54	46	52
Moldova	2003	—	—	—	—	—	—
Poland	1998	1	1	4	1	1	3
Poland	1999	1	1	5	1	1	3
Poland	2000	1	1	7	1	2	4
Poland	2001	1	2	6	1	2	3
Poland	2002	1	2	7	1	2	3
Romania	1998	6	17	23	9	23	6
Romania	1999	7	25	28	13	29	9
Romania	2000	8	25	30	15	34	10
Romania	2001	10	21	23	10	26	7
Romania	2002	9	21	24	10	26	7
Romania	2003	7	16	21	8	20	5
Russian Fed.	1997	8	10	17	8	9	—
Russian Fed.	1998	10	11	20	11	13	—
Russian Fed.	1999	17	17	29	19	21	—
Russian Fed.	2000	14	10	24	15	17	—
Russian Fed.	2001	—	—	—	—	—	—
Russian Fed.	2002	7	7	16	7	8	—
Serbia & Montenegro	2002	3	6	10	5	2	12
Tajikistan	1999	91	88	93	90	85	90
Tajikistan	2003	72	68	79	74	61	74
Ukraine	2002	2	1	5	2	4	6
Ukraine	2003	1	1	2	1	3	0
Uzbekistan	2000/01	—	—	—	—	—	—
Uzbekistan	2002	—	—	—	—	—	—
Uzbekistan	2003	—	—	—	—	—	—
Colombia	2003	3	5	5	0	3	7
Turkey	2002	12	21	13	5	11	18
Vietnam	1998	28	40	30	33	17	28

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Azerbaijan, Lithuania 1998-2002: "Wage employee" contains data for both wage employee and self-employed (disaggregation was not possible).

FYR Macedonia 2002-2003: "Inactive in working age" includes students (disaggregation was not possible).

Moldova, Poland, and Romania: ILO definition of labor force is used.

Russian Federation 1997-2000, 2002: Working pensioners were assumed to be wage employees. Not possible to estimate inactive in working age.

— = not available; ... = negligible.

Country	Year	Structure of poverty by labor market status (%), \$PPP 2.15/day (adults, >15 y.o.)					
		Wage employee	Self-employed	Unemployed	Retired	Student	Inactive in working age
Macedonia, FYR	2002	13	5	25	9	...	49
Macedonia, FYR	2003	15	9	19	6	...	47
Moldova	1998	45	10	4	28	4	9
Moldova	1999	43	15	3	29	4	6
Moldova	2000	40	18	3	30	4	5
Moldova	2001	37	21	2	31	5	4
Moldova	2002	33	25	3	31	4	3
Moldova	2003	—	—	—	—	—	—
Poland	1998	24	16	17	13	9	20
Poland	1999	21	19	19	14	11	18
Poland	2000	20	10	27	12	11	19
Poland	2001	21	13	27	9	11	19
Poland	2002	20	10	29	9	14	17
Romania	1998	17	39	13	6	15	11
Romania	1999	15	43	13	6	12	11
Romania	2000	15	40	14	6	14	11
Romania	2001	27	31	11	5	16	10
Romania	2002	27	29	11	5	17	11
Romania	2003	28	29	10	6	16	11
Russian Fed.	1997	55	1	21	14	9	—
Russian Fed.	1998	53	1	20	17	9	—
Russian Fed.	1999	54	0	17	19	10	—
Russian Fed.	2000	54	0	17	18	11	—
Russian Fed.	2001	—	—	—	—	—	—
Russian Fed.	2002	53	2	18	16	11	—
Serbia & Montenegro	2002	17	7	17	31	2	27
Tajikistan	1999	31	16	9	8	6	29
Tajikistan	2003	31	20	3	8	5	34
Ukraine	2002	31	0	25	18	12	13
Ukraine	2003	34	20	8	2	36	0
Uzbekistan	2000/01	—	—	—	—	—	—
Uzbekistan	2002	—	—	—	—	—	—
Uzbekistan	2003	—	—	—	—	—	—
Colombia	2003	17	38	7	0	4	33
Turkey	2002	18	37	1	2	4	39
Vietnam	1998	10	77	1	6	3	4

TABLE 7

## Poverty Profile: Health Dimension

Country	Year	Morbidity rate (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	4	12	16	14	15	14
Armenia	1998/99	19	17	17	21	18	18
Armenia	2001	17	13	12	15	15	14
Armenia	2002	18	11	13	16	14	14
Armenia	2003	14	10	10	14	10	11
Azerbaijan	2002	—	—	—	—	—	—
Azerbaijan	2003	—	—	—	—	—	—
Belarus	1998	—	—	—	—	—	—
Belarus	1999	—	—	—	—	—	—
Belarus	2000	—	—	—	—	—	—
Belarus	2001	—	—	—	—	—	—
Belarus	2002	—	—	—	—	—	—
Bosnia & Herzegovina	2001	14	24	26	26	24	23
Bosnia & Herzegovina	2004	17	20	18	18	17	18
Bulgaria	1995	6	10	13	9	9	10
Bulgaria	2001	10	15	15	14	14	15
Bulgaria	2003	20	14	12	17	12	14
Estonia	2000	—	—	—	—	—	—
Estonia	2001	—	—	—	—	—	—
Estonia	2002	—	—	—	—	—	—
Estonia	2003	—	—	—	—	—	—
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	—	—	—	—	—	—
Georgia	2000	25	18	17	22	18	19
Georgia	2001	14	14	11	16	10	13
Georgia	2002	10	9	8	11	7	9
Georgia	2003	11	7	9	12	8	9
Hungary	1998	—	—	—	—	—	—
Hungary	1999	—	—	—	—	—	—
Hungary	2000	—	—	—	—	—	—
Hungary	2001	—	—	—	—	—	—
Hungary	2002	—	—	—	—	—	—
Kazakhstan	2001	18	17	11	20	9	14
Kazakhstan	2002	14	13	7	16	6	10
Kazakhstan	2003	9	13	8	15	7	11
Kyrgyz Rep.	2000	—	—	—	—	—	—
Kyrgyz Rep.	2001	—	—	—	—	—	—
Kyrgyz Rep.	2002	—	—	—	—	—	—
Kyrgyz Rep.	2003	—	—	—	—	—	—
Latvia	2002	—	—	—	—	—	—
Latvia	2003	—	—	—	—	—	—
Lithuania	1998	—	—	—	—	—	—
Lithuania	1999	—	—	—	—	—	—
Lithuania	2000	—	—	—	—	—	—
Lithuania	2001	—	—	—	—	—	—
Lithuania	2002	—	—	—	—	—	—
Lithuania	2003	—	—	—	—	—	—

Country	Year	Health care utilization rate (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	28	39	34	40	29	35
Armenia	1998/99	40	38	33	43	31	37
Armenia	2001	34	37	32	37	28	34
Armenia	2002	30	35	33	37	34	32
Armenia	2003	38	31	31	39	23	33
Azerbaijan	2002	—	—	—	—	—	—
Azerbaijan	2003	—	—	—	—	—	—
Belarus	1998	—	—	—	—	—	—
Belarus	1999	—	—	—	—	—	—
Belarus	2000	—	—	—	—	—	—
Belarus	2001	—	—	—	—	—	—
Belarus	2002	—	—	—	—	—	—
Bosnia & Herzegovina	2001	51	33	24	25	27	31
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	56	66	55	71	48	61
Bulgaria	2001	73	66	53	68	51	62
Bulgaria	2003	79	84	85	81	85	83
Estonia	2000	—	—	—	—	—	—
Estonia	2001	—	—	—	—	—	—
Estonia	2002	—	—	—	—	—	—
Estonia	2003	—	—	—	—	—	—
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	—	—	—	—	—	—
Georgia	2000	69	71	83	76	77	75
Georgia	2001	85	85	85	84	82	85
Georgia	2002	90	89	87	89	88	88
Georgia	2003	92	93	93	95	89	93
Hungary	1998	—	—	—	—	—	—
Hungary	1999	—	—	—	—	—	—
Hungary	2000	—	—	—	—	—	—
Hungary	2001	—	—	—	—	—	—
Hungary	2002	—	—	—	—	—	—
Kazakhstan	2001	50	59	47	59	47	55
Kazakhstan	2002	61	56	54	59	50	56
Kazakhstan	2003	54	55	56	56	55	55
Kyrgyz Rep.	2000	—	—	—	—	—	—
Kyrgyz Rep.	2001	—	—	—	—	—	—
Kyrgyz Rep.	2002	—	—	—	—	—	—
Kyrgyz Rep.	2003	—	—	—	—	—	—
Latvia	2002	—	—	—	—	—	—
Latvia	2003	—	—	—	—	—	—
Lithuania	1998	—	—	—	—	—	—
Lithuania	1999	—	—	—	—	—	—
Lithuania	2000	—	—	—	—	—	—
Lithuania	2001	—	—	—	—	—	—
Lithuania	2002	—	—	—	—	—	—
Lithuania	2003	—	—	—	—	—	—

(Table continues on the following page.)

TABLE 7 (continued)

## Poverty Profile: Health Dimension

Country	Year	Morbidity rate (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	—	—	—	—	—	—
Macedonia, FYR	2003	—	—	—	—	—	—
Moldova	1998	—	—	—	—	—	—
Moldova	1999	—	—	—	—	—	—
Moldova	2000	—	—	—	—	—	—
Moldova	2001	—	—	—	—	—	—
Moldova	2002	—	—	—	—	—	—
Moldova	2003	15	10	13	19	8	13
Poland	1998	—	—	—	—	—	—
Poland	1999	—	—	—	—	—	—
Poland	2000	—	—	—	—	—	—
Poland	2001	—	—	—	—	—	—
Poland	2002	—	—	—	—	—	—
Romania	1998	14	13	10	15	8	12
Romania	1999	12	14	11	16	8	12
Romania	2000	11	14	10	15	7	12
Romania	2001	10	13	10	14	8	12
Romania	2002	11	13	10	13	8	12
Romania	2003	12	15	11	15	8	13
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	43	37	32	38	35	36
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	46	38	36	39	34	38
Russian Fed.	2001	42	39	35	42	35	38
Russian Fed.	2002	37	39	33	42	33	37
Serbia & Montenegro	2002	—	—	—	—	—	—
Tajikistan	1999	10	10	8	9	7	8
Tajikistan	2003	6	9	6	8	6	7
Ukraine	2002	87	71	63	73	66	69
Ukraine	2003	—	—	—	—	—	—
Uzbekistan	2000/01	10	7	4	8	4	5
Uzbekistan	2002	7	4	2	6	2	3
Uzbekistan	2003	11	4	2	7	2	4
Colombia	2003	9	13	10	12	9	11
Turkey	2002	—	—	—	—	—	—
Vietnam	1998	38	39	43	37	50	42

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Latvia, FYR Macedonia, Poland (1998), Romania, and Serbia and Montenegro: column "Capital" includes some rural dwellings.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie vojvodship, which contains five urban counties—Warsaw, Radom, Plock, Siedlce, Ostroleka.

Russian Federation: data for Ingushetiya Republic is not available for 1999.

Turkey: "Capital" contains estimates for Ankara and Istanbul and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

Morbidity rate reference periods are: 1 month for Albania, Armenia, Bosnia & Herzegovina, Bulgaria, Colombia, Georgia, Kazakhstan, Moldova, Romania, Russian Federation, Tajikistan, Uzbekistan, and Vietnam; and 12 months for Ukraine.

— = not available.

Country	Year	Health care utilization rate (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	—	—	—	—	—	—
Macedonia, FYR	2003	—	—	—	—	—	—
Moldova	1998	—	—	—	—	—	—
Moldova	1999	—	—	—	—	—	—
Moldova	2000	—	—	—	—	—	—
Moldova	2001	—	—	—	—	—	—
Moldova	2002	—	—	—	—	—	—
Moldova	2003	67	54	45	53	52	51
Poland	1998	—	—	—	—	—	—
Poland	1999	—	—	—	—	—	—
Poland	2000	—	—	—	—	—	—
Poland	2001	—	—	—	—	—	—
Poland	2002	—	—	—	—	—	—
Romania	1998	22	19	21	21	23	20
Romania	1999	57	56	54	55	52	55
Romania	2000	64	60	59	62	53	60
Romania	2001	68	62	59	66	54	61
Romania	2002	77	63	60	66	57	63
Romania	2003	78	67	60	68	60	65
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	42	42	40	45	34	41
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	42	37	37	42	36	37
Russian Fed.	2001	31	27	28	27	29	28
Russian Fed.	2002	33	29	27	31	28	29
Serbia & Montenegro	2002	—	—	—	—	—	—
Tajikistan	1999	48	47	46	50	41	46
Tajikistan	2003	57	52	53	53	50	53
Ukraine	2002	—	—	—	—	—	—
Ukraine	2003	—	—	—	—	—	—
Uzbekistan	2000/01	49	68	72	65	67	67
Uzbekistan	2002	55	69	70	65	69	67
Uzbekistan	2003	53	65	72	60	63	65
Colombia	2003	73	70	65	78	66	69
Turkey	2002	—	—	—	—	—	—
Vietnam	1998	37	37	38	33	41	37

**TABLE 8**  
**Poverty Profile: Access to Education Dimension**

Country	Year	Primary enrollment rate, age 7–14 (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	90	92	92	93	90	92
Armenia	1998/99	98	98	98	99	96	98
Armenia	2001	98	98	98	99	96	98
Armenia	2002	99	99	98	99	99	99
Armenia	2003	98	99	98	98	98	98
Azerbaijan	2002	99	98	98	99	98	98
Azerbaijan	2003	98	99	97	99	98	98
Belarus	1998	—	—	—	—	—	—
Belarus	1999	—	—	—	—	—	—
Belarus	2000	—	—	—	—	—	—
Belarus	2001	—	—	—	—	—	—
Belarus	2002	—	—	—	—	—	—
Bosnia & Herzegovina	2001	96	97	97	99	96	97
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	90	92	87	94	77	91
Bulgaria	2001	97	96	89	99	77	93
Bulgaria	2003	99	97	94	100	90	96
Estonia	2000	99	96	96	97	95	97
Estonia	2001	95	97	97	97	96	97
Estonia	2002	98	98	97	97	96	98
Estonia	2003	99	99	99	99	99	99
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	—	—	—	—	—	—
Georgia	2000	97	98	99	99	97	98
Georgia	2001	98	97	98	99	97	98
Georgia	2002	99	96	97	97	95	97
Georgia	2003	100	99	99	100	99	99
Hungary	1998	94	94	94	97	92	94
Hungary	1999	94	94	95	94	93	94
Hungary	2000	96	94	94	97	93	94
Hungary	2001	100	100	100	100	100	100
Hungary	2002	100	100	100	100	100	100
Kazakhstan	2001	—	—	—	—	—	—
Kazakhstan	2002	91	93	92	95	91	93
Kazakhstan	2003	96	91	92	93	90	92
Kyrgyz Rep.	2000	100	99	99	99	98	99
Kyrgyz Rep.	2001	91	97	97	96	97	96
Kyrgyz Rep.	2002	99	98	96	95	96	97
Kyrgyz Rep.	2003	95	92	91	92	94	92
Latvia	2002	99	99	98	99	98	99
Latvia	2003	99	100	100	98	99	100
Lithuania	1998	—	—	—	—	—	—
Lithuania	1999	—	—	—	—	—	—
Lithuania	2000	—	—	—	—	—	—
Lithuania	2001	—	—	—	—	—	—
Lithuania	2002	98	98	97	99	97	98
Lithuania	2003	98	98	99	96	99	99

Country	Year	Secondary enrollment rate, age 15-17 (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	84	75	39	69	34	53
Armenia	1998/99	80	74	69	77	70	73
Armenia	2001	80	76	72	81	72	75
Armenia	2002	72	78	74	86	69	75
Armenia	2003	75	74	78	84	72	76
Azerbaijan	2002	93	85	84	86	89	87
Azerbaijan	2003	96	88	81	90	85	87
Belarus	1998	—	—	—	—	—	—
Belarus	1999	—	—	—	—	—	—
Belarus	2000	—	—	—	—	—	—
Belarus	2001	—	—	—	—	—	—
Belarus	2002	—	—	—	—	—	—
Bosnia & Herzegovina	2001	97	92	88	96	80	91
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	92	83	50	93	44	77
Bulgaria	2001	95	90	56	94	40	83
Bulgaria	2003	100	90	61	100	56	85
Estonia	2000	98	97	98	98	96	98
Estonia	2001	98	99	97	100	95	98
Estonia	2002	100	99	98	100	97	99
Estonia	2003	92	99	98	100	93	97
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	—	—	—	—	—	—
Georgia	2000	96	87	83	90	83	87
Georgia	2001	91	90	90	93	87	90
Georgia	2002	98	94	92	98	89	94
Georgia	2003	96	93	86	94	85	90
Hungary	1998	93	95	90	96	87	93
Hungary	1999	95	97	93	100	88	95
Hungary	2000	100	98	93	99	92	96
Hungary	2001	100	100	100	100	100	100
Hungary	2002	100	100	100	100	100	100
Kazakhstan	2001	—	—	—	—	—	—
Kazakhstan	2002	100	99	99	100	98	99
Kazakhstan	2003	100	99	100	100	100	99
Kyrgyz Rep.	2000	92	81	72	85	68	76
Kyrgyz Rep.	2001	97	82	80	88	80	83
Kyrgyz Rep.	2002	98	86	89	91	89	90
Kyrgyz Rep.	2003	97	76	88	85	83	87
Latvia	2002	94	97	98	98	94	96
Latvia	2003	97	96	96	98	91	96
Lithuania	1998	—	—	—	—	—	—
Lithuania	1999	—	—	—	—	—	—
Lithuania	2000	—	—	—	—	—	—
Lithuania	2001	—	—	—	—	—	—
Lithuania	2002	99	98	96	97	96	98
Lithuania	2003	100	100	98	100	98	99

(Table continues on the following page.)

TABLE 8 (continued)

## Poverty Profile: Access to Education Dimension

Country	Year	Primary enrollment rate, age 7–14 (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	—	—	—	—	—	—
Macedonia, FYR	2003	—	—	—	—	—	—
Moldova	1998	93	90	95	92	94	94
Moldova	1999	94	96	94	93	94	95
Moldova	2000	96	94	96	93	96	96
Moldova	2001	95	94	95	100	93	95
Moldova	2002	96	96	96	99	97	96
Moldova	2003	99	98	97	99	96	98
Poland	1998	99	98	98	98	98	98
Poland	1999	98	98	98	98	98	98
Poland	2000	97	98	98	98	98	98
Poland	2001	99	97	98	98	98	98
Poland	2002	98	98	98	98	98	98
Romania	1998	96	96	93	98	90	95
Romania	1999	94	94	92	96	89	93
Romania	2000	96	95	92	96	90	94
Romania	2001	93	94	91	94	89	93
Romania	2002	96	95	92	96	90	93
Romania	2003	94	95	92	96	89	93
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	—	—	—	—	—	—
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	—	—	—	—	—	—
Russian Fed.	2001	—	—	—	—	—	—
Russian Fed.	2002	—	—	—	—	—	—
Serbia & Montenegro	2002	100	98	98	99	97	98
Tajikistan	1999	91	94	96	97	92	95
Tajikistan	2003	88	90	91	91	87	90
Ukraine	2002	—	—	—	—	—	—
Ukraine	2003	—	—	—	—	—	—
Uzbekistan	2000/01	94	87	88	89	89	88
Uzbekistan	2002	97	96	97	97	97	97
Uzbekistan	2003	99	99	99	99	99	99
Colombia	2003	97	96	86	99	86	93
Turkey	2002	97	92	90	96	88	92
Vietnam	1998	95	96	92	95	85	92

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Latvia, FYR Macedonia, Poland (1998), Romania, and Serbia and Montenegro: column "Capital" includes some rural dwellings.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie vojvodship, which contains five urban counties—Warsaw, Radom, Plock, Siedlce, Ostroleka.

Russian Federation: data for Ingushetiya Republic is not available for 1999.

Turkey: "Capital" contains estimates for Ankara and Istanbul and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

— = not available.

Country	Year	Secondary enrollment rate, age 15-17 (%)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	—	—	—	—	—	—
Macedonia, FYR	2003	—	—	—	—	—	—
Moldova	1998	72	75	62	55	54	67
Moldova	1999	68	78	60	62	54	65
Moldova	2000	82	80	60	80	64	69
Moldova	2001	71	72	73	87	73	72
Moldova	2002	67	85	76	89	74	77
Moldova	2003	94	90	76	97	68	81
Poland	1998	100	98	95	99	94	97
Poland	1999	97	100	96	100	94	97
Poland	2000	98	98	95	99	92	97
Poland	2001	100	99	97	100	95	98
Poland	2002	99	99	98	99	97	99
Romania	1998	90	85	54	89	53	74
Romania	1999	90	91	65	95	61	81
Romania	2000	92	94	68	98	66	83
Romania	2001	95	93	68	98	61	83
Romania	2002	90	95	68	97	62	83
Romania	2003	98	95	70	96	63	84
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	91	88	64	98	80	79
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	90	90	77	85	88	86
Russian Fed.	2001	81	87	77	93	79	84
Russian Fed.	2002	76	86	76	91	66	82
Serbia & Montenegro	2002	100	98	97	99	98	98
Tajikistan	1999	65	61	64	63	58	64
Tajikistan	2003	61	64	67	73	60	66
Ukraine	2002	—	—	—	—	—	—
Ukraine	2003	—	—	—	—	—	—
Uzbekistan	2000/01	76	58	54	64	46	57
Uzbekistan	2002	84	66	71	78	67	70
Uzbekistan	2003	87	78	78	82	75	79
Colombia	2003	81	73	48	81	52	67
Turkey	2002	63	61	49	78	39	57
Vietnam	1998	77	78	56	75	42	60

**TABLE 9**  
**Poverty Profile: Infrastructure Dimension**

Country	Year	Household access to water					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	100	98	98	99	96	98
Armenia	1998/99	99	96	77	87	91	89
Armenia	2001	100	95	81	93	90	91
Armenia	2002	99	95	73	88	88	87
Armenia	2003	100	98	78	90	88	90
Azerbaijan	2002	92	76	32	68	62	62
Azerbaijan	2003	96	84	42	75	69	69
Belarus	1998	99	91	46	78	81	78
Belarus	1999	100	88	47	78	78	77
Belarus	2000	99	89	48	79	79	78
Belarus	2001	99	91	52	80	80	80
Belarus	2002	98	89	55	79	79	80
Bosnia & Herzegovina	2001	100	100	100	100	100	100
Bosnia & Herzegovina	2004	99	99	99	100	99	99
Bulgaria	1995	100	100	99	100	99	100
Bulgaria	2001	100	100	99	100	98	99
Bulgaria	2003	99	97	80	98	78	92
Estonia	2000	99	94	71	95	80	89
Estonia	2001	100	95	70	95	81	88
Estonia	2002	99	94	70	96	82	88
Estonia	2003	99	93	74	94	83	89
Georgia	1997	96	81	69	80	72	79
Georgia	1998	92	68	69	75	69	75
Georgia	1999	97	82	79	90	79	84
Georgia	2000	94	78	74	85	75	80
Georgia	2001	98	85	72	89	73	82
Georgia	2002	99	86	70	89	71	81
Georgia	2003	99	85	54	82	56	72
Hungary	1998	100	95	89	99	82	93
Hungary	1999	100	95	90	99	83	94
Hungary	2000	100	96	90	99	85	95
Hungary	2001	100	100	100	100	100	100
Hungary	2002	100	100	100	100	100	100
Kazakhstan	2001	100	96	86	95	89	92
Kazakhstan	2002	100	96	89	97	88	93
Kazakhstan	2003	100	96	87	97	89	92
Kyrgyz Rep.	2000	92	96	77	91	79	83
Kyrgyz Rep.	2001	92	96	73	88	70	81
Kyrgyz Rep.	2002	92	96	72	91	75	80
Kyrgyz Rep.	2003	87	97	77	95	82	83
Latvia	2002	97	85	56	95	64	81
Latvia	2003	98	87	59	95	66	83
Lithuania	1998	96	94	60	93	67	84
Lithuania	1999	97	93	61	93	66	84
Lithuania	2000	96	92	59	94	64	83
Lithuania	2001	98	93	62	95	69	85
Lithuania	2002	97	94	63	95	66	85
Lithuania	2003	97	91	56	95	61	82

Country	Year	Use of clean fuels for heating					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	80	60	24	56	30	41
Armenia	1998/99	58	31	7	31	28	28
Armenia	2001	51	29	16	42	24	30
Armenia	2002	54	21	17	36	24	29
Armenia	2003	61	22	13	44	19	30
Azerbaijan	2002	—	—	—	—	—	—
Azerbaijan	2003	—	—	—	—	—	—
Belarus	1998	—	—	—	—	—	—
Belarus	1999	—	—	—	—	—	—
Belarus	2000	—	—	—	—	—	—
Belarus	2001	—	—	—	—	—	—
Belarus	2002	—	—	—	—	—	—
Bosnia & Herzegovina	2001	48	8	5	22	10	14
Bosnia & Herzegovina	2004	—	—	—	—	—	—
Bulgaria	1995	90	62	9	62	40	49
Bulgaria	2001	84	46	3	57	16	37
Bulgaria	2003	95	49	9	59	26	43
Estonia	2000	—	—	—	—	—	—
Estonia	2001	—	—	—	—	—	—
Estonia	2002	—	—	—	—	—	—
Estonia	2003	—	—	—	—	—	—
Georgia	1997	—	—	—	—	—	—
Georgia	1998	—	—	—	—	—	—
Georgia	1999	—	—	—	—	—	—
Georgia	2000	—	—	—	—	—	—
Georgia	2001	—	—	—	—	—	—
Georgia	2002	—	—	—	—	—	—
Georgia	2003	—	—	—	—	—	—
Hungary	1998	96	84	63	93	54	78
Hungary	1999	95	85	63	92	55	79
Hungary	2000	94	83	63	91	57	78
Hungary	2001	95	84	63	91	55	79
Hungary	2002	95	83	63	89	56	78
Kazakhstan	2001	98	89	64	91	63	78
Kazakhstan	2002	98	93	73	94	70	85
Kazakhstan	2003	98	93	75	94	72	85
Kyrgyz Rep.	2000	—	—	—	—	—	—
Kyrgyz Rep.	2001	—	—	—	—	—	—
Kyrgyz Rep.	2002	—	—	—	—	—	—
Kyrgyz Rep.	2003	—	—	—	—	—	—
Latvia	2002	—	—	—	—	—	—
Latvia	2003	—	—	—	—	—	—
Lithuania	1998	—	—	—	—	—	—
Lithuania	1999	—	—	—	—	—	—
Lithuania	2000	—	—	—	—	—	—
Lithuania	2001	—	—	—	—	—	—
Lithuania	2002	—	—	—	—	—	—
Lithuania	2003	—	—	—	—	—	—

(Table continues on the following page.)

TABLE 9 (continued)

## Poverty Profile: Infrastructure Dimension

Country	Year	Household access to water					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	94	99	89	96	90	94
Macedonia, FYR	2003	97	99	85	97	90	94
Moldova	1998	99	54	2	46	15	29
Moldova	1999	98	55	1	50	16	29
Moldova	2000	99	56	2	49	22	30
Moldova	2001	99	57	3	46	21	30
Moldova	2002	99	52	3	48	18	29
Moldova	2003	100	54	3	43	22	30
Poland	1998	98	99	90	98	90	95
Poland	1999	98	99	91	98	92	96
Poland	2000	98	99	91	99	91	96
Poland	2001	98	99	93	99	93	97
Poland	2002	97	99	94	99	93	97
Romania	1998	85	89	18	76	36	57
Romania	1999	85	90	19	78	34	58
Romania	2000	83	89	20	78	36	58
Romania	2001	96	90	21	82	33	60
Romania	2002	85	90	20	82	31	58
Romania	2003	85	90	19	80	31	57
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	99	89	44	84	72	77
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	100	90	42	87	65	77
Russian Fed.	2001	100	90	49	90	68	80
Russian Fed.	2002	100	90	49	89	68	80
Serbia & Montenegro	2002	96	98	79	96	82	90
Tajikistan	1999	95	96	91	93	93	92
Tajikistan	2003	100	93	56	78	57	67
Ukraine	2002	100	83	23	74	56	64
Ukraine	2003	100	86	22	76	54	66
Uzbekistan	2000/01	99	85	55	78	57	68
Uzbekistan	2002	100	89	57	82	64	70
Uzbekistan	2003	100	90	60	85	65	72
Colombia	2003	99	97	52	96	70	86
Turkey	2002	97	99	85	99	84	94
Vietnam	1998	99	78	57	78	52	63

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Azerbaijan, Belarus, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Romania, Serbia & Montenegro, Ukraine, and Turkey: running/piped water.

Latvia, FYR Macedonia, Poland (1998), Romania, Serbia and Montenegro: column "Capital" includes some rural dwellings.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie vojevodship, which contains 5 urban counties—Warsaw, Radom, Plock, Siedlce, Ostroleka.

Russian Federation: data for Ingushetiya Republic is not available for 1999.

Turkey: "Capital" contains estimates for Ankara and Istanbul and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

— = not available.

Country	Year	Use of clean fuels for heating					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	—	—	—	—	—	—
Macedonia, FYR	2003	—	—	—	—	—	—
Moldova	1998	—	—	—	—	—	—
Moldova	1999	—	—	—	—	—	—
Moldova	2000	—	—	—	—	—	—
Moldova	2001	—	—	—	—	—	—
Moldova	2002	—	—	—	—	—	—
Moldova	2003	100	70	7	48	27	36
Poland	1998	—	—	—	—	—	—
Poland	1999	—	—	—	—	—	—
Poland	2000	—	—	—	—	—	—
Poland	2001	—	—	—	—	—	—
Poland	2002	—	—	—	—	—	—
Romania	1998	77	81	9	67	27	49
Romania	1999	78	81	9	69	25	49
Romania	2000	79	82	10	70	27	50
Romania	2001	94	82	13	74	26	53
Romania	2002	82	77	11	72	21	48
Romania	2003	82	76	11	71	20	47
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	—	—	—	—	—	—
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	—	—	—	—	—	—
Russian Fed.	2001	—	—	—	—	—	—
Russian Fed.	2002	—	—	—	—	—	—
Serbia & Montenegro	2002	—	—	—	—	—	—
Tajikistan	1999	77	38	4	28	10	14
Tajikistan	2003	88	56	7	33	19	24
Ukraine	2002	—	—	—	—	—	—
Ukraine	2003	—	—	—	—	—	—
Uzbekistan	2000/01	—	—	—	—	—	—
Uzbekistan	2002	—	—	—	—	—	—
Uzbekistan	2003	—	—	—	—	—	—
Colombia	2003	—	—	—	—	—	—
Turkey	2002	43	9	1	27	3	11
Vietnam	1998	—	—	—	—	—	—

TABLE 10

## Poverty Profile: Housing Dimension

Country	Year	Tenancy rights					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	88	90	97	94	94	94
Armenia	1998/99	94	86	93	93	91	92
Armenia	2001	94	90	94	94	92	93
Armenia	2002	89	93	94	92	92	92
Armenia	2003	88	90	95	92	91	91
Azerbaijan	2002	79	89	97	87	90	89
Azerbaijan	2003	80	93	97	89	92	90
Belarus	1998	30	49	75	63	45	54
Belarus	1999	36	50	77	64	47	56
Belarus	2000	58	62	78	75	56	67
Belarus	2001	59	63	75	72	56	66
Belarus	2002	58	70	75	77	62	69
Bosnia & Herzegovina	2001	75	75	84	83	66	79
Bosnia & Herzegovina	2004	86	83	89	87	78	86
Bulgaria	1995	91	93	96	95	89	93
Bulgaria	2001	91	90	92	88	89	91
Bulgaria	2003	77	87	90	86	82	87
Estonia	2000	79	86	88	85	78	84
Estonia	2001	86	88	88	87	84	87
Estonia	2002	86	88	88	91	81	87
Estonia	2003	83	89	91	91	81	88
Georgia	1997	88	77	97	91	89	89
Georgia	1998	91	80	97	92	90	91
Georgia	1999	92	81	96	91	90	91
Georgia	2000	94	92	99	96	96	96
Georgia	2001	94	95	99	97	96	97
Georgia	2002	92	93	98	95	95	95
Georgia	2003	91	89	99	94	94	95
Hungary	1998	77	89	95	93	82	89
Hungary	1999	78	90	95	93	82	89
Hungary	2000	80	89	96	93	81	90
Hungary	2001	83	89	95	92	82	90
Hungary	2002	83	89	95	93	83	90
Kazakhstan	2001	93	93	97	96	94	95
Kazakhstan	2002	90	94	98	95	96	96
Kazakhstan	2003	92	95	98	96	97	96
Kyrgyz Rep.	2000	83	92	99	94	97	95
Kyrgyz Rep.	2001	87	95	98	96	95	96
Kyrgyz Rep.	2002	88	96	98	96	96	96
Kyrgyz Rep.	2003	84	98	97	94	95	95
Latvia	2002	79	66	81	85	62	75
Latvia	2003	82	70	80	85	62	78
Lithuania	1998	88	89	85	90	81	87
Lithuania	1999	87	88	85	89	79	87
Lithuania	2000	89	88	87	91	81	88
Lithuania	2001	88	87	84	88	79	86
Lithuania	2002	85	86	84	85	79	85
Lithuania	2003	85	86	83	85	80	85

Country	Year	Overcrowded housing (more than 3 per room or less than 6 sq m per person)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Albania	2002	10	16	19	4	35	17
Armenia	1998/99	23	17	14	7	31	18
Armenia	2001	19	11	6	7	24	11
Armenia	2002	20	10	8	9	18	12
Armenia	2003	19	15	8	10	18	13
Azerbaijan	2002	7	4	11	4	14	8
Azerbaijan	2003	5	3	6	2	8	5
Belarus	1998	11	11	7	4	19	10
Belarus	1999	14	9	9	4	17	10
Belarus	2000	12	9	6	3	18	9
Belarus	2001	12	9	6	3	15	9
Belarus	2002	11	8	7	3	17	8
Bosnia & Herzegovina	2001	5	13	6	2	17	8
Bosnia & Herzegovina	2004	4	4	2	2	3	3
Bulgaria	1995	5	3	4	1	10	4
Bulgaria	2001	3	4	7	1	21	5
Bulgaria	2003	5	6	8	2	15	6
Estonia	2000	1	1	1	1	3	1
Estonia	2001	1	1	1	0	3	1
Estonia	2002	1	0	2	0	3	1
Estonia	2003	1	1	1	0	2	1
Georgia	1997	27	16	10	12	19	16
Georgia	1998	20	12	5	6	13	11
Georgia	1999	19	9	4	5	13	9
Georgia	2000	16	12	6	7	11	10
Georgia	2001	16	13	4	7	11	9
Georgia	2002	16	11	6	7	13	10
Georgia	2003	15	13	5	6	13	9
Hungary	1998	2	1	1	0	3	1
Hungary	1999	2	1	1	0	4	1
Hungary	2000	1	0	1	0	2	0
Hungary	2001	1	0	0	0	2	0
Hungary	2002	1	1	1	0	3	1
Kazakhstan	2001	8	11	16	4	27	13
Kazakhstan	2002	13	9	14	4	25	11
Kazakhstan	2003	13	8	11	3	19	9
Kyrgyz Rep.	2000	25	22	14	9	28	17
Kyrgyz Rep.	2001	24	20	14	9	27	17
Kyrgyz Rep.	2002	28	23	14	10	33	18
Kyrgyz Rep.	2003	28	20	13	7	30	17
Latvia	2002	2	2	3	0	8	3
Latvia	2003	2	1	3	0	6	2
Lithuania	1998	4	3	6	1	12	4
Lithuania	1999	4	3	5	1	8	4
Lithuania	2000	3	3	3	1	7	3
Lithuania	2001	3	3	4	0	8	3
Lithuania	2002	3	2	4	1	7	3
Lithuania	2003	3	2	3	0	7	3

(Table continues on the following page.)

TABLE 10 (continued)

## Poverty Profile: Housing Dimension

Country	Year	Tenancy rights					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	100	100	100	100	100	100
Macedonia, FYR	2003	100	100	100	100	100	100
Moldova	1998	47	78	98	80	90	85
Moldova	1999	53	81	99	80	89	87
Moldova	2000	55	82	98	80	89	87
Moldova	2001	57	80	99	83	89	88
Moldova	2002	67	86	100	87	91	91
Moldova	2003	70	91	99	90	93	92
Poland	1998	56	49	89	68	64	65
Poland	1999	56	50	89	69	65	66
Poland	2000	63	55	90	74	65	70
Poland	2001	60	53	89	73	60	68
Poland	2002	59	54	89	74	63	69
Romania	1998	93	93	95	95	90	94
Romania	1999	92	93	96	95	91	94
Romania	2000	91	94	96	95	91	95
Romania	2001	94	94	97	96	92	95
Romania	2002	94	95	97	96	93	96
Romania	2003	93	94	97	96	93	95
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	94	90	92	91	89	91
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	92	90	92	92	90	91
Russian Fed.	2001	90	90	92	89	91	90
Russian Fed.	2002	91	92	93	91	94	92
Serbia & Montenegro	2002	87	85	92	86	88	88
Tajikistan	1999	86	83	94	91	87	92
Tajikistan	2003	82	86	97	93	92	94
Ukraine	2002	74	80	97	87	81	86
Ukraine	2003	74	79	97	87	84	85
Uzbekistan	2000/01	94	91	96	94	94	95
Uzbekistan	2002	97	93	97	96	96	96
Uzbekistan	2003	95	95	98	96	96	97
Colombia	2003	55	55	64	63	60	57
Turkey	2002	62	66	89	73	77	74
Vietnam	1998	77	93	98	93	96	96

Source: World Bank staff estimates using the ECA Household Surveys Archive.

Note: Latvia, FYR Macedonia, Poland (1998), Romania, and Serbia and Montenegro: column "Capital" includes some rural dwellings.

Lithuania: column "Capital" contains estimates for the five largest cities.

Poland (1999–2002): column "Capital" includes urban dwellings of Mazowieckie vojvodship, which contains five urban counties—Warsaw, Radom, Plock, Siedce, Ostroleka.

Turkey: "Capital" contains estimates for Ankara and Istanbul and includes some rural dwellings.

Vietnam: column "Capital" contains estimates for Hanoi and Ho Chi Minh City.

— = not available.

Country	Year	Overcrowded housing (more than 3 per room or less than 6 sq m per person)					
		Capital	Other urban	Rural	Top quintile	Bottom quintile	Average
Macedonia, FYR	2002	11	7	12	4	22	10
Macedonia, FYR	2003	9	8	7	2	19	8
Moldova	1998	17	13	7	6	15	10
Moldova	1999	18	12	5	10	11	9
Moldova	2000	16	10	5	7	13	8
Moldova	2001	17	9	5	6	12	8
Moldova	2002	16	7	5	5	12	7
Moldova	2003	18	7	4	5	13	7
Poland	1998	6	5	10	1	18	7
Poland	1999	6	5	10	1	18	7
Poland	2000	6	5	9	1	20	7
Poland	2001	6	5	9	1	18	6
Poland	2002	7	5	8	1	18	6
Romania	1998	7	8	14	2	29	10
Romania	1999	7	8	15	1	32	11
Romania	2000	7	9	14	1	33	11
Romania	2001	6	7	14	1	31	10
Romania	2002	8	9	14	1	32	11
Romania	2003	8	8	14	1	30	10
Russian Fed.	1997	—	—	—	—	—	—
Russian Fed.	1998	9	13	11	8	19	12
Russian Fed.	1999	—	—	—	—	—	—
Russian Fed.	2000	8	12	12	7	21	12
Russian Fed.	2001	16	12	8	8	18	11
Russian Fed.	2002	18	10	10	7	18	11
Serbia & Montenegro	2002	4	3	2	2	6	3
Tajikistan	1999	37	36	42	26	57	40
Tajikistan	2003	36	33	32	17	50	32
Ukraine	2002	3	3	3	0	8	3
Ukraine	2003	5	4	4	1	9	4
Uzbekistan	2000/01	10	14	11	7	20	12
Uzbekistan	2002	9	10	9	7	13	9
Uzbekistan	2003	13	9	7	7	11	8
Colombia	2003	5	6	15	0	22	8
Turkey	2002	1	6	7	0	19	5
Vietnam	1998	14	21	27	20	31	25



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This report is part of a series undertaken by the Europe and Central Asia Region of the World Bank. The series draws on original data, the World Bank's operational experience, and the extensive literature on the Region. Poverty, jobs, trade, migration, and infrastructure will be among the topics covered.

"....a most interesting report. I have read it with considerable interest, and have learned a lot. It tells a clear story, and it contains a lot of interesting material."

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"The key conclusion of the report is that rapid economic growth is fundamentally important for job creation and, consequently, reducing poverty."

**Ewa Balcerowicz**, *President of the Board, Center for Social and Economic Research, Warsaw, Poland*

While the countries of Eastern Europe and the Former Soviet Union have made significant progress in reducing poverty during 1998–2003, poverty and vulnerability remain significant problems. More than 60 million are poor and more than 150 million are vulnerable. Most of the poor are the working poor. Many others face deprivations in terms of access and quality of public services. Regional inequalities both between and within countries are large. The highest levels of absolute poverty are found in the poor countries of Central Asia and the South Caucasus, but most of the region's poor and vulnerable are in middle-income countries.

*Growth, Poverty, and Inequality* examines these important issues and recommends that public policies focus on: accelerating shared growth and job creation; improving public service delivery; strengthening social protection; and enhancing the monitoring of progress in poverty reduction. This book will be especially useful for policy makers and social scientists working in the Region.



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