

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

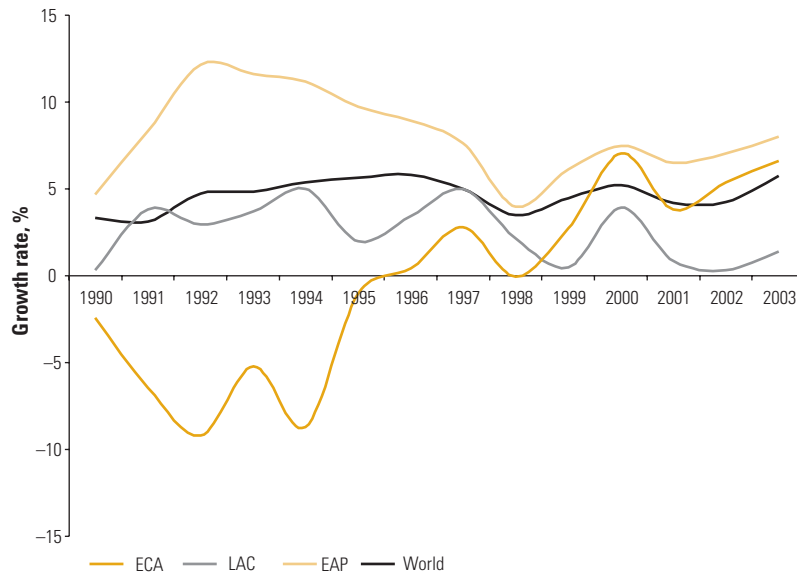
Virtually all countries in the Region experienced positive rates of growth (as measured by GDP) during 1999–2003, some at rates unprecedented in the past quarter of a century.¹ Since 1999, regional output has increased by more than 25 per cent. Not only was growth widespread but it also consistently 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.² 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.³ 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).

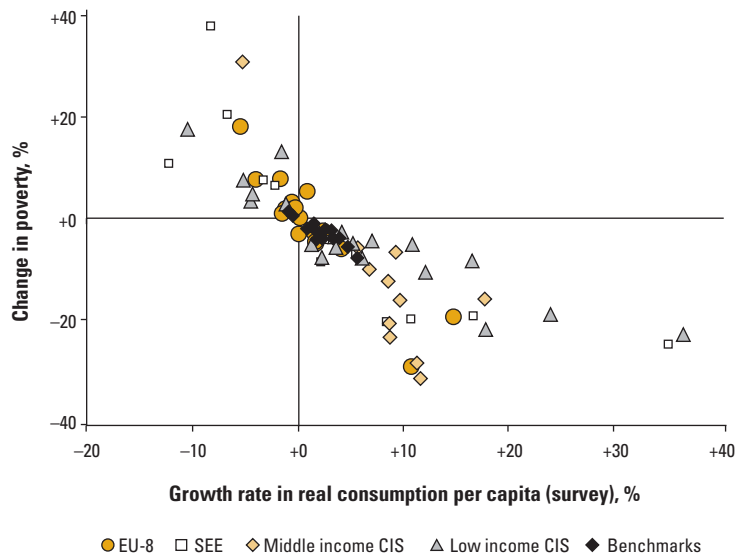
Note: All averages are population weighted.

Poverty has, in general, responded to growth in all subgroups (see figure 2.2).⁴ 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.

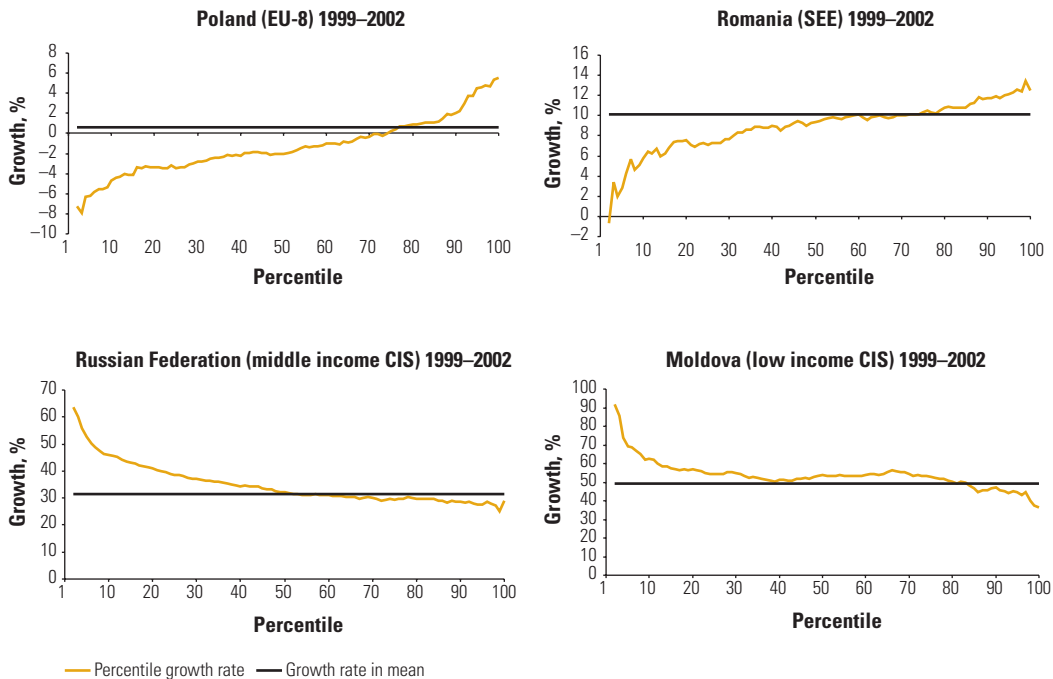
Figure 2.3 highlights the importance of the distribution of growth to the overall responsiveness of poverty to growth. Although there is

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 income⁵ *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.⁶

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

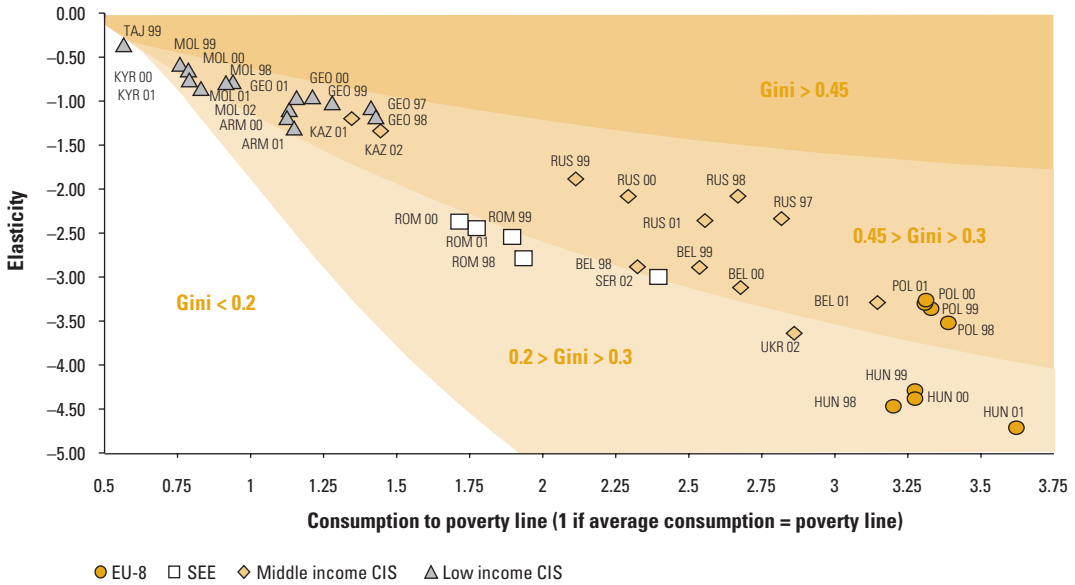


Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix, chart 1, group A for detailed description of the surveys.

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.⁷ 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.⁸ 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.

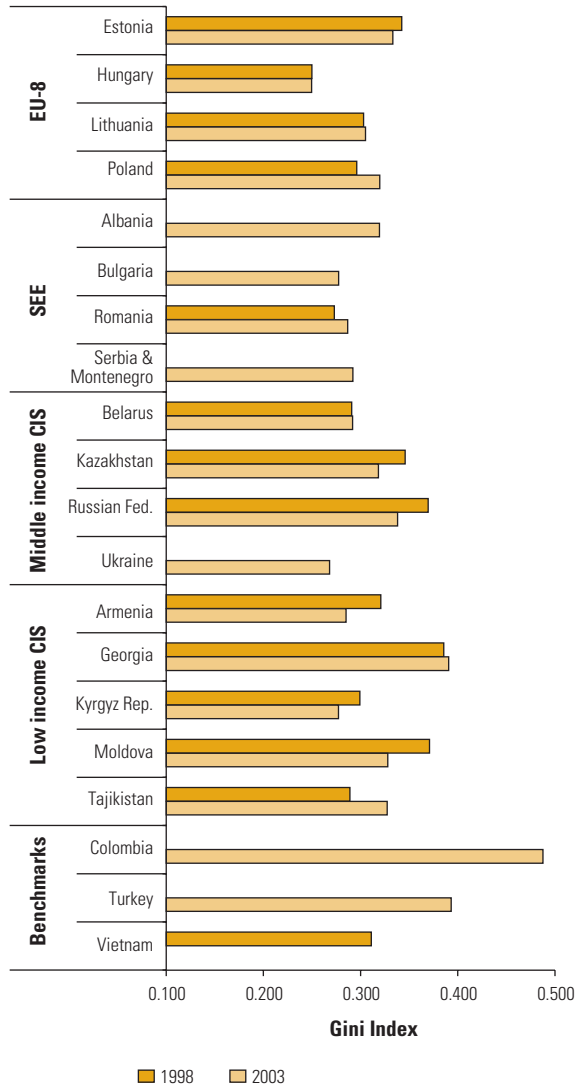
Changes in Distribution, What Happened and Why

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.⁹ 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.

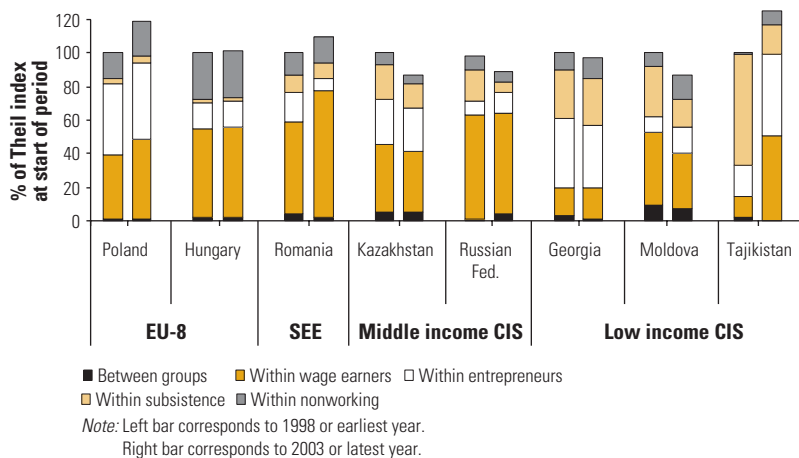
tence activities, and nonemployment (retirement, unemployment, and so on).¹⁰ The study uses the Theil entropy measure of inequality, which can be conveniently decomposed into contributions of inequality within and between groups. The share of within-group inequality is the product of inequality within 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

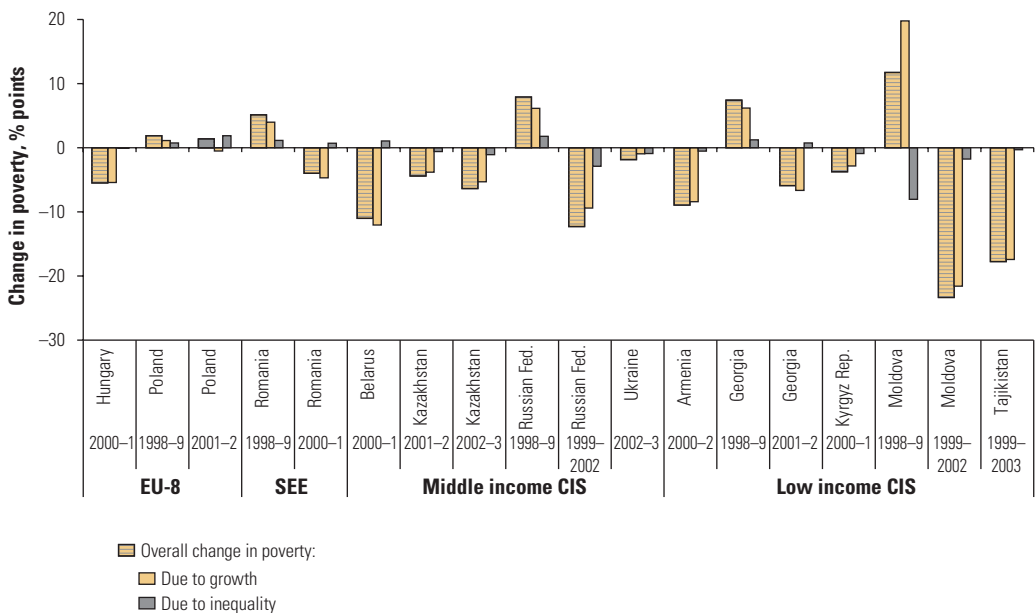
Given the importance of both growth and changes in distribution to poverty reduction, it is useful to understand the relative importance of the two factors. Figure 2.7 plots the shares of growth and changes in distribution to poverty reduction for selected growth periods since 1998. The “growth share” 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.

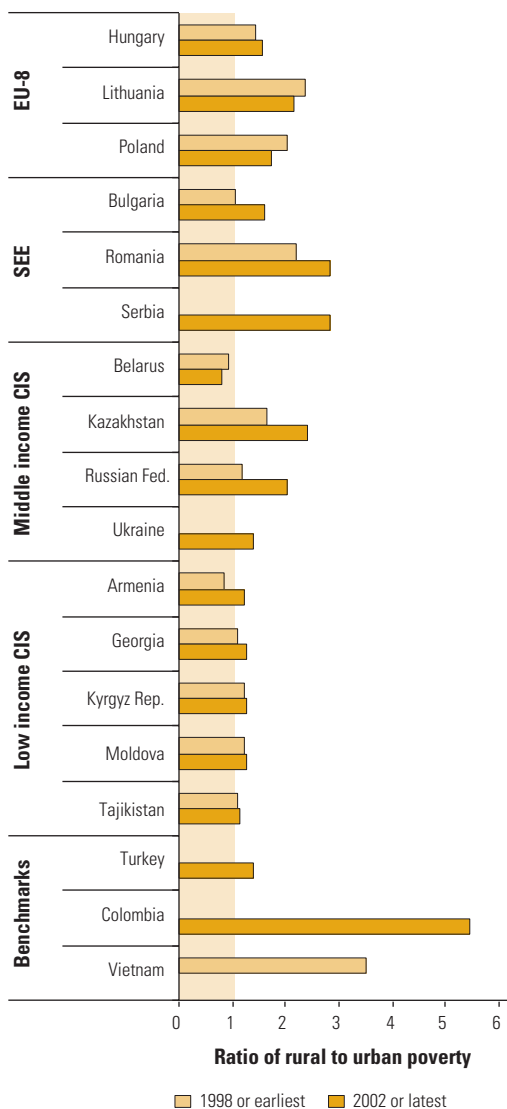
Rural-Urban and Other Subnational Differences in Poverty Reduction

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

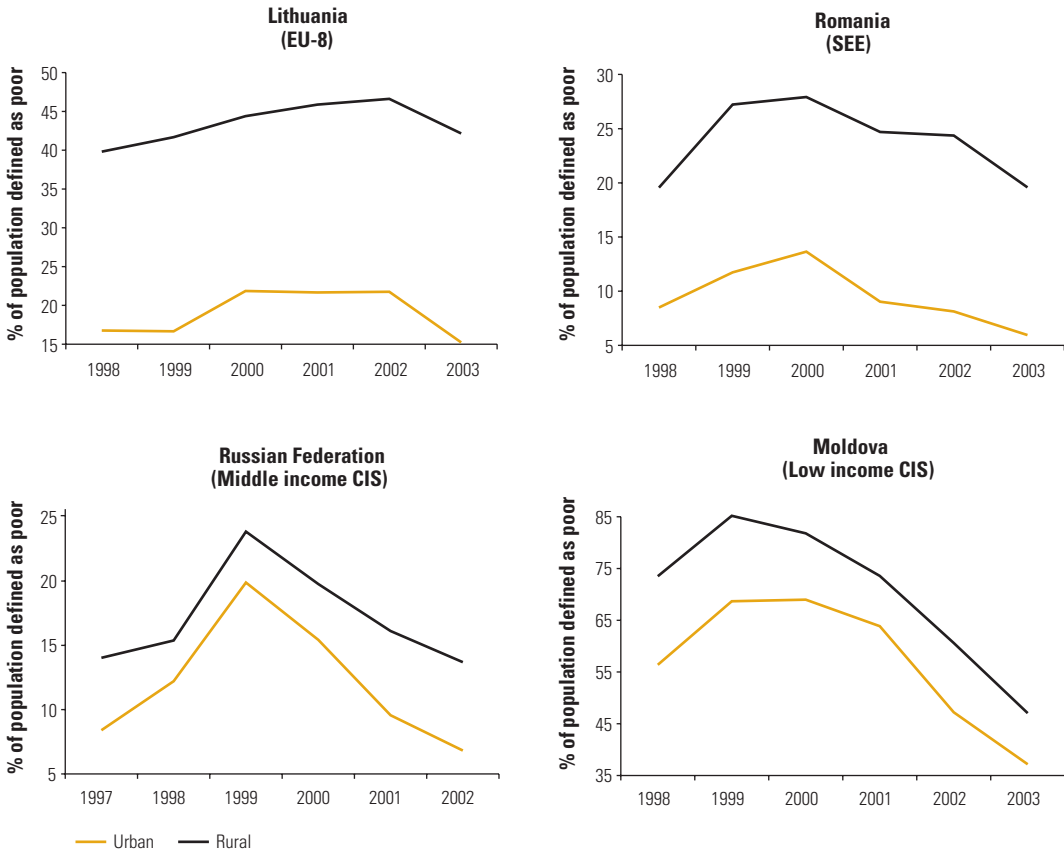


Source: World Bank staff estimates using data from ECA Household Surveys Archive; see appendix table 3 for country-level data and years used.

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.

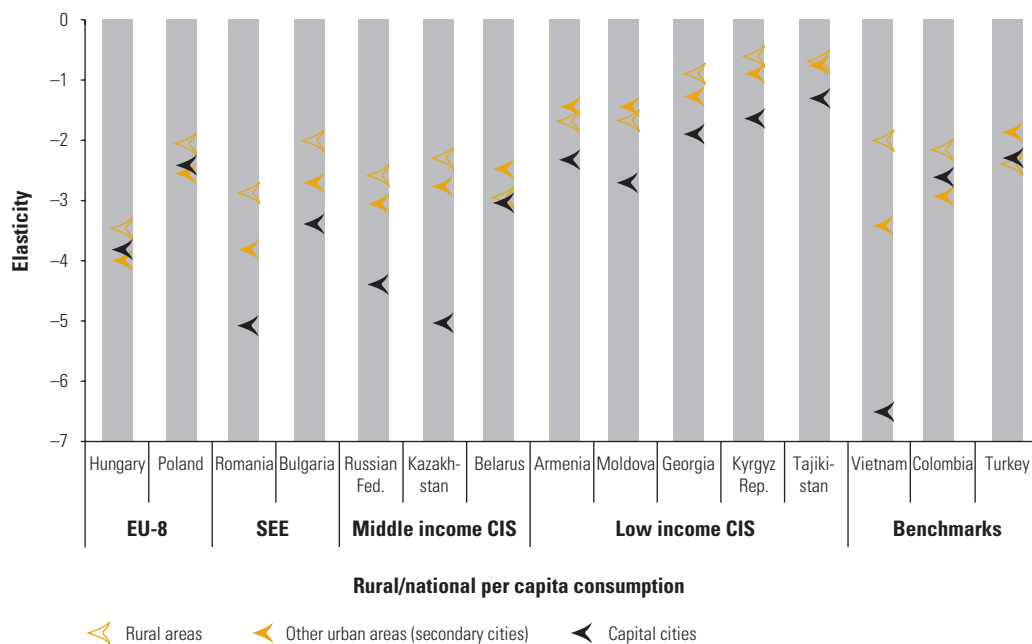
tion, although higher inequality there may diminish their potential in reducing poverty with a given growth rate. How exactly all these factors interplay can be studied with survey data.

(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.¹¹

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.

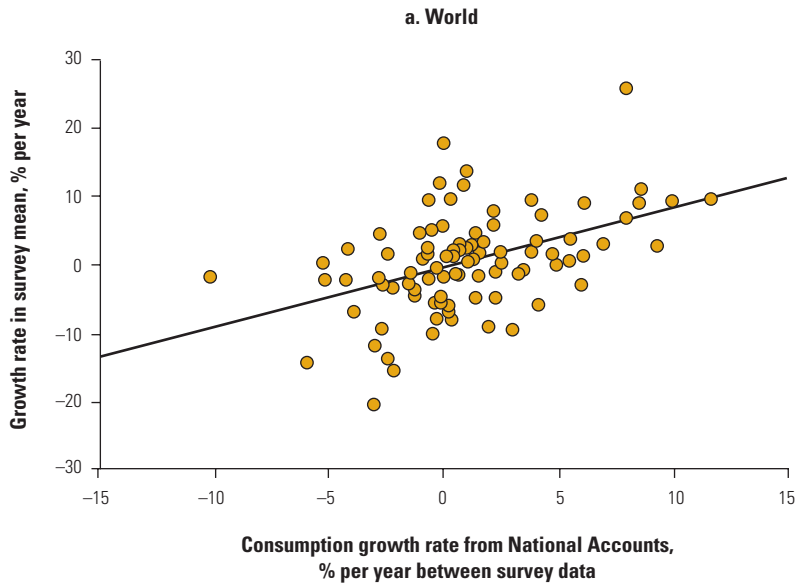
Although related in principle, the concept of consumption measured by the two sources is different. For example, survey data generally exclude consumption of goods and services by unincorporated businesses and nonprofit organizations; however, these are included in the national accounts measure of private 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 β -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

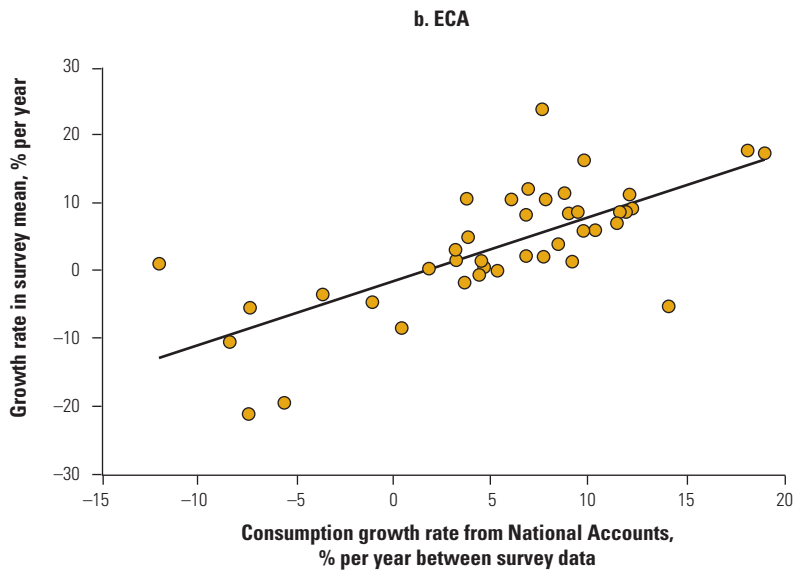
ANNEX FIGURE 1

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.

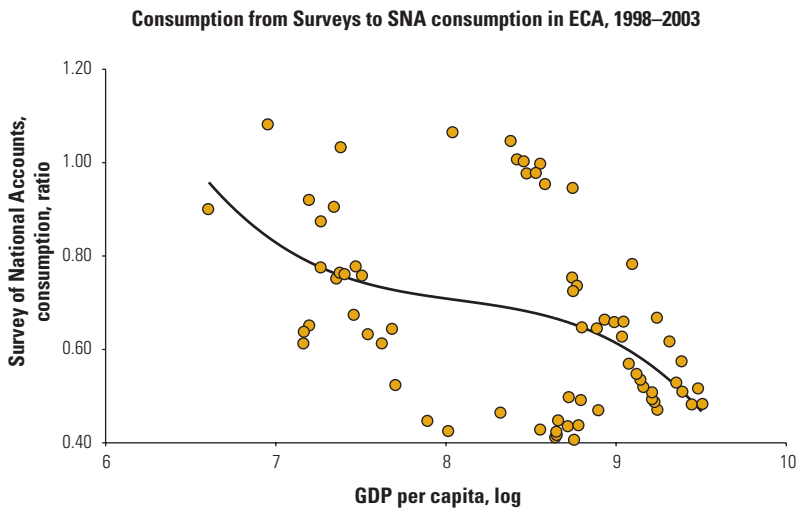
This impression of broad convergence is reinforced when the ratio of consumption measured by the two sources is examined. As argued by Deaton (2004), consumption as measured by survey data is typically found to be lower than consumption as measured by national accounts. Moreover, the ratio of the two 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).¹² 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



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.

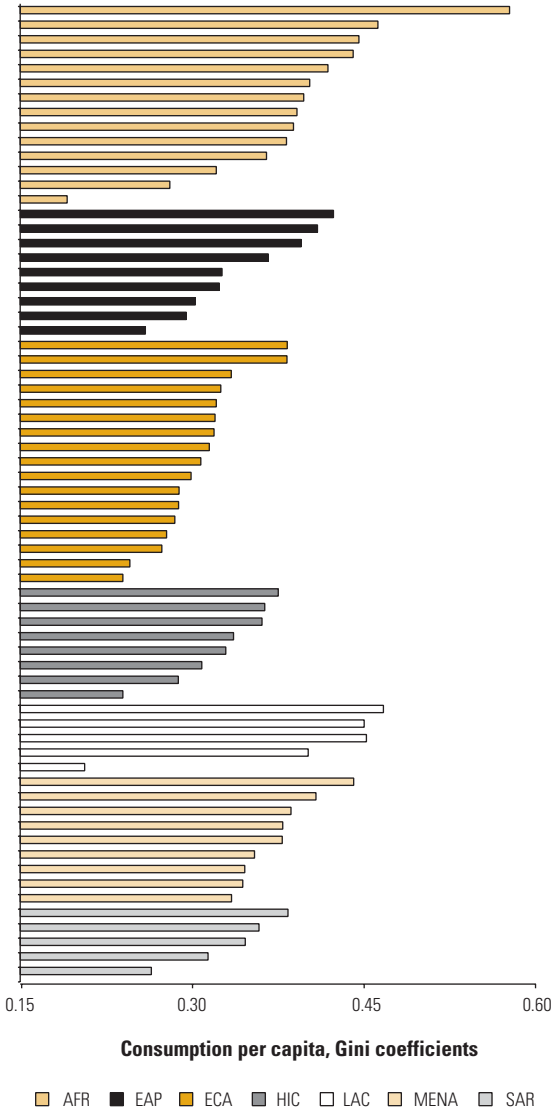
Note: EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

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; Bazen 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 σ , 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.