

- b) The “other urban areas” have poverty indicators equivalent to, or worse than, those of rural areas, including in terms of access and quality (reliability) of infrastructure.
- c) Although formal access to infrastructure and energy (e.g. utility connections) remains higher in urban areas than rural in most cases, many households, especially in secondary cities, are “infrastructure-poor” because of unreliable and deteriorated services, and these households are hidden by studies that do not examine actual quality. To fully appreciate the welfare implications of inadequate infrastructure services, it is important to take account of the different housing circumstances and options available to urban as compared to rural households.
- d) Income and infrastructure inequality are generally higher in urban than in rural areas, and highest in capital cities. Inequality may have significance for social perceptions of welfare.

It must be stressed, however, that there is no average ECA country and that the economies vary widely across all issues, although there are distinct similarities within the sub-regions (the Balkans, Caucasus, Central Asia, EU Accession, and Slavic countries).

The remainder of this report is organized as follows. Section 2 describes the data used for the empirical analysis and discusses some measurement issues. Section 3 provides an overview of the economic and demographic situation in Europe and Central Asia. The extent and nature of urban poverty in the region is then investigated in Section 4.

2. Measurement and Data Issues

2.1. Data sources

The sources of primary data were sample surveys of households within transition economies of the ECA Region. In most cases the surveys are administered by the statistical agencies within each country with technical assistance from donor organizations. The sophistication and usefulness of the household surveys undertaken in the Region have improved considerably during the 1989 - 2003 period. Most countries have a program of annual Household Budget Surveys (HBS). However the data available from this source were of poor quality until the sampling frameworks were improved in the mid to late 1990s. The HBS approach does not always allow for the calculation of welfare aggregates based on consumption so expenditures or income are used instead. Large flows in population within and among countries in the region in the early transition years also created sampling uncertainties. The most recent surveys have benefited from completion of new national censuses from 1999-2003.

This study used surveys from 20 countries in the ECA region (Table 2.1). The countries that were not included in the study include five of the EU candidate countries (the Czech Republic, Estonia, Latvia, Slovakia, Slovenia), as well as Croatia, Macedonia, Montenegro (although the more populous Serbia was included) and Ukraine. In the case of the first wave EU accession countries, data sets were not easily available and these countries were seen to be of lower priority in terms of future Bank-financed development work. Datasets of sufficient quality were not available for Croatia, Macedonia and Montenegro at the time the data were being assembled. Work on the Ukrainian dataset was not sufficiently advanced to determine the welfare (consumption) aggregate to be used. The final set of surveys that was used to provide the data used in this report is listed below. Annex 1 Measurement and Data Issues, provides more background and detail on the material presented in this chapter.

Table 2.1. Data sources by country and year

	Country	Date	Survey
1	Albania	2002	Living Standard Measurement Study
2	Armenia	2001	Integrated Living Conditions Survey
3	Azerbaijan	2001	Household Budget Survey (new design)
4	Belarus	2001	Income and Expenditure Survey (newer design)
5	Bosnia & Herzegovina	2001	Living Standard Measurement Study
6	Bulgaria	2001	Integrated Household Survey
7	Georgia	2001	Survey of Georgian Households
8	Hungary	2000	Household Budget Survey
9	Kazakhstan	2001	Household Budget Survey
10	Kosovo	2000	Living Standard Measurement Survey
11	Kyrgyz Republic	2001	Household Budget Survey
12	Lithuania	2000	Household Budget Survey
13	Moldova	2001	Household Budget Survey
14	Poland	2001	Household Budget Survey
15	Romania	2002	Family Budget Survey
16	Russia	2001	Russia Longitudinal Monitoring Study Round X
17	Serbia	2002	Poverty Household Survey
18	Tajikistan	1999	Living Standard Measurement Survey
19	Turkmenistan	1998	Living Standard Measurement Survey
20	Uzbekistan	2000	Household Budget Survey

2.2. Selected indicators of income and non-income dimensions of well-being

For the purpose of this study, three different types of indicators were constructed, each representing a different dimension of poverty. The first type of indicator refers to income poverty and economic opportunities and includes the national absolute poverty rate, the relative poverty rate, and the household-head unemployment ratio. The national absolute poverty rate refers to the percentage of households whose consumption lies below a pre-defined country--specific poverty line. The relative poverty rate corresponds to the households in the bottom quintile of national consumption per capita and is useful to assess the relative position of different groups in society. The household head unemployment ratio is the proportion of unemployed heads of household.

The second type of indicator relates to very approximate aspects of human capital and includes the incidence of activities interrupted due to health problems and the incidence of household heads with less than secondary education. These are very narrow dimensions of well-being but the advantage is that they can be easily constructed for, and compared across, a large number of countries.

The third type of indicator refers to other non-income dimensions of well-being: adequate shelter, light, heat, running water and sanitation. In urban areas where light, heat, running water and sanitation depend on access to local utilities, the surveys can be used to identify "delivery-based" indicators which show basic access to infrastructure services, level of service reliably available, living conditions and spending on payments for services. Since most of the surveys used in this study track access to network services, the data are of much less relevance for understanding living conditions in rural areas. As one example, a rural household that does not have access to piped water, may have a well in the front yard to meet its water needs.

Box 2.1: Millennium Development Goals (MDGs)

Several of the indicators used in this study are related to those mentioned in the Millennium Declaration adopted in September 2000 by the U.N. General Assembly, which set the Millennium Development Goals (MDGs) to be achieved by countries by 2015. In fact, among the MDGs, 2 include specific targets and indicators that relate directly to infrastructure and energy poverty. these are as follows:

- Goal 7 - Ensure environmental sustainability
 - Target 10 - Halve by 2015 the proportion of people without sustainable access to safe drinking water
 - Indicator 29 - Proportion of population with sustainable access to an improved water source
 - Target 11 - By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers
 - Indicator 30 - Proportion of people with access to improved sanitation
 - Indicator 31 - Proportion of people with access to secure tenure (urban/rural)
- Goal 8 - Develop a Global Partnership for Development
 - Target 18 - In cooperation with the private sector, make available the benefits of new technologies, especially information and communications
 - Indicator 47 - Telephone lines per 1,000 people

The MDGs were however mostly developed for the poorest countries in Africa and do not fit very well the situation in ECA countries, where quality, reliability and affordability of infrastructure and energy services may be more of an issue than actual provision (physical connection). ECA countries are also unusual in that for some MDGs for some countries, performance is deteriorating, not improving. A number of indicators more relevant to the region were therefore constructed for this study. Four broad types of desired indicators were identified, referring respectively to access, reliability, living conditions, and payment for services.

2.3. Measurement issues regarding infrastructure and urban poverty in household surveys

This analysis of urban poverty, including its infrastructure and energy dimensions, relies on recent Living Standards Measurement Surveys (LSMS) surveys, and when these were not available, on Household Budget Surveys (HBS) surveys. LSMS and HBS surveys have been the most frequently used quantitative instrument for poverty monitoring and analysis in the region, as they are the only surveys that contain extensive information on household income and expenditures. The preference given to LSMS over HBS surveys lies in the fact that LSMS surveys usually cover a greater variety of topics, including infrastructure and energy poverty, and receive considerable care in terms of quality control.

Despite their advantages, there are a number of problems with LSMS and HBS surveys for the purpose of a comprehensive analysis of infrastructure and urban poverty in ECA. These problems are set-out below.

2.3.1. Urban poverty may not be properly represented in sample surveys

Although LSMS and HBS surveys in ECA countries have generally robust sampling frameworks, three groups are consistently under-represented or omitted entirely from the surveys: peri-urban dwellers, those who are homeless and Internally Displaced People (IDP)/refugees. The appearance of slums in the periphery of big cities is a new - and still not well recognized - phenomenon in some countries in the ECA region. Since these peri-urban areas are not administratively part of the city, residents do not appear on the rosters of the local authorities and are excluded from sampling within the official city boundaries. Large peri-urban settlements have been reported outside Bishkek and some Albanian cities, especially Tirana, as well as in the

countries of the former Yugoslavia. Exclusion of homeless populations occurs across ECA countries, as well as the rest of the world. They are a notoriously difficult population to include in a survey. Finally, countries in the region that have experienced conflict (notably, the Caucasus and the countries of the former Yugoslavia) typically under-sample IDP/refugee populations, although these populations are generally found in urban areas. As a result of under-representation of these groups, the true level of poverty in urban areas is likely underestimated.

Peri-urban areas. These are typically not treated adequately in household surveys because they are excluded from explicit consideration when setting up the sampling strata. Formally established urban areas are covered in one strata. Rural areas are covered in one or more strata which make use of sampling units selected from around the entire country. Unless a peri-urban area happens to be chosen by random selection as one of the sampling units in the rural strata, it will not be included at all. This random inclusion in the rural sample strata does not ensure proper coverage of peri-urban issues. (For example, in Albania in the last ten years, ten percent of the national population has migrated to Tirana and is largely housed in peri-urban areas on the outskirts of the capital.)

Internal structure of the city. Similarly to the sampling problem of peri-urban areas is the issue of adequate understanding of specific sub-areas or neighborhoods within a city. Urban activities take place in such intensity, concentration, and with substantial externalities that many different household welfare situations can exist in close proximity and yet be leading to different welfare outcomes. This could be corrected through better sample strata design and higher numbers of households surveyed. Alternatively, and to prevent over-burdening the national sample, separate urban surveys could be undertaken before the poverty analysis for the country is attempted.

Capital city. A related example of the inadequacy of the traditional approach to setting up the urban strata is the problem of analysis when the capital city is combined with other urban areas in the country. Since the capital city has better access to national decision makers and international connections it is often better off than other cities. This can introduce an overall upward bias in the urban welfare measures which can mask major problems in non-capital cities. This effect is demonstrated by the analysis within this study. Most household surveys undertaken within the last three years have solved this by providing separate strata for the capital city and other urban areas. The poverty analysis work based on these surveys needs to consistently make use of this greater specificity and avoid lumping together the capital and other cities.

2.3.2. Poverty indicators are not necessarily comparable between urban and rural areas

Since there is no single definition of what is a rural and urban settlement, great care needs to be given when comparing poverty indicators from LSMS and HBS data across urban and rural areas in different countries. The choice of a particular country-specific threshold for a rural/urban setting can have a non-negligible implication for the observed incidence of income and non-income poverty by rural-urban areas and makes comparison across countries problematic.

One poverty line. Generally poverty lines are calculated for the country as a whole. A common problem with many poverty estimates derived from household surveys is that they do not take into account rural-urban price differences. In the ECA region, out of the 20 countries investigated, only 12 had a welfare aggregate and/or a poverty measure which had been adjusted for price differences between rural and urban households. Since the cost of living is usually higher in urban areas than in rural areas, in an income-based poverty measure, ignoring the relative price differences would lead to an overestimate of the true level of economic well-being in urban areas. In addition the underlying "basket" of consumption used to estimate price differences generally does not reflect the larger differences in urban and rural consumption patterns. This exacerbates the underestimation of urban and the overestimation of rural poverty. Also the regions used for the price calculations may correspond to administrative units which are inappropriate for isolating capital city, other urban, and rural differences such as whole provinces, states, or districts.

Access or connection to network-based utilities. The presence or absence of a connection to a centralized network utility does not have the same welfare implications in rural areas as it does in urban areas. In urban areas, households without connections to central water supply, central sewage, or central heating/natural gas have a lower quality of life than those with these services. However, in rural areas this may not be the case as adequate substitutes such as well water may be available. For example, no one would assume that rural households without district heating are deprived of heating. Quite the opposite, district heating (and many other network services) only make economic sense in densely populated areas. Access to district heating should never be used as a proxy for availability of heating for rural households. Furthermore, as this study shows, connection to network utilities does not mean those services are provided and care should be taken to not assume that connection means provision.

2.3.3. Poor coverage of infrastructure and energy in multi-topic questionnaires

Overall in the region, the coverage of infrastructure and energy poverty tends to be fairly poor. This is illustrated in Table 2.2 showing the availability of 26 desired indicators for 20 transition countries. Region-wide, out of the 26 desired indicators constructed for this study, only about 70 percent could be measured with recent available data. There are also large disparities across countries in terms of survey coverage of infrastructure and energy indicators. The percentage of desired indicators that could be measured ranged from 48 percent in the Belarus 2001 HBS to 89 percent in the Albania 2002 LSMS and Turkmenistan 1998 LSMS.

In general, LSMS surveys in the region provided much more comprehensive coverage of infrastructure and energy than the HBS surveys. The average coverage rate of the desired indicators was 78 percent in LSMS surveys, compared with only 64 percent in HBS surveys. The possibility to relate welfare outcomes with access to infrastructure and energy services was also much more limited in HBS than LSMS surveys. Among countries with available recent LSMS surveys, the coverage of infrastructure and energy poverty was the worst in Russia (48 percent) and the best in Albania and Turkmenistan (89 percent). Among those with HBS-type surveys only, the coverage was the poorest in Belarus (48 percent) and the most comprehensive in Georgia (85 percent).

Table 2.2. also shows great disparities in the dimensions of infrastructure and energy poverty that can be measured in the region. While most surveys provided information on the availability of infrastructure and energy services, few contained information on whether these services were reliable and paid for and even fewer provided information on the consumption of infrastructure and energy services.

Moreover, not all types of infrastructure and energy services were covered equally. In terms of availability, public transportation and electricity connections were the least well documented in the region, although for different reasons. In the case of public transportation, few surveys asked any questions and those questions were not comparable (Box 2.2). In the case of electricity, countries assume all households are connected, thus choose not to include this question. As regards reliability, information on the quality of district heating was extremely limited and even information on water and electricity was available from fewer than half the surveys. In terms of payment rates, the information provided for natural gas was extremely poor.

Table 2.2. Availability of infrastructure poverty related indicators in ECA

Indicator	% of Surveys	Indicator	% of Surveys
DELIVERY BASED INDICATORS		DEMAND BASED INDICATORS	
<u>Availability</u>		Potential demand	100%
Water connection	100%	WELFARE BASED INDICATORS	
District heating connection	100%	<u>Environmental</u>	
Natural gas connection	75%	Lacking waste water treatment	75%
Electricity connection	50%	Lacking waste disposal	35%
Telephone connection	100%	Using dirty fuels	85%
Time/distance to nearest bus stop	35%	<u>Health</u>	
Car ownership	100%	Activities interrupted by health problems	70%
<u>Reliability</u>		Education	
Potable water 24 hours per day	45%	Head of HH with less than secondary education	100%
Potable water ≤ 4 hours/day	35%	<u>Living Conditions</u>	
District heating for 3 or more months per year	25%	Crowding	95%
Electricity 24 hours per day	45%	<u>Economic Opportunities</u>	
Electricity ≤ 6 hours/day	30%	Unemployment	100%
<u>Affordability</u>		<u>Security/Disruption</u>	
Reporting any payment for central water	85%	Owning principal dwelling	100%
Reporting any payment for district heat	85%	Moved within the last five years	35%
Reporting any payment for electricity	80%		
Reporting any payment for natural gas	70%		

Source: see Table 2.1.

Another important drawback is the fact that the infrastructure module is not tailored to reflect the specific conditions that differ in urban and rural areas. Most questions in infrastructure modules relate to central connections which only makes sense in urban areas, as discussed above. In rural areas, however, central connection is not necessarily desirable for all types of services (e.g., district heating) and the absence of connections does not necessarily mean poor access to basic services, as other types of measures are usually used.

In addition to those indicators which were reasonably expected to be available, and for which some were not available (the discussion of the 26 indicators above), is another issue. This concerns the indicators that were ideally desired but for which there was little possibility, at this time, that they would be available.

In the early stages of this research some 80 ideally desired indicators were developed. Initial screening of data availability reduced this set to the 26 indicators which were used for analysis. Annex 1 provides a table of these ideally desired indicators and the original framework used to develop the set of 80, as well as discussion of the problems encountered.

Box 2.2. What happened to public transportation?

ECA countries began transition with a greater reliance on public transportation than is true in other regions. Subsequent years have seen the continued collapse of public transportation and an associated rapid motorization. Despite this background, and despite the importance of public transportation (especially for the poor), only 35 percent of surveys included the most basic indicator of public transport availability (distance to nearest bus stop). The surveys did not include questions about the use or quality of public transportation, such as number of trips or the average commuting time to work. Finally, although the surveys did include expenditures on public transportation, the large number of people who are exempted from payment or who simply do not pay makes the data of little use, since one cannot establish who rides public transportation to begin with. As a result, the authors reluctantly excluded public transportation from this study.

3. Economic Overview

The overall impact of the transition on the state of the economy of countries in the ECA region is illustrated by the large changes in the most basic economic indicators – primarily, national incomes. The degree to which national income has been affected ranges widely among transition economies. There is a sharp divergence across the region, both in terms of output and level of national poverty.

3.1. Uneven economic recovery across the region

Available data points to a large diversity across the region in the degree to which countries have recovered from the initial transition shocks. Figure 3.1 provides information on the change in real GDP level from 1989 to 2001 by countries and country groups.⁹ As Figure 3.1 presents, by the end of 2001, five of the accession countries (Poland, Slovenia, Hungary, Slovakia, Czech Republic,) out of 8, reached and even exceeded their pre-transition GDP level. The success rate among other transition countries is lower. Of the seven Balkan countries, only Albania managed to exceed its pre-transition GDP level. Among the three Slavic countries, only Belarus did so and in Central Asia, this was true only of Uzbekistan. In nine countries (Romania, Kazakhstan, FYR Macedonia, Bulgaria, Kyrgyzstan, Latvia, Lithuania, Russia, Armenia), GDP levels were about 60-80 percent of their pre-transition level. And in six countries (Azerbaijan, Tajikistan, FR Yugoslavia, Ukraine, Georgia, Moldova), GDP levels stood at only 35 to 55 percent of their 1989 levels.

Besides the large changes in overall GDP, the patterns of growth in different sectors have also differed greatly. As shown in Figure 3.2, between 1990 and 2000, in most countries in the region, there was a large decline of output in industry, manufacturing, and agriculture, while there was an increase in services. The very weak performance in agriculture (almost universally negligible or negative growth, except for Albania and the Czech Republic) explains why urban-to-rural migration during the early transition years has stopped. Economic prospects remain better in the urban areas. However, the equally dismal record in manufacturing (except in the EU accession countries of Hungary and to a lesser extent, Slovakia, Slovenia and Estonia) has meant considerable unemployment especially from retrenchment in the traditional state-owned enterprises.

⁹ For the purposes of this study, transition countries were classified into five groups: first wave EU accession countries, Balkans, Slavic, Caucasus and Central Asia. The use of these groups allows us to draw out broader patterns among countries that share similar patterns of urban development and face similar urban problems. In developing these groupings, consideration was given to factors such as urbanization, level of income and economic structure. Classification of Moldova was problematic and its inclusion with the Balkans admittedly rather arbitrary. In the case of Kazakhstan, the structure of the economy would suggest affiliation with Russia and the other Slavic countries, but Kazakhstan is less urbanized and ultimately it was included with the other Central Asian countries.