INNOCENTI SOCIAL MONITOR

CEE/CIS/Baltic States

SOCIAL MONITOR 2003

Economic growth and poverty
External public debt
Refugees and displaced persons
Intercountry adoption
HIV/AIDS

Special feature: Infant mortality

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Innocenti Social Monitor

Social Monitor 2003

The MONEE Project
CEE/CIS/Baltic States

For every child
Health, Education, Equality, Protection
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The MONEE project provides research on people's social and economic well-being in the 27 countries of Central and Eastern Europe and the Commonwealth of Independent States. The project aims to contribute to the international debate on the directions of public policy in countries of the CEE/CIS, drawing attention to emerging issues of importance for children, women and families across the region and keeping the interests of children on the agenda.

"Social Monitor 2003" is the second in an annual series, the *Innocenti Social Monitor*, the purpose of which is to follow overall socio-economic trends, particularly as they impact on children. The *Innocenti Social Monitor*, which is published in English and Russian versions, builds on the work of eight *Regional Monitoring Reports* that were produced between 1993 and 2001. These are:

1. "Public Policy and Social Conditions", 1993
2. "Crisis in Mortality, Health and Nutrition", 1994
3. "Poverty, Children and Policy: Responses for a Brighter Future", 1995
4. "Children at Risk in Central and Eastern Europe: Perils and Promises", 1997
5. "Education for All?", 1998
6. "Women in Transition", 1999
7. "Young People in Changing Societies", 2000
8. "A Decade of Transition", 2001

These are also available in both Russian and English.

The MONEE project likewise produces the annually updated *TransMONEE Database*, a menu-driven downloadable database containing a wealth of statistical information covering the period 1989 to the present on social and economic issues relevant to the welfare of children, young people and women.

In addition, the project produces *Innocenti Working Papers*, linked to the themes of the MONEE project.

Publications of the MONEE project, including this publication and the *TransMONEE Database*, can be downloaded from the UNICEF IRC website:

< www.unicef-icdc.org >

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THE UNICEF INNOCENTI RESEARCH CENTRE

The UNICEF Innocenti Research Centre in Florence, Italy, was established in 1988 to strengthen the research capability of the United Nations Children's Fund (UNICEF) and to support its advocacy for children worldwide. The Centre helps to identify and research current and future areas of UNICEF's work. Its prime objectives are to improve international understanding of issues relating to children's rights and to help facilitate the full implementation of the United Nations Convention on the Rights of the Child in industrialized and developing countries.

The Centre's publications are contributions to a global debate on child rights issues and include a wide range of opinions. For this reason, the Centre may produce publications that do not necessarily reflect UNICEF policies or approaches on some topics. These publications are produced by the Centre in order to stimulate further dialogue on child rights.

The Centre collaborates with its host institution in Florence, the Istituto degli Innocenti, in selected areas of work. Core funding for the Centre is provided by the Government of Italy, while financial support for specific projects is also provided by other governments, international institutions and private sources, including UNICEF National Committees.

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Foreword

At the United Nations Special Session on Children in May 2002, nations committed themselves to a visionary and concrete action plan to build "a world fit for children". With more than 100 million children, the 27 countries of Central and Eastern Europe and the Commonwealth of Independent States have a vital role to play in achieving this global goal.

This year's *Innocenti Social Monitor* looks at the CEE/CIS region with this global goal in mind. It tracks some key dimensions of child welfare and includes a special feature article on infant mortality. The research finds that, in several countries, the number of infant deaths is considerably higher than official figures suggest, that methods used to count births and deaths are inconsistent with best international practice, and that standards of care for pregnant women and infant children are often poor. Reducing infant deaths dramatically is an urgent priority not only in the region, but worldwide. A healthy start for mother and baby is essential to the responsible care and protection of the child.

Overall, political stability has been regained in the region, and economic reform is advancing. Armed conflict has been greatly reduced, and living standards are rising. However, the residue of the damaging trends remains. It is evident in the faces of the large numbers of children in the region living in poverty, in institutions because they lack parental care, or as refugees and displaced persons. Improving conditions for these children is a pressing concern. States need to act decisively and firmly on their responsibilities for upholding the human rights of each and every child.

There already exists a comprehensive and coherent set of international agreements to guide our collective action. Standing as a major outcome of the Special Session on Children, *A World Fit for Children* sets a global agenda for the current decade. It provides a contribution to the broader United Nations *Millennium Development Goals*, the targets of which embrace the reduction of poverty, HIV/AIDS and child mortality. It is incumbent upon States to live up to these commitments. Above all, it is critical that they steadily pursue the effective implementation of the *Convention on the Rights of the Child*, if we are to build the safe and nurturing world children need and have a right to claim.

The *Innocenti Social Monitor* offers valuable data, analyses and insights on social trends, policy directions and practices in the CEE/CIS region. At UNICEF, we trust that this year's report will further help decision makers and children's advocates find the best route forward in building "a region fit for children".

Carol Bellamy
Executive Director, UNICEF

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Key Findings

- Nearly all 27 countries in Central and Eastern Europe and the Commonwealth of Independent States have now enjoyed substantial economic growth since 1998. In some of the poorest countries, absolute poverty is falling.

- The cost of servicing public debt has increased considerably since the start of the transition in the poorest countries. In Georgia, Kyrgyzstan, Moldova and Tajikistan, at least a third of all government expenditure is needed to service this debt in 2001-2005.

- Real public expenditure on health care and education – vital for human development and the reduction of long-term disadvantage – is low in many countries. In Georgia and Tajikistan, combined public expenditure on health care and education is less than expenditure on debt service.

- There were 3 million refugees and displaced persons in the CEE/CIS at the end of 2001 according to data of the Office of the UN High Commissioner for Refugees. Although this represents a decline from 3.5 million in 1998, the numbers are still high, and the conditions that these people endure remain difficult.

- The number of intercountry adoptions from the region has increased from a very low level in 1989 to over 12,000 in 2001, a third of the world total of officially recorded intercountry adoptions to advanced industrialized countries. Bulgaria, Romania, Russia and Ukraine were the biggest 'sending' countries in 2001.

- There were an estimated 1.2 million people infected with HIV/AIDS in the region at the end of 2002, up from 1 million in 2001. Only 1 in 25 people who are registered with HIV in the CEE/CIS are receiving antiretroviral therapy, which can protect against the onset of AIDS.

- While most people become infected with HIV through injecting drug use, the heterosexual transmission of the virus is growing, as is HIV among women. In the region, there are now an estimated 140,000 women of childbearing age with HIV. This has implications for the transmission of HIV from mothers to children.

- Survey data show that infant mortality was high in the 1990s by global standards in the countries of the Caucasus and Central Asia, ranging from 36 per 1,000 live births in Armenia to 89 in Tajikistan.

- In several CIS countries, official data are likely to understate the true infant mortality rate for several reasons, including the definition of live birth that is used and poor coverage by official registration systems of births and deaths.

Overview: a region fit for children?

In May 2002, at the UN Special Session on Children, the nations of the world – including the 27 countries of Central and Eastern Europe and the Commonwealth of Independent States – committed themselves to building "a world fit for children". The session's declaration calls on nations to "put children first" in taking action on poverty, the protection of children from violence and exploitation, the provision of health care and education and the promotion of children's participation in matters that affect them. The CEE/CIS countries, after more than a decade of turbulent change, now need to grasp the opportunity to create "a region fit for children".

The dominance of state institutions in economic and social life prior to 1989 left little space for individual freedom, human diversity or civil society. The economic crisis early in the transition, exemplified by the collapse of many state enterprises, had a debilitating effect on employment, family incomes, state revenues and public services such as health care and education. At the same time, political fragmentation took place as 27 nations emerged, often bloodily, from the original eight countries. All CEE/CIS countries have struggled, with varying degrees of success, to build on the positive legacies of the past, while stemming the negative impacts of the transition, even as they have engaged in fundamental economic and social reform and, in many cases, the monumental task of nation-building.

The first *Innocenti Social Monitor*, published in 2002, looked at recent trends in incomes, population, health, education and child protection, with a special focus on two major issues of relevance to the entire region: quality of education and HIV/AIDS. "Social Monitor 2003", which contains six in-depth analyses, updates the picture on many of the issues raised in the previous Social Monitor and in the *Regional Monitoring Reports* produced by the UNICEF Innocenti Research Centre's MONEE project between 1993 and 2001. It pays special attention to problems associated with the upheavals of the transition. These problems have been particularly acute in some of the poorest countries in the CIS and in South-Eastern Europe.

The first article in this Social Monitor, on economic growth and poverty, examines the impact of the economic growth that almost every country in the region has experienced since 1998. Over this time, the proportion of people in absolute poverty has fallen even in some of the poorest countries. However, the number of people, including many children, living in poverty remains substantial. In Armenia, Georgia, Kyrgyzstan and Moldova in 2001, half the population was living below national subsistence levels.

Despite the promising recovery since the late 1990s from the deep and damaging economic decline of the early transition years, public expenditure on services such as education, health and welfare – vital for the protection of children's rights and for investment in child development – remains low, especially in the poorer countries.

The second article focuses on these poorer countries and looks at the implications of the burden of servicing external public debt. It finds, for example, that, in Georgia and Tajikistan, combined public expenditure on health care and education was less than expenditure on external debt service. In some developing countries, the high cost of public debt is often associated with under-investment in public services. It is important to monitor the level of external debt service in the poorest CIS countries so as to ensure that the debt burden does not come at the expense of other vital public expenditures.

The article on refugees and displaced persons calls attention to conditions that people endure, again many of them children, when they are driven from home and community by wars, ethnic tensions and persecution. There have been large reductions in the numbers of refugees and displaced persons in the countries of the former Yugoslavia. However, the actual numbers are still substantial, particularly in Bosnia and Herzegovina and Serbia and Montenegro, which account together for 1 million of the 3 million refugees and displaced persons in the CEE/CIS. The three countries of the Caucasus account for another million. Conditions for these people remain poor not least in terms of the education available to many refugee and displaced children.

Another significant population that remains excluded is the children who are left without parental care. Many of these children are living in institutions, although some are living with foster parents, and others are being adopted. The article on intercountry adoption examines the continuing growth in this trend, which is strongest in Kazakhstan, Russia and Ukraine, as well as in Bulgaria and Romania (although, in the latter country, a moratorium was imposed in June 2001). The article raises the question of whether intercountry adoption is genuinely an option of 'last resort' or a practice that is becoming an integral part of the child welfare system in some of these countries.

The article on HIV/AIDS updates the focus on this disease in "Social Monitor 2002". The epidemic has particularly affected Russia, Ukraine and the Baltic States. It has not yet emerged on a large scale in Central and South-Eastern Europe or in the Caucasus and Central Asia, but there is little room for complacency. The epidemic continued to spread rapidly in 2002, with the proportion of new infections attributable to sexual contact also rising. Infections among women are growing, as are mother-to-child infections. Meanwhile, only 1 in 25 persons with HIV in the region are receiving antiretroviral therapy, which can protect against the onset of AIDS.

One of the most commonly used measures of child welfare and, indeed, national well-being, is the infant mortality rate, which is the focus of the feature article in this *Innocenti Social Monitor*. The analysis uses information from household surveys to argue that actual infant mortality rates, particularly in the countries of the Caucasus and Central Asia, are high, considerably higher than official data show. This is despite widespread literacy and extensive health care systems, two factors that are often associated with low rates of infant mortality. The article points to the need for more accurate reporting of infant deaths, including adoption of the internationally recognized definition of 'live birth', as well as more vigorous implementation of protocols for maternal and infant health care, better training of medical staff and health education for parents.

The experience of the transition has varied greatly across the region. In 2003, more than a decade after the end of the communist period, the divergence in the paths taken by different countries has never been more apparent. Five countries in Central Europe and the three Baltic States are scheduled to join the European Union in 2004 and are soon likely to be counted among the world's advanced industrialized democracies. At the same time, the poorest CIS countries are showing characteristics associated with developing nations and, for a longer time than was originally thought, might need substantial, continuous international assistance to foster economic and human development. As the articles in this *Innocenti Social Monitor* show, each and every country faces the challenge of enhancing children's rights and the responsibility to 'put children first' in their economic, social and political priorities.

The Innocenti Social Monitor *is an annual publication of the UNICEF Innocenti Research Centre's MONEE project. Together with a forthcoming companion series, the* Innocenti Social Report, *it replaces the Centre's* Regional Monitoring Report *series published between 1993 and 2001 and will continue to identify emerging issues important for children and families in the region.*

1 Economic growth, poverty and long-term disadvantage

In most of the 27 countries of Central and Eastern Europe and the Commonwealth of Independent States, there have now been three or more consecutive years of positive economic growth. Living standards are rising, and poverty is falling. This is a welcome turnaround from the difficulties that people faced in the 1990s. It also represents a springboard for progress towards the United Nations Millennium Development Goals, which focus on poverty-related issues such as the reduction of absolute deprivation and child and maternal mortality and the raising of enrolments in basic education.[1] Yet, in many countries, living standards are still low; income inequality is high, and large numbers of children are trapped in poverty. Moreover, public expenditure on services such as health care and education, vital for decreasing long-term disadvantage and for the promotion of children's well-being, remains inadequate.

The polarization between the richest and poorest parts of the CEE/CIS region is becoming more entrenched. In 2004, five countries in Central Europe and the three Baltic States will join the European Union, thereby enhancing reform, trade and investment and the free movement of people and ideas. In 2007, Bulgaria and Romania are scheduled to join.[2] In the context of EU membership, the prospects are good in these 10 countries for economic growth, improved public services and greater democracy.

It is now accepted that long-term aid and assistance are needed if some of the other countries are to make significant social and economic progress. In 2002, the World Bank and other international financial institutions launched the CIS-7 Initiative with the governments of seven of the poorest countries in the region: six of the eight countries in the Caucasus and Central Asia, plus Moldova.[3] The purpose of this initiative is to promote economic growth and poverty reduction through improvements in the business and investment climate, more efficient social-sector spending, and structural reform. In spite of recent progress, these low-income countries display many characteristics traditionally associated with developing countries, including inadequate public expenditure, high public debt and large numbers of people in absolute poverty.

This article examines trends in poverty, inequality and disadvantage across the region: in countries that are scheduled to join the EU, countries covered by the CIS-7 Initiative and other countries in South-Eastern Europe and the CIS. There is an urgent need across the region to translate economic growth into greater poverty reduction. There is also an ongoing need to invest more in high-quality public services, especially education and health care, that facilitate economic growth, foster people's long-term well-being and support children's development.

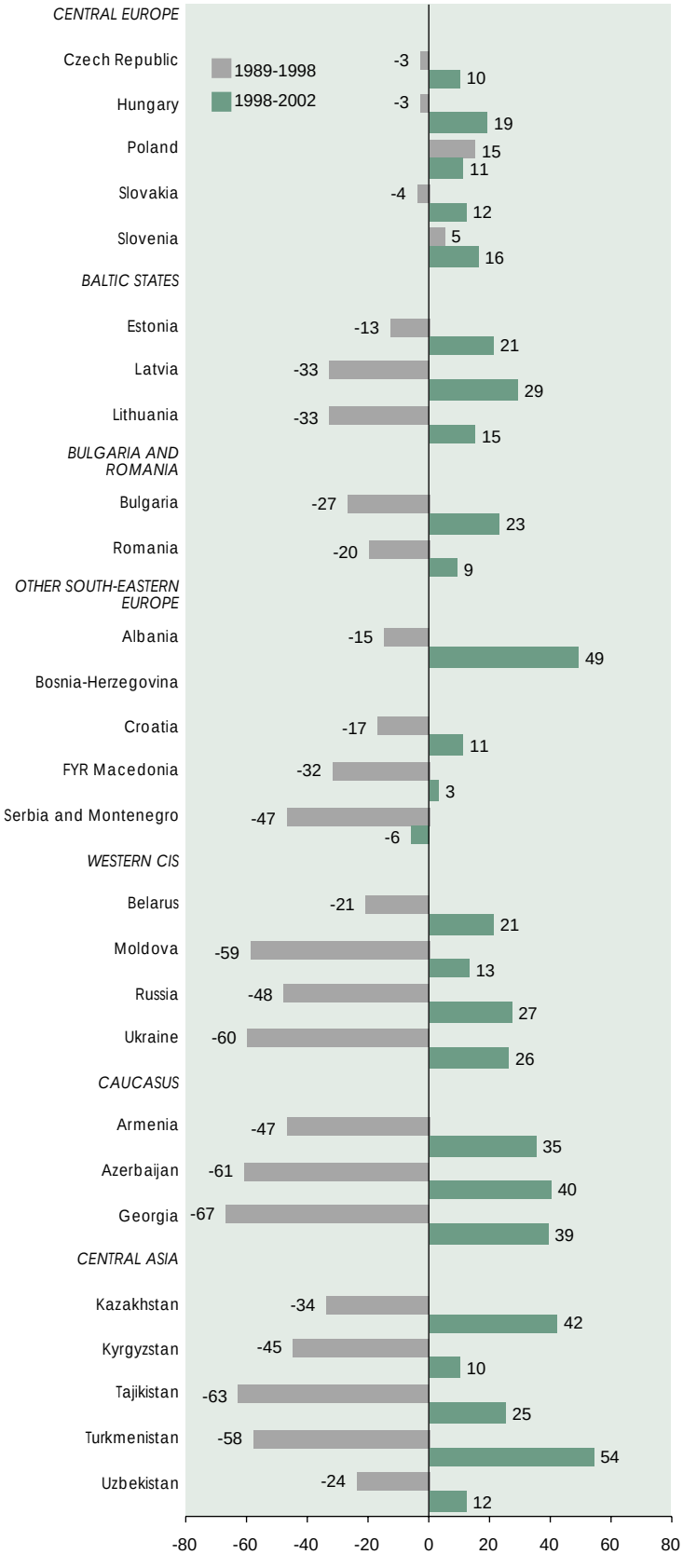
1.1 National income is growing

Since the late 1990s, national income has been growing in nearly all the 27 countries of the region. Figure 1.1 summarizes changes in national income, expressed as a share of per capita gross domestic product in 1989. The grey bars show the change between 1989 and 1998. The green bars show the change between 1998 and 2002. In Kyrgyzstan, for example, a decrease by 45 per cent in GDP between 1989 and 1998 was followed by an increase by 10 per cent between 1998 and 2002, meaning that per capita GDP was 35 per cent smaller in 2002 relative to 1989.[4]

The countries are organized into seven subregions. (The tables in the Statistical Annex are similarly organized.) The economies of the five Central European countries that are due to join the EU in 2004 performed the best in the region, with growth from the mid-1990s compensating for early transition shocks. The Baltic States, also due to join the EU in 2004, experienced larger declines in national income during the early 1990s than was the case in the five Central European countries, but have since recovered well. The European Bank for Reconstruction and Development states that economic and institutional reforms are well advanced in all these eight countries.[5] Bulgaria and Romania, both scheduled

Figure 1.1

Change in real per capita GDP (per cent of 1989 level)



Source: Statistical Annex, Tables 1.1 and 10.1.

Note: Calculated on the basis of mid-year population. Growth data for 2002 are preliminary. Population data for 2002 are projections. No data are available for Bosnia and Herzegovina on a 1989 basis.

to join the EU in 2007, did not begin to enjoy consistent growth until the turn of the millennium. The experience of other countries in South-Eastern Europe has been mixed. Crisis and conflict have retarded growth, particularly in Serbia and Montenegro (formerly FR Yugoslavia).

The 12 countries of the CIS suffered massive falls in GDP through much of the 1990s, and many endured further losses as a result of the Russian financial crisis of 1998. Since then, growth rates have been impressive despite the generally slower pace of economic and institutional reforms in the CIS relative to Central Europe and the Baltic States.[6] The expansion in per capita national income in Central Asia is particularly notable in that some of these countries have experienced significant population growth in recent years. (See Statistical Annex, Table 1.1.) In most other countries in the region, greater national income is now being shared among populations that are falling or remaining stable in size.

Figure 1.2 shows how these changes translated into income per person in the seven subregions between 1989 and 2001. The Figure follows gross national income – a measure of national output that is commonly used by international agencies to assess a population's income – in US dollars exchanged for local currencies at purchasing power parity rates. A dollar exchanged at these rates should buy roughly the same amount of goods in all countries. The growing gap in incomes between the five Central European countries, soaring at the top of the Figure, and the eight countries of the Caucasus and Central Asia, at the bottom, is particularly notable. Income in Central Asia was low by regional standards at the start of the transition and remained low. However, the fall in incomes in the countries of the Caucasus was large, from $7,500 per person in 1989 to less than $2,000 in 1995. In the middle, the Baltic States show a steady growth trajectory. Bulgaria and Romania and the other countries of South-Eastern Europe are some way behind. Across the region, the pattern of consistent growth since the late 1990s is clearly visible.

1.2 Employment and earnings

Increased national income is the result of greater output and usually translates into more employment or higher earnings. As economies declined in the early 1990s, employment and real wage levels fell. When economic growth returned, rises in employment did not always follow. The proportion of working-age people in paid jobs went up in only five countries in the region between 1998 and 2001.[7] Employment in Serbia and Montenegro decreased dramatically following belated economic liberalization in 1999: there were 15 per cent fewer people of

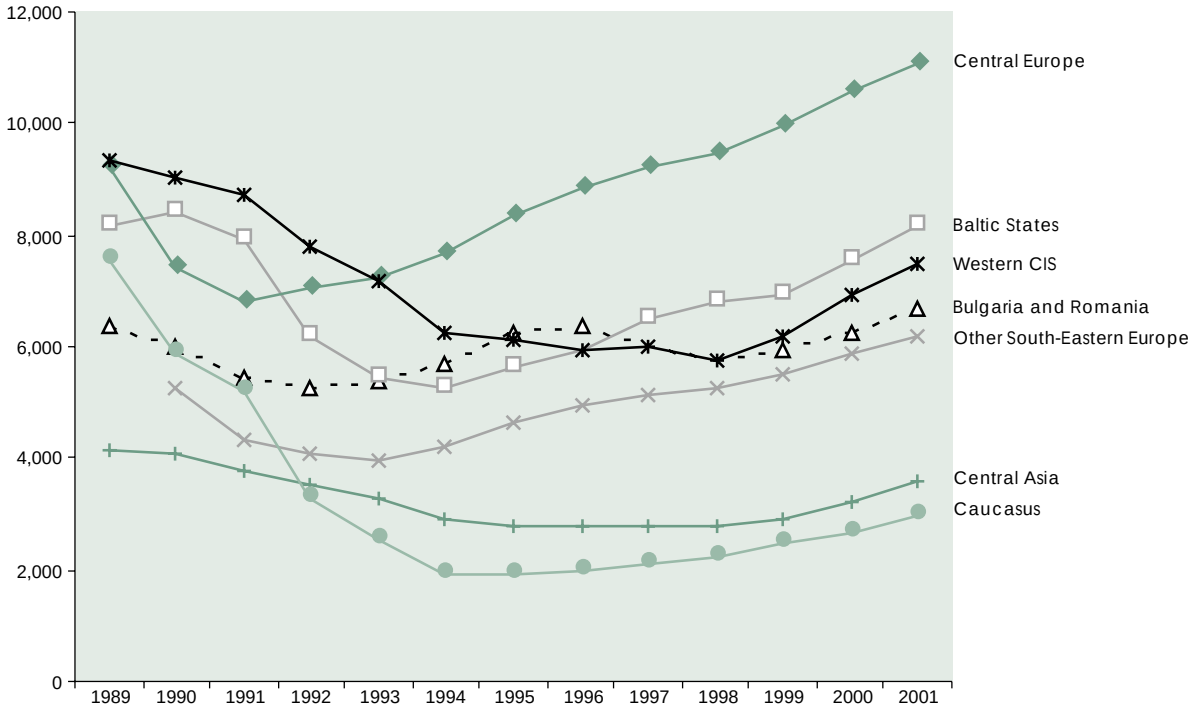
working age in employment in 2001 than in 1998. Across the region, however, average real wages generally grew in the late 1990s, meaning extra income for many families. They climbed by almost 13 per cent in Russia between 1998 and 2001 and by a third in Kazakhstan and Poland (Statistical Annex, Table 10.9). Moreover, while inequality in earnings continued to increase in some countries, for example Kyrgyzstan, it stabilized in others, suggesting that people with low earnings were also benefiting from economic growth (Statistical Annex, Table 10.10).

Not all economic activity is easily captured by official statistics. In the countries of the CEE/CIS region, informal employment or productive activity, undeclared to authorities, has always been a significant source of extra income or consumption for families. From the start of the transition, the decline in state control coincided with a mushrooming of informal economic activity, such as agriculture and the provision of small-scale services. The very nature of informal economic activity means that this activity is difficult to measure either in terms of the number of people who are engaged in it, or in terms of how much it adds to family incomes. Sometimes, informal activities are paid for through exchanges of goods or services rather than through cash transactions. Often, families themselves consume what they produce. Official statistics compiled from tax returns, administrative information from employers and producers and, sometimes, household surveys are unlikely to capture the full extent of informal economic activity or the contribution of such activity to the material well-being of families.

Nonetheless, surveys of household incomes and employment indicate that informal activity is extensive. Figure 1.3 shows that the average income from informal activities in Russia between 1992 and 2001 varied between 700 and 1,200 roubles a month, or from about a tenth to a quarter of average household income, reaching a peak during the 1998 financial crisis. Most of the gain among low-income households came from the consumption of home produce. Among wealthier households, cash income was increasingly important. As economic growth took hold after 1998, the value of informal activity declined among low-income households, but rose among households with high incomes. While income from informal activity certainly helped support the living standards of poor families in Russia, it appears to have benefited well-off families more.

Figure 1.2

Gross national income per capita, purchasing power parity exchange rates (dollars per year)

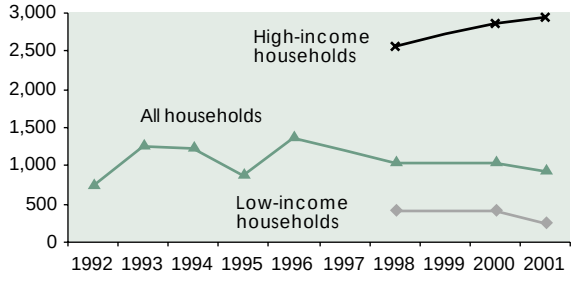


Sources: World Bank (2002), *World Development Indicators 2002*, World Bank: <*www.worldbank.org/data/*> and personal communication; MONEE project database.

Note: Group data are averages weighted by population size. For country groupings, see Figure 1.1. No data for Armenia, Croatia, Czech Republic, FYR Macedonia, Poland, or Slovenia in 1989, or Bosnia and Herzegovina or Serbia and Montenegro in any year. Gross national income is the sum of the value added by all resident producers, plus any product taxes (less subsidies) not included in the valuation of output, plus net receipts of primary income (compensation of employees and property income) from abroad. A dollar converted from local currency at purchasing power parity exchange rates has the same purchasing power as a dollar in the US.

Figure 1.3

Average monthly income from home production and informal activity, Russia 1992-2001
(roubles, 1992 prices)

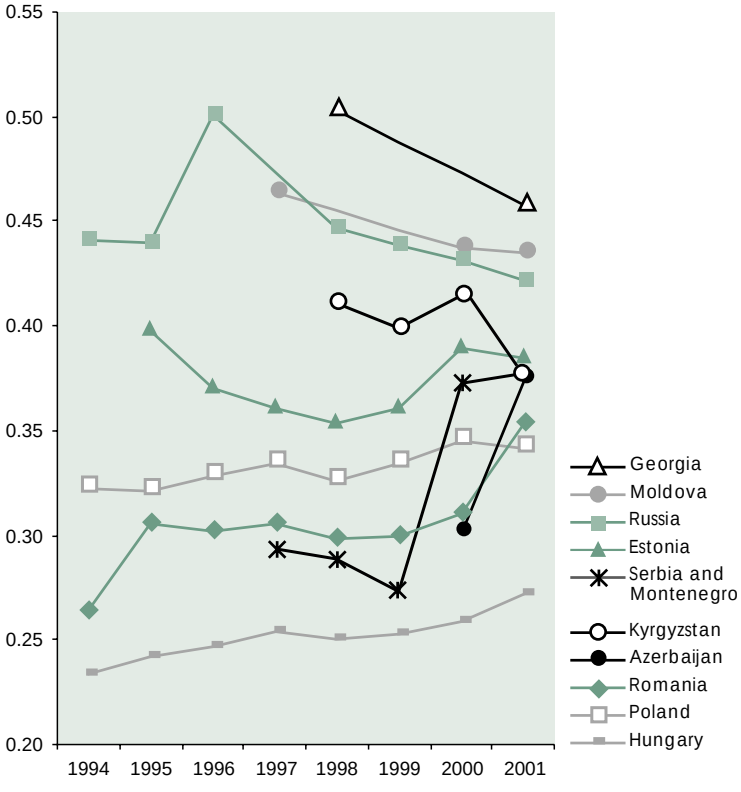


Sources: Mroz, T., L. Henderson, M. Bontch-Osmolovsii and B. M. Popkin (2002), "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey, 1992-2001", April, Carolina Population Center, University of North Carolina at Chapel Hill, Tables 2 and 3; Mroz, T., L. Henderson and B. M. Popkin (2001), "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey, 1992-2000", March, Carolina Population Center, University of North Carolina at Chapel Hill, Table 3; Mroz, T., D. Mancini and B. M. Popkin (1999), "Monitoring Economic Conditions in the Russian Federation: The Russia Longitudinal Monitoring Survey, 1992-1998", March, Carolina Population Center, University of North Carolina at Chapel Hill, Table 3. Papers available at <*www.cpc.unc.edu/projects/rlms/*> (accessed 13 February 2003).

Note: Data represent estimates of cash and non-cash income from home production and the informal sector at constant prices. Low- and high-income households are households in the bottom and top 20%, respectively, according to per capita household income in the Russia Longitudinal Monitoring Survey.

Figure 1.4

Income inequality, 1994-2001 (Gini coefficients)



Source: Statistical Annex, Table 10.11. For Russia, Series B is used; for Hungary, Series A is used.

Note: The distribution is that of individuals ranked by household per capita income.

1.3 Growth and inequality

Changes in employment and average earnings and in the distribution of earnings are important indicators of the diffusion of economic growth through society. But because most people live in families and households, it is not only employees who gain when their earnings increase or who lose when their earnings decline or when they become unemployed. The living standards of the whole household are affected. How have the incomes of poor and rich households changed in recent years?

Figure 1.4 shows trends in inequality in household incomes in 10 countries between 1994 and 2001 based on a common summary measure, the Gini coefficient. If all households in a country had the same income, the Gini coefficient would equal '0', and, if all the income in a country were held by one household, it would equal '1'. Hence, higher Gini values indicate more inequality. Gini values of 0.25-0.35 provide a benchmark: inequality in most advanced industrialized countries falls within this range. Inequality in the region was at the lower end of this range at the start of the transition, but increased during the 1990s.[8] Often, this was a reflection of economic reforms, whereby people were able to avail themselves of new opportunities and whereby the rewards in the labour market became more closely related to education and skills. In some cases, however, very large increases in inequality were facilitated, according to a World Bank analysis, more by a lack of economic reform and by 'state capture', the ability of powerful groups to influence policy for their own enrichment.[9] In Georgia and Russia, the Gini coefficient touched 0.50 during the mid-1990s, reminiscent of inequality in some Latin American countries. In other CIS countries, the Gini rose to above 0.40, considerably higher than in Hungary and Poland, where it remained close to the average in advanced industrialized countries.

Figure 1.4 shows that, at the end of the 1990s, inequality stabilized in Moldova and declined in Georgia, Kyrgyzstan and Russia.[10] This implies that, although the level of inequality in these countries was still high, many households with below average incomes did gain from the recent economic growth, or, at least, did not see further erosion in their living standards. In Azerbaijan, Serbia and Montenegro, and Romania, on the other hand, inequality rose sharply between 1998 and 2001. In the case of Azerbaijan, this is consistent with the trend in the average incomes among refugees and displaced persons and among the total population shown in Figure 3.5 in this *Social Monitor*. The gap in income between the two groups has grown substantially in recent years.

1.4 Relative and absolute poverty

Trends in inequality and in poverty are closely linked. One common approach in poverty measurement is to define the 'poor' as those persons living in households with income or expenditure significantly below the average in their country. For example, the EU has adopted a poverty line that equals 60 per cent of the median income or expenditure in each country. The rationale for this definition of *relative poverty* is that people whose living standards (as measured by their income or expenditure) fall far below the average are at risk of being excluded from the advantages and benefits considered normal in society. Where poverty is measured according to a relative criterion, a rise in inequality will cause the number of people in relative poverty to increase. When inequality declines, the number of relatively poor people will drop.[11]

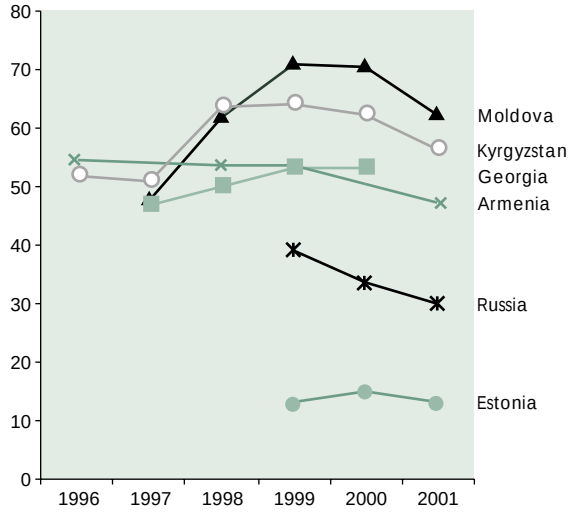
In Poland, the proportion of households with incomes below 60 per cent of the median stayed roughly constant over the 1990s, at about 14 per cent. This occurred in the context of rising national income. Economic growth did help the incomes of poor households to increase. Slowly rising inequality, on the other hand (see Figure 1.4), meant that the proportion of households with incomes at less than 60 per cent of the average remained much the same. In absolute terms, many poor people in Poland were more well off at the end of the 1990s than they had been at the beginning. In relative terms, they were not.[12]

An alternative approach to poverty measurement involves calculating the cost of a minimum 'basket' of goods that people would need to survive. This method might measure the cost of the food needed for day-to-day survival with no allowance for non-food costs, or it might also include the cost of items, such as a radio or transportation, that allow greater participation in society. This *absolute poverty* threshold, whether it covers only food, or other items, too, does not change over the short term as average living standards rise or fall. Therefore, the relationship between an absolute poverty line and average living standards might change greatly over time. Indeed, in some countries, a person with average income or expenditure may also be absolutely poor.

This was the case in several CIS countries at the turn of the millennium, as Figure 1.5 shows. Between 1996 and 2001, upwards of half the population in Armenia, Georgia, Kyrgyzstan and Moldova were defined as absolutely poor according to national criteria. The same was true of Tajikistan in 1999 (not shown in Figure 1.5), when 96 per cent of the population were living on incomes under the national poverty line.[13] The Figure shows that there were declines in the proportion in poverty in Armenia, Estonia, Kyrgyzstan, Moldova and Russia in 2001. But the overall size of the problem remains enormous. Estimates from Goskomstat, the federal statistical agency, suggest that, in Russia in 2000, almost 11 million children were living in households with incomes below the national subsistence minimum.[14]

Figure 1.5

Proportion of the population living in poverty
(per cent)



Sources: Falkingham, J. (2003), "Inequality and Poverty in the CIS-7", paper prepared for the Lucerne Conference of the CIS-7 Initiative, 20-22 January: <*www.cis7.org*> (8 March 2003), Table 6; World Bank (2002), "Georgia: Poverty Update", Report No. 22350-GE, World Bank: <*www.worldbank.org*>, Table A1; RECEP (2002), *Russian Economic Trends Monthly*, 14 October, Russian-European Centre for Economic Policy: <*www.recep.org/*>, Table 10; MONEE project country report, Estonia (2001), (2002).

Note: National definitions of poverty vary. In Armenia, for example, the subsistence minimum is calculated on the basis of a nutritional intake of 2,100 calories, with an extra amount for non-food purchases. In 1999, it was set at 11,735 drams per person per month, or $104 at purchasing power parity exchange rates. The measure for Estonia is 'extreme poverty': people living in households with incomes below 80% of the subsistence minimum. The 'extreme poverty' threshold was 971 krooni per person per month in 2000, or $154 at purchasing power parity exchange rates, based on a four-member household.

In many of these countries, moreover, the thresholds used to measure the number of people in poverty are low. In the case of Georgia in 2000, for example, the threshold was the cost of a minimum food basket of 2,160 calories, with 30 per cent added for non-food costs.[15] The difficulties associated with surviving on an income under a minimal poverty line are examined in the UNDP *National Human Development Report Georgia 2001/2002*.[16] The study shows that many Georgians with incomes below the poverty line have a nutritional intake of considerably less than that allowed for in poverty calculations, partly because the price of key food products varies according to the season and partly because nutritional knowledge is often lacking. Moreover, the study points out that the food basket approach is not designed to cope with the effects of a debilitating illness. Poor nutrition makes people more susceptible to illness, and poor nutrition among pregnant women is a factor in infant illness and death, as

Article 6 in this *Social Monitor* indicates. Poor nutrition can also impair a child's mental and physical development. Recent surveys have shown that rates of stunting and wasting among young children are high in several countries in the region.[17]

1.5 Public expenditure

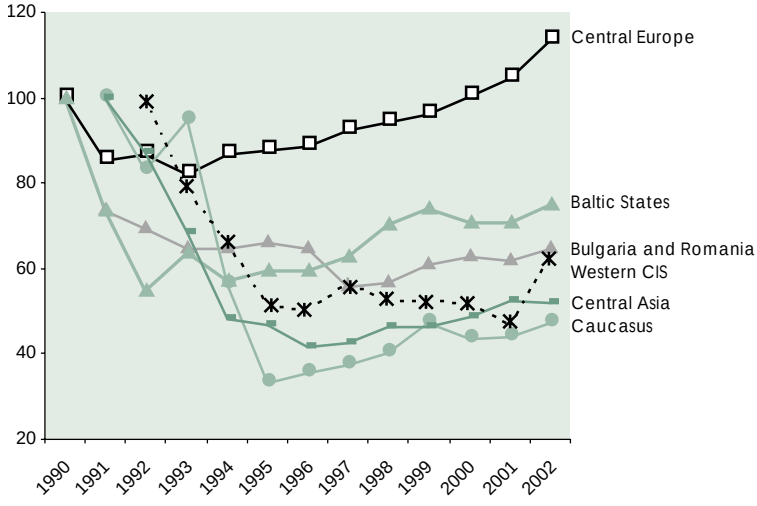
Public expenditure policies are an important focus in any drive to reduce poverty. Public policies can improve people's living standards directly, for example through social security payments, or indirectly through investment in communications infrastructure or in health care and education.

A defining and generally welcomed characteristic of the transition has been the imposition of limits on the state control and redistribution of income. But because national income and government revenues declined across the region during the first half of the 1990s, the deterioration in government purchasing power has often been very steep. This has been exacerbated in many cases by a growing burden of external debt, as Article 2 in this *Social Monitor* demonstrates. Figure 1.6 shows trends in real public expenditure in the region. In the five countries of Central Europe, real government expenditure fell, on average, up to 1992, but then recovered to above the level at the start of the transition. Public spending in all other subregions declined. In the Baltic States in 2002, it represented three quarters of the 1990 level.[18] Early estimates show a sharp increase in real government expenditure in western CIS countries in 2002, following constant declines up to that point. In the countries of the Caucasus and Central Asia, public spending in 2002 represented, on average, half the 1989 level.

In some countries, as overall public spending fell, efforts were made to protect expenditure on health and education. Available information indicates that real expenditure in these key areas between the early 1990s and the start of the new century increased in seven countries, but fell in nine.[19] Figure 1.7 shows that, in Hungary, a leading reforming country, total real public expenditure declined through most of the 1990s, as did public expenditure on health and education. After 1996, real expenditure on education began to increase and by 2001 was almost at the 1990 level. Real health expenditure was 10 per cent lower in 2000 than in 1990. Health and education expenditure fared better than total government expenditure, which, in 2001, was 84 per cent of the 1990 level in real terms. However, recent information suggests

Figure 1.6

Real government expenditure (1990-92 = 100)

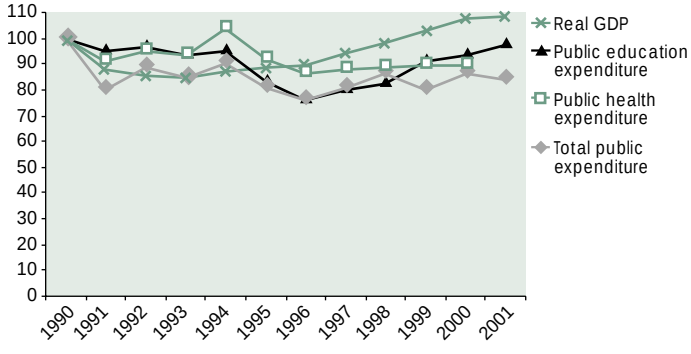


Source: Calculated from Statistical Annex, Tables 10.1 and 10.4.

Note: The series for Central Europe, the Baltic States, Bulgaria and Romania start in 1990, for the Caucasus and Central Asia in 1991 and for the western CIS in 1992. Data for other countries in South-Eastern Europe (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia and Serbia and Montenegro) are excluded. Data for 2002 are preliminary estimates. Data are simple unweighted averages for countries in each group. For the make-up of the groups, see Figure 1.1.

Figure 1.7

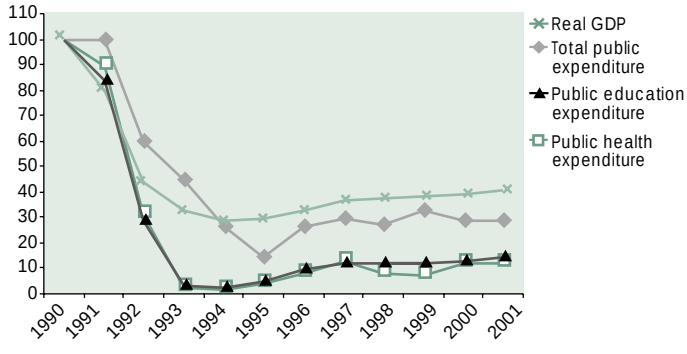
Real GDP and real public expenditure in Hungary (1990 = 100)



Source: Calculated from Statistical Annex, Tables 6.10, 7.6, 10.1 and 10.4.

Figure 1.8

Real GDP and real public expenditure in Georgia (1990 = 100)



Source: Calculated from Statistical Annex, Tables 6.10, 7.6, 10.1 and 10.4.

that total public expenditure rose substantially in 2002. (See Statistical Annex, Table 10.4.)

A more extreme pattern is visible in the case of Georgia (Figure 1.8). Total real public expenditure was seven times lower in 1995 than in 1990 and almost four times lower in 2001. Although expenditure on health and education did grow in the late 1990s, it was still nearly 90 per cent lower in 2001 relative to the pre-transition level.

Across the region, changes in patterns of public expenditure have coincided with other transformations. For example, early census results suggest that the Armenian population has declined to 3 million people from 3.5 million in 1989.[20] Importantly for education expenditure, school-age populations have fallen substantially in most countries. (See Statistical Annex, Tables 1.2 and 1.3.) Moreover, many households in the region have now become accustomed to paying significant amounts for private health care and education. Therefore, while public expenditure on these key services has often declined or stagnated, private expenditure has increased.

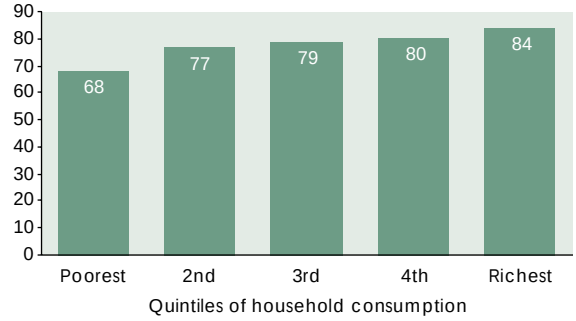
The extent of the willingness of parents in the CEE/CIS to seek good education for their children was one of the striking findings of the analysis in "Quality of Learning" in *Social Monitor 2002*. However, the greater emphasis on parental investment in the education of their children not only in terms of time, but also in terms of money, may have raised inequality in outcomes. A recent report on education and poverty in Armenia indicates that the average private expenditure on education per secondary school student was three times that of the corresponding public expenditure in 2000. Behind this average lay considerable inequality. Thus, the education spending of non-poor households was nearly three times that of very poor households. Moreover, most of this spending did not go for 'extras', such as additional tuition, but for transportation to and from school and for food.[21] Figure 1.9 shows that, in the case of Uzbekistan in 2000-2001, school attendance among 7-15 year-olds was notably higher among students from richer households.

Strategies to reduce long-term disadvantage and the reproduction of poverty across generations need a significant public element if they are to increase opportunities among low-income families, as well as among those families which are more well off. Such an approach is being undertaken through "Poverty Reduction Strategy Papers". These documents, which are prepared by governments with input from civil society and international partners in development, outline macroeconomic, structural and social policies for income growth and poverty reduction.[22] For example, the most recent Poverty Reduction Strategy Paper for Kyrgyzstan envisages a tripling of the primary health care budget between 2002 and 2005. The Albanian strategy likewise pledges increases in health care and education expenditure.[23] These are positive signs that, as economies expand in the region, low education and ill health – indicators associated with long-term poverty and disadvantage – may begin to improve. As *A World Fit for Children*, the outcome document of the UN Special Session on Children in May 2002, argues:

> "Chronic poverty remains the single biggest obstacle to meeting the needs, protecting and promoting the rights of children. It must be tackled on all fronts, from the provision of basic social services to the creation of employment opportunities, from the availability of microcredit to investment in infrastructure, and from debt relief to fair trade practices."[24]

Figure 1.9

Children aged 7-15 attending school in Uzbekistan in 2000-2001, by household consumption quintiles (per cent)



Source: Falkingham (2003), op. cit. (Figure 1.5), Table 15.

Note: The data show school attendance, which is not the same as enrolment. (Students who are enrolled may not always attend.) Moreover, they reflect survey results. For these reasons, they cannot be compared with the enrolments indicated in Statistical Annex, Table 7.2, which are drawn from administrative sources. Household consumption quintiles are based on per capita food consumption evaluated at purchase prices and are calculated from the household budget survey, April 2000-March 2001.

Notes and references

1. Eight major Millennium Development Goals were agreed at the UN Millennium Development Summit in September 2000. For more information, see <*www.developmentgoals.org*> (accessed 19 March 2003).
2. The eight countries in the CEE/CIS region scheduled to join the EU in 2004 are: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. Bulgaria and Romania are currently expected to become EU members in 2007. See EC (2002), "Brussels European Council, 24-25 October", *Bulletin of the European Union*, No. 10, European Commission: <*www.europa.eu.int/abc/doc/off/bull/*> (9 March 2003). In early 2003, Croatia formally applied to join the EU.
3. The CIS-7 Initiative aims to enhance economic growth and reduce poverty in Armenia, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan. It is a joint initiative of the governments of these countries and the World Bank, the International Monetary Fund, the European Bank for Reconstruction and Development and the Asian Development Bank. For further details, see <*www.cis7.org*>.

4. GDP is not a comprehensive measure of national material well-being, and the comparison of GDP over time is sometimes problematic. A fuller discussion of the difficulties in the measurement of GDP in transition countries and in the comparison of GDP before and after the fall of communism is contained in World Bank (2002), *Transition, the First Ten Years: Analysis and Lessons for Eastern Europe and the Former Soviet Union*, World Bank: Washington, DC, Box 1.1. The same publication also provides a detailed analysis of macroeconomic trends during the transition.
5. EBRD (2002), *Transition Report 2002: Agriculture and Rural Transition*, European Bank for Reconstruction and Development: London, Section 2.1.
6. EBRD (2002), op. cit., Section 2.1.
7. The five countries where the proportion of working-age people in employment grew between 1998 and 2001 were Albania (5% increase in the proportion employed), FYR Macedonia (7.9%), Georgia (4.3%), Hungary (3.3%) and Russia (1%). The largest falls in the proportion in employment occurred in Armenia (9.7% fall), Poland (8.6%), Serbia and Montenegro (15.5%), Tajikistan (7.9%) and Ukraine (10.4%). See Statistical Annex, Table 10.6.
8. See Atkinson, A. B. and J. Micklewright (1992), *Economic Transformation in Eastern Europe and the Distribution of Income*, Cambridge University Press: Cambridge, UK; Flemming, J. and J. Micklewright (1999), "Income Distribution, Economic Systems and Transition", *Innocenti Occasional Papers*, No. EPS 70 (May), UNICEF Innocenti Research Centre: Florence; UNICEF (2001), "A Decade of Transition", *Regional Monitoring Reports*, No. 8, Chapter 2, UNICEF Innocenti Research Centre: Florence.
9. World Bank (2000), *Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia*, World Bank: Washington, DC, pages 14-15.
10. In general, inequality measures need to be treated with some caution, particularly where there are only two data points to compare, as in the case of Azerbaijan and Georgia in Figure 1.4. A World Bank analysis calculates Gini coefficients for Georgia at 0.36 in 1996-97 and 0.39 in 2000. However, the very different estimates of Gini in the World Bank analysis and in the analysis in this *Social Monitor* suggest that alternative data and methods may have been used. See World Bank (2002), "Georgia: Poverty Update", Report No. 22350-GE, World Bank: <*www.worldbank.org*> (25 July 2002), paragraph 1.48.
11. However, if the poverty line is defined as a percentage of the median income, then changes in the distribution of income among people above the median will affect measured income inequality, but leave the number of people in poverty unchanged.
12. A recent analysis shows that, in Poland, the proportion of households with incomes below the social minimum rose from 24% to 29% between 1990 and 1994 before declining to 18% in 1999. On the other hand, the proportion of households with incomes below 60% of the median was 13% in 1990, 14% in 1994 and 14% in 1999. See Szulc, A. (2002), "Poverty in Poland during the 1990s: Does the Method Matter?", paper presented at the Conference on Income Distribution and Welfare, Bocconi University, Milan, 30 May to 1 June: <*www.uni-bocconi.it*> (19 March 2003).
13. Falkingham, J. (2003), "Inequality and Poverty in the CIS-7", paper prepared for the Lucerne Conference of the CIS-7 Initiative, 20-22 January: <*www.cis7.org*> (8 March 2003), Table 6.
14. In Russia in 2000, according to Goskomstat estimates, there were 2.8 million children aged 0-6 and 8 million children aged 7-15 living in households with incomes below the official subsistence minimum. See Table 5.12, Goskomstat (2002), *Sotsial'noye polozhenie i uroven' zhizni naseleniya Rossii* (*Social Status and Living Standards of the Population of Russia*), Goskomstat: Moscow (in Russian).
15. World Bank (2002), op. cit., Table A1.
16. UNDP (2002), *National Human Development Report Georgia 2001/2002*, UN Development Programme: Tblisi, Georgia.
17. See UNICEF (2001), op. cit., Table 3.3.
18. In Central Europe, Poland is an exception. There, real public expenditure rose continuously through the 1990s and was almost 70% higher in 2002 than in 1989. Among the Baltic States, Estonia is an exception. There, real public expenditure recovered to the pre-transition level in 1998 and was 16% higher than that level in 2002. In no CIS countries did real public expenditure in 2002 exceed the pre-transition level. See also Statistical Annex, Table 10.4.
19. These data are calculated from Statistical Annex, Tables 6.10, 7.6, 10.1 and 10.4. Data are not reported for every country, but available information suggests that total real public expenditure on health and education increased up to 2000-2001 in Belarus, Czech Republic, Estonia, Latvia, Lithuania, Poland and Romania, while it fell in Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Hungary, Kyrgyzstan, Moldova and Russia.
20. Information from the World Bank (personal communication). It is worth noting that the population of Armenia has been subject to a considerable degree of uncertainty since the late 1980s following a major earthquake in 1988, which caused severe disruption and perhaps had an impact on the accuracy of the 1989 census there. Conflict in the Caucasus during the early 1990s, which caused large-scale movements of people, and a considerable amount of emigration from Armenia have added to the uncertainty.
21. UNDP (UN Development Programme) (2002), "Education, Poverty and Economic Activity in Armenia: Situation Analysis Report", UN Office in Armenia: <*www.undp.am*> (13 March 2003), Chapter 4, Section 7.2.
22. Poverty Reduction Strategy Papers "describe a country's macroeconomic, structural and social policies and programs to promote growth and reduce poverty, as well as associated external financing needs. [These papers] are prepared by governments through a participatory process involving civil society and development partners, including the World Bank and the International Monetary Fund." See the World Bank website: <*www.worldbank.org/poverty/strategies*> (9 March 2003).
23. Republic of Kyrgyzstan (2003), "Expanding the Country's Capacities: National Poverty Reduction Plan 2003-2005" and Council of Ministers, Republic of Albania (2001), "National Strategy for Socio-Economic Development", both World Bank: <*www.worldbank.org/poverty/strategies*> (9 March 2003).
24. UNICEF (2002), *A World Fit for Children*, UNICEF: <*www.unicef.org*> (19 December 2002), paragraph 18.

2 Debt service: an emerging problem

Governments may borrow from other countries, from commercial institutions, or from multilateral organizations for various purposes. The loans may be used to promote economic and human development or to support public services. But taking on loans entails an obligation to service the resulting debt: to pay interest and to keep up with the repayment schedule. To monitor the level of the debt service is important. Otherwise, it can reach amounts that may impede economic and social development by squeezing out expenditure to support political and economic reform and the development of human capital.

While most countries in Central and Eastern Europe and the Commonwealth of Independent States began the transition with little debt, the situation soon changed dramatically. Nations had to struggle to cope with the adverse effects of the transition. Now, some of the poorest countries are paying a considerable sum – 2 to 4 per cent of their national incomes – to service external public debt. In certain cases, this is more than the countries spend on education or health care. Social expenditures in these countries have declined to historically low levels. This puts the long-term well-being of a whole generation of children and young people at risk. There is no clear link between increased debt servicing and falling public expenditure on key social services in these countries. However, international help to reduce debt service obligations in the most hard pressed countries may nonetheless produce tangible payoffs in terms of greater social spending.

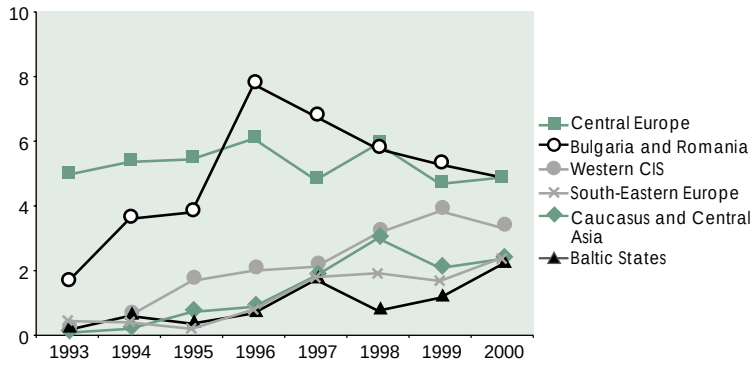
2.1 Debt service across the region

Figure 2.1 shows the annual cost of servicing external public debt as a proportion of national income in the CEE/CIS in 1993-2000. Public debt accounts for about 80 per cent of total external debt in the poorest CIS countries.[1] For this purpose, 'public debt' includes loans that are taken directly by the government and other loans for which repayment is guaranteed by the state. Three different trends are apparent in the Figure. In the countries of Central Europe, debt servicing has remained quite steady since the early 1990s at about 5 per cent of national income. In Bulgaria and Romania, the cost of debt servicing increased greatly until 1996, but then declined. In other subregions, the broad trend involves a rise in the cost of debt servicing in relation to national income.

All the former Soviet republics (except Russia) had a clean slate at the start of the transition because Russia took on all the external debt (and all the external assets) of the former USSR. This renders the build-up of debt in these countries all the more notable. In Central Europe, Hungary has had the largest debt service costs. Servicing public external debt required 10 per cent of Hungarian national income in 1993-96. Most of this debt had been taken on before the onset of the transition. The debt service costs in Hungary in 2000 were 7.9 per cent of nation-

Figure 2.1

Public external debt service as a share of national income (per cent)



Source: World Bank, "Public and Public-Guaranteed Long-Term Debt as a Percent of Gross National Income", *Global Development Finance Online:* <*www.worldbank.org*> (accessed 4 January 2003).

Note: Data are unweighted averages for countries in each group. The cost of repaying short-term loans from the International Monetary Fund is not included. National income is defined as gross national income, that is, the sum of the value added by all resident producers, plus any product taxes (less subsidies) not included in the valuation of output, plus the net receipts of primary income (compensation of employees and property income) from abroad.

al income, followed by Croatia (7.0 per cent), Bosnia and Herzegovina (6.6 per cent), Bulgaria (6.1 per cent) and Ukraine (5.7 per cent).[2]

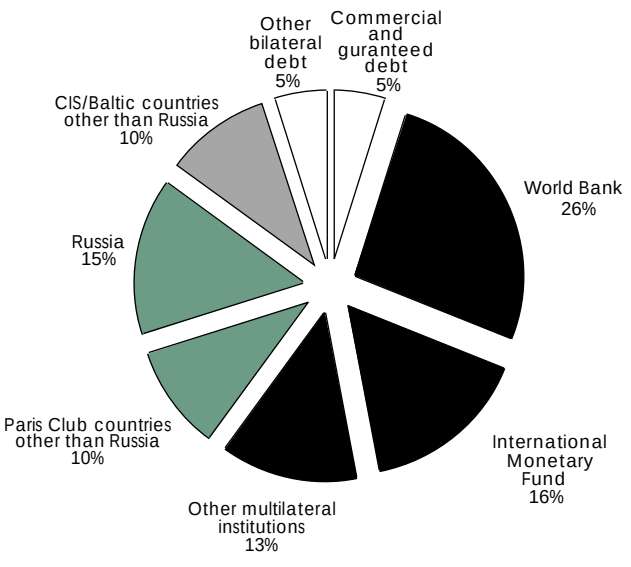
International concern has focused, however, on countries further down the table. Among these countries, the cost of debt servicing may be somewhat lower, but the capacity of governments to raise the necessary money to pay the cost (hence, the 'sustainability' of the existing external debt) is lower as well. Assessment of the sustainability of debt requires a forward-looking (and ultimately uncertain) evaluation of several factors, including growth in tax revenue (combined with restrained growth in public expenditure), which usually depends on increases in national income, as well as the ability to collect taxes; growth in exports (combined with restrained growth in imports), and the level of the interest rates, plus the risk premiums, demanded by creditors.[3] The situation of the five poorest CIS countries – Armenia, Georgia, Kyrgyzstan, Moldova and Tajikistan – has been the subject of particular concern. Two of these, Kyrgyzstan and Tajikistan, are classified by the World Bank among the world's 44 'severely indebted' countries.[4]

Together with Azerbaijan and Uzbekistan, these five low-income countries are the focus of the CIS-7 Initiative jointly sponsored by the World Bank, the International Monetary Fund, the European Bank for Reconstruction and Development, the Asian Development Bank and the governments in the seven countries. This initiative is intended to enhance the prospects of the countries for economic growth and the reduction of poverty. The initiative website notes that "the CIS-7 countries and the international community underestimated the impact of the break-up of the Soviet Union and the complexity of the transition challenges facing these countries."[5] One result is that loans were offered (and accepted) in the mid-1990s with the expectation that an early return to strong economic growth would allow repayment 'without tears'. But this growth did not quickly materialize, in part because of insufficient reform efforts by national governments. Currency devaluations following the Russian financial crisis of 1998 worsened the debt service burden, since most external debt was denominated in US dollars.

Figure 2.2 shows the proportion of external public debt in the five poorest CIS countries that is owed to various creditor nations and commercial and multilateral institutions. Most external public debt is owed to multilateral sponsors such as the International Monetary Fund and the World Bank. However, the debt to Russia and to the region's other energy-abundant countries (Azerbaijan, Kazakhstan, Turkmenistan and Uzbekistan) also contributes significantly to the overall burden.[6]

Figure 2.2

The structure of external public debt in nominal terms in the five poorest CIS countries, end 2000 (per cent)



Source: IMF and World Bank (2002), "Poverty Reduction, Growth and Debt Sustainability in Low-Income CIS Countries", 4 February, International Monetary Fund and World Bank: <*www.cis7.org*> (12 March 2003), Table 8 and Figure 9.

Note: Debt is counted in nominal terms. For details about the Paris Club of creditor nations, see <*www.clubdeparis.org*>.

2.2 The debt build-up

Much of the public debt which accumulated during the early 1990s in the poorest CIS countries was taken on to bolster day-to-day government spending after the break-up of the Soviet Union. Independence left many CIS countries bereft not only of resource transfers and markets, but also of many of the institutions necessary for running a modern economy. Tax and fiscal administrations are particularly relevant examples.[7] In addition, as in all transition countries, many state-owned enterprises faced collapse when they were cut adrift from their traditional markets and confronted with world prices for energy consumption. Rather than allow public enterprises and public services to fail, governments borrowed heavily. They thereby reduced some of the initial social costs associated with the transition.

It is from this early borrowing that much of the current external debt crisis developed.[8] The efficacy of this borrowing is open to question, since governments were often slow to implement market reforms. Moreover, weak governance and administration, which facilitated inefficiencies, sometimes resulted in the poor use of public expenditure. The International Monetary Fund estimates that 'quasi-fiscal activities' – implicit or hidden subsidies by government to support large enterprises and household consumption – are valued at between 5 and 10 per cent of national income in Kyrgyzstan, Moldova and Tajikistan and at over 20 per cent in Azerbaijan. Such sub-

sidies are often justified on social grounds in that they sustain the living standards of poor households, but they are generally poorly targeted.[9]

Nonetheless, even if a large part of the debt that was accumulated was used to support inefficient or badly targeted public expenditure, the debt did play a role in maintaining public services and living standards, particularly during the early crisis years of the transition.[10] As an International Monetary Fund analysis argues,

> ". . . had countries adjusted more in the initial years, the social costs would surely have been higher. In hindsight, it would appear that foreign aid in the form of outright grants in the first two or three years of transition would have helped prevent debt build up and, at the same time, preserved consumption levels."[11]

The question that now arises is: How can public debt be managed without imposing overly high social costs on the poor CIS countries a decade after independence? In these countries, a burden of public debt service of only a few percentage points of national income each year can be a heavy load. This is brought out in Table 2.1, which compares average annual debt servicing costs with expenditure on health care and education at the turn of the millennium. In the five poorest countries, debt service exceeded the public expenditure on health care. In four of them, it equalled or exceeded the expenditure on education. And, in Georgia and Tajikistan, even the sum of health and education expenditures fell short of the debt service costs. The total spent in these two countries and in Armenia on health and education is significantly below the 4.4 per cent for all low-income countries worldwide.[12]

Although any simple conclusion based on these data that debt service is definitely crowding out expenditures in the social sphere should be resisted, there is certainly cause for concern whenever debt service in low-income countries exceeds key social expenditure totals. Part of an appropriate response may well be to attempt to reduce the burden of debt service, but the solution may also lie in monitoring other expenditures and in raising more tax revenue so that additional money could be used both to service the external debt and to increase spending in the social sector. Efficient tax collection has proved to be an enormous challenge in most countries in the region, not least in the poorest ones, where large informal sectors have often developed. (See Article 1 in this Social Monitor). Figure 2.3 shows that general government tax revenue, as a proportion of national income, is low in the five poorest CIS countries relative to other countries in the region such as Estonia and Russia. Moreover, tax revenue as a percentage of national income actually declined in Kyrgyzstan and Moldova between 1995 and 2000, reducing the resources available to service debt and support pubic services.[13]

2.3 Managing the debt burden

What are the prospects for reducing the debt burden in the poorest CIS countries? The World Bank and the International Monetary Fund made forecasts in early 2002 that incorporated various assumptions about growth in national income and exports, exchange rates and other key indicators. With the baseline assumption that national income would increase by around 4-5 per cent per year, the average public debt service over 2001-2005 was forecast to be equivalent to nearly a fifth of central government revenue in Armenia, about a third in Georgia and

Table 2.1

Public sector expenditure on external debt service, health care and education, 1998-2000
(average per cent of national income)

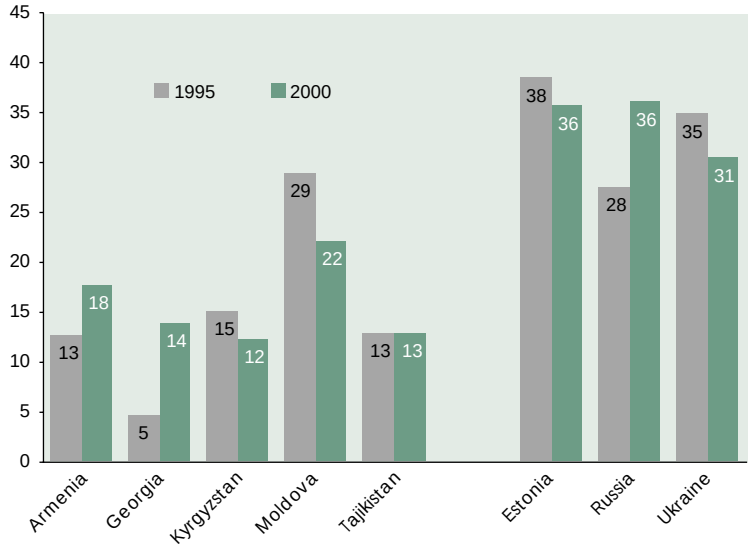
	Debt service	Health care	Education	Health and education
Moldova	6.5	3.4	5.0	8.4
Georgia	3.6	0.7	2.0	2.7
Tajikistan	2.8	0.4	2.2	2.6
Kyrgyzstan	2.4	2.2	4.1	6.3
Armenia	2.1	1.4	2.1	3.5

Sources: World Bank, *Global Development Finance Online*, op. cit. (Figure 2.1); Statistical Annex, Tables 6.10 and 7.6.

Note: Average health care expenditure for Armenia is for 1998 and 2000. Education expenditure for Georgia is for 1998, 1999 and 2001.

Figure 2.3

General government tax revenue, 1995 and 2000 (per cent of GDP)



Source: IMF (2001), "Republic of Armenia: Recent Economic Developments and Selected Issues", *IMF Country Report*, No. 01/78 (29 May), International Monetary Fund: <*www.imf.org*> (15 January 2002).

Kyrgyzstan and well over two fifths in Moldova and Tajikistan.[14] Servicing the debt would therefore take a significant slice of the public sector's resources.

The good news is threefold. First, the problem has now been clearly recognized by the international community, which has accepted some blame for the situation because of a lack of caution in lending during the early phase of transition and insufficient help in the form of grants (rather than loans).

Second, creditors have provided some assistance to ease the debt burden. The Paris Club of creditor nations agreed to rescheduling terms over 2001-2002 with Georgia, Kyrgyzstan, Serbia and Montenegro (formerly FR Yugoslavia) and Ukraine.[15] The World Bank and the International Monetary Fund have estimated that Kyrgyzstan and Moldova had debt levels in 2000 that would formally qualify them to benefit from the Heavily Indebted Poor Countries Initiative. In principle, this would allow the debt of the two countries to multilateral organizations to be eased. However, the potential for debt relief under the programme has been described as modest.[16]

Third, in the five poorest CIS countries, economic growth in 2001 exceeded the baseline levels assumed in the debt forecasts of the International Monetary Fund and the World Bank, although the pattern does not seem to have held everywhere in 2002.[17] Moreover, the two multilateral institutions argue that, to achieve long-term growth, there is a need for improved economic management and performance through better governance, reduced corruption and enhanced cooperation among countries in Central Asia and the Caucasus.[18]

There is a down side, however. The poor CIS countries took on large debt burdens in the early 1990s partly because of optimistic projections of economic growth that turned out to be overly optimistic. Moreover, debt prospects also depend on several factors other than growth in national income. For example, the World Bank and the International Monetary Fund note that their predictions about debt sustainability are sensitive to assumptions about exchange rates and that "even a mild depreciation [in exchange rates] could significantly undermine fiscal sustainability in all countries".[19] Besides, debt servicing would continue to weigh significantly on public finances for several years after an eventual onset of robust growth and exchange rate stability.

The major tool promoted by the International Monetary Fund and the World Bank for simultaneous economic development and poverty reduction is the "Poverty Reduction Strategy Paper". This is a set of policy commitments designed by national governments with the broad participation of civil society and the donor community. A key element of these commitments is clear, costed priorities for macroeconomic, structural and social policy reform. The commitments provide a framework both for government action and for donor support. The poverty reduction strategies are expected to contribute indirectly to declines in the debt burden through strong fiscal adjustment and the creation of a more favourable environment for business investment. By the beginning of 2003, the five poorest CIS countries had presented Poverty Reduction Strategy Papers to the International Monetary Fund and the World Bank.[20]

At the same time, the door is being opened for more grant aid in support of social spending in the poorest CIS countries. Shengman Zhang, managing director at the World Bank, in accepting that the donor community should have done more to help these countries in the early years of the transition, argues:

> "I think this lesson is relevant for the future, especially as the donor community aims to assist the CIS-7 countries to achieve the difficult but worthwhile targets of the Millennium Development Goals. Fortunately, IDA now has the ability to provide grant financing – in some measure – and will be better able to address similar problems in the future."[21]

With the support of international organizations and donor countries, the poorest CIS countries can manage their debt service commitments and boost social expenditure. It is the responsibility of the former to ensure that adequate resources are available, and it is the responsibility of the latter to ensure that these resources are efficiently used to provide a substantive gain in people's well-being and in human development.

Notes and references

1. For a more detailed analysis of the structure of debt in the region, see Helbling, T., A. Mody and R. Sahay (2003), "Debt Accumulation in the CIS-7 Countries: Bad Luck, Bad Policies or Bad Advice?", paper prepared for the Lucerne Conference of the CIS-7 Initiative, 20-22 January: <*www.cis7.org*> (accessed 15 March 2003). See also IMF and World Bank (2002), "Poverty Reduction, Growth and Debt Sustainability in Low-Income CIS Countries", 4 February, International Monetary Fund and World Bank: <*www.cis7.org*> (15 March 2003).
2. World Bank, *Global Development Finance Online*: <*www.worldbank.org*> (4 January 2003).
3. See EBRD (2001), *Transition Report Update*, April, European Bank for Reconstruction and Development: London.
4. This is according to the World Bank classification as of July 2002. See <*www.worldbank.org*> (12 March 2003). It is important to note that the criteria for this classification are not identical to the eligibility criteria used for assistance by the World Bank and the International Monetary Fund under the Highly Indebted Poor Countries Initiative. See <*www.worldbank.org/hipc*> or <*www.imf.org/external/np/exr/facts/*> (17 March 2003).

5. See <*www.cis7.org*> (15 March 2003).
6. Most of the debt of the poor CIS countries to other CIS countries is energy related and has been the result mainly of three factors: a sharp upward adjustment in the prices charged by the energy suppliers after the break-up of the Soviet Union, insufficient reforms in the energy sector of the energy-importing countries and a continued reliance on the energy infrastructure inherited from the Soviet era. See EBRD (2001), op. cit.
7. IMF and World Bank (2002), op. cit.
8. Helbling, Mody and Sahay (2003), op. cit.
9. See IMF and World Bank (2002), op. cit., Box 1.
10. This is also the case of loans from the World Bank. Many of these loans, granted at concessional rates, had the explicit purpose of improving public services in areas such as health, education and social security. All World Bank projects are listed on the World Bank website, <*www.worldbank.org*> (14 March 2003).
11. Helbling, Mody and Sahay (2003), op. cit., page 58.
12. The percentage figure for the low-income countries worldwide is taken from World Bank (2001), *World Development Indicators 2001*, World Bank: Washington, DC, Table 4.10.
13. Equity in taxation is an important issue. Increases in taxation to support pubic services are most beneficial to poor families if they are progressive in nature, that is, people with larger incomes should pay a higher proportion of their incomes in tax than do people with smaller incomes.
14. IMF and World Bank (2002), op. cit. The baseline assumptions are summarized there in Table 12.
15. For details, see <*www.clubdeparis.org*> (which may also be monitored for future agreements with countries in the region) and, for comment, see EBRD (2002), *Transition Report 2002: Agriculture and Rural Transition*, European Bank for Reconstruction and Development: London, page 56.
16. See IMF and World Bank (2002), op. cit., page 35. Note 4 above contains sources of information on the Highly Indebted Poor Countries Initiative. For critical comment, refer, for example, to <*www.oxfam.org.uk/policy/papers/hipc/*>.
17. Estimated growth rates in GDP were above 5% in four of the five poorest CIS countries in 2002. In Kyrgyzstan, GDP declined by 0.5% in 2002. See Statistical Annex, Table 10.2.
18. Shengman Zhang (2003), "Closing Remarks", presented at the Lucerne Conference of the CIS-7 Initiative, 20-22 January: <*www.cis7.org*> (15 March 2003).
19. IMF and World Bank (2002), op. cit., page 38. For a discussion of other factors, see also UNECE (2002), *Economic Survey of Europe*, No. 1, UN Economic Commission for Europe: Geneva, page 155.
20. See <*www.worldbank.org/poverty/strategies*> (17 March 2003).
21. Shengman Zhang (2003), op. cit. "IDA" is the International Development Association, an arm of the World Bank that provides long-term loans at zero interest to the poorest developing countries. See <*www.worldbank.org/ida*> (17 March 2003).

3 Refugees and displaced persons: still large numbers

Although conflicts have diminished and social and economic stability has increased, there were still about 3 million refugees, asylum seekers and displaced persons in Central and Eastern Europe and the Commonwealth of Independent States at the end of 2001, according to estimates of the Office of the UN High Commissioner for Refugees (UNHCR), the UN agency concerned with people who have been forced to flee their homes as a result of conflict or the threat of violence and persecution. This huge number – 16 per cent of the total of such people in the world – nonetheless represents a decrease from over 3.5 million in 1998.[1]

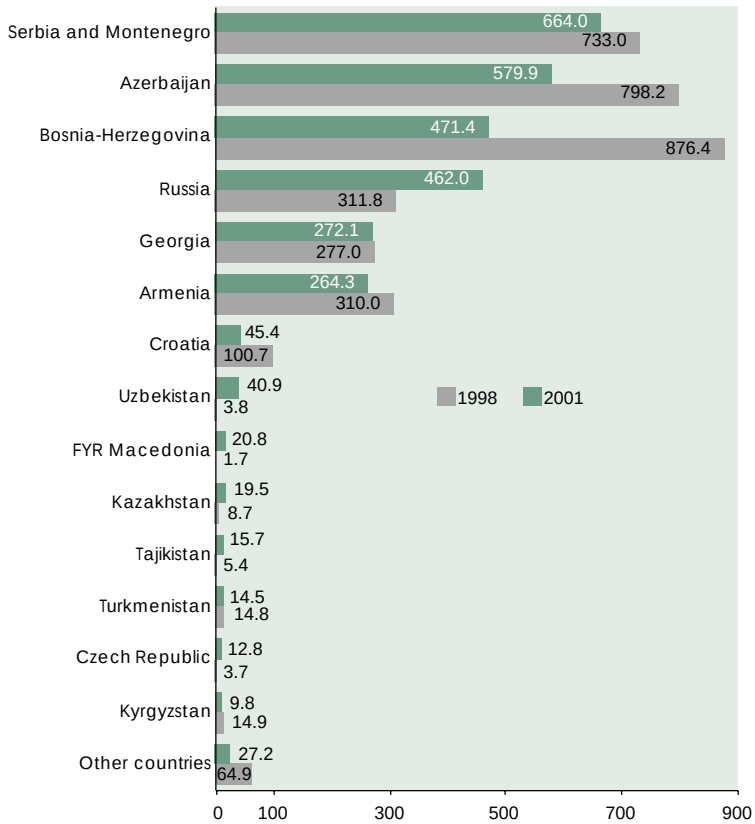
This article shows that, while the number of people who have fled their homes because of conflict or fear of persecution has decreased greatly since the 1990s, recent and ongoing strife in Afghanistan, in Chechnya in Russia and in the former Yugoslavia have resulted in new displacements. The social and economic situation of refugees and displaced persons remains fragile. Moreover, the political will to resolve permanently the status of these people is often lacking or is not perceived as a priority.

3.1 The numbers are down

Figure 3.1 shows the number of refugees, asylum seekers and internally displaced persons in the CEE/CIS in 1998 and 2001 with whom the UNHCR was concerned. The largest decline over this period took place in Bosnia and Herzegovina, where the total halved, falling from 876,000 to 471,000. There was also a significant reduction in Azerbaijan, and smaller drops in numbers occurred in Armenia, Croatia, and Serbia and Montenegro (formerly FR Yugoslavia). However, the numbers increased in other countries, notably FYR Macedonia, Russia and Uzbekistan. The changes mainly reflect growing political and social stability in most of the countries of the former Yugoslavia, but also the eruption of new conflicts or of the renewed persecution of minorities in some areas. In FYR Macedonia, hostilities in the first half of 2001 caused many thousands of people to flee their homes, although, by the end of the year, most were preparing to return. Ongoing hostilities in Afghanistan, which came to a head in late 2001 with the overthrow of the Taliban regime, led many people to escape north to Tajikistan and Uzbekistan. In the latter country, there were fewer than

Figure 3.1

Refugees, asylum seekers and displaced persons, 1998 and 2001
(thousands)



Sources: UNHCR (1999), "Refugees and Others of Concern to UNHCR: 1998 Statistical Overview", Office of the UN High Commissioner for Refugees: Geneva, Table I.1; UNHCR (2002), *Statistical Yearbook 2001*, Office of the UN High Commission for Refugees: <*www.unhcr.ch*> (accessed 2 February 2003), Table I.1.

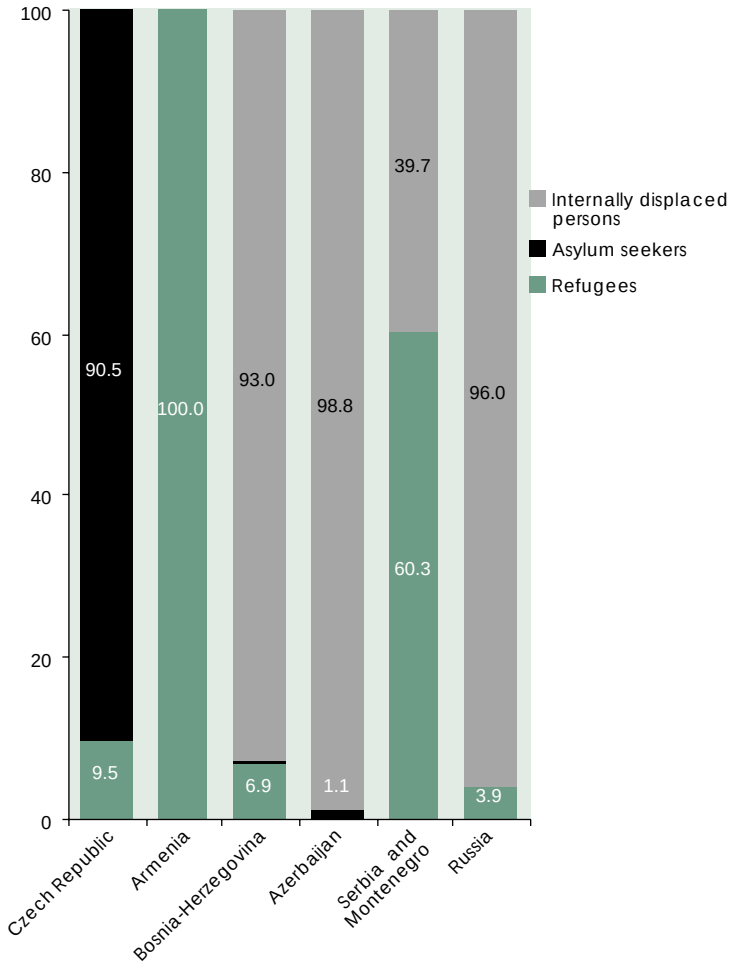
Note: The table does not include returned refugees and returned displaced persons or others of concern to UNHCR (for example, 'forced migrants' in Russia). The numbers represent the relevant people located within the reporting countries.

4,000 refugees and displaced persons in 1998, but over 40,000 such people by the end of 2001.[2]

Information on the number of children growing up as refugees and displaced persons is often scarce. Nonetheless, they are thought to be substantial in several countries in the region. UNHCR estimates that, in 2001, children and young people aged under 18 comprised a tenth of all refugees and displaced persons in Armenia, a third in Azerbaijan and a half in Uzbekistan. However, information on trends in the number of children who are refugees or among the displaced is not available. Therefore, it is not possible to say whether the share of children in refugee populations has been growing or shrinking in recent years or to determine the length of time children spend as refugees and displaced persons in different countries.[3]

Figure 3.2

Categories of persons of concern to UNHCR, 2001 (per cent)



Source: UNHCR (2002), op. cit. (Figure 3.1), Table I.1.

Note: Data refer to people located within the countries. Other groups of people of concern to UNHCR, including 'forced migrants', are not included.

3.2 The various categories

The number of people indicated in Figure 3.1 refers to the three main groups with which UNHCR is concerned, namely:

- *Refugees:* persons recognized as refugees under the 1951 Convention relating to the Status of Refugees. Such people cannot be expelled or repatriated to the country from which they have fled.
- *Asylum seekers:* persons whose application for refugee status is pending or under consideration.
- *Internally displaced persons:* persons who are displaced (or forced to flee their homes), but remain in their country of origin and to whom UNHCR extends protection or assistance in particular situations when requested to do so.[4]

Figure 3.2 shows the relative importance of these groups in five countries in 2001. In Czech Republic, 9 in 10 of the 13,000 refugees and others were asylum seekers awaiting a decision on their claim for refugee status.[5] In Armenia, almost all those with whom UNHCR was concerned were ethnic Armenian refugees who, beginning in the late 1980s, had fled Azerbaijan during the conflict between the two countries. In Azerbaijan and Bosnia and Herzegovina, on the other hand, nearly all were internally displaced persons. This is a reflection of the fact that wars were fought directly on the national territories of these countries, forcing thousands to escape to other regions within their own countries. In Russia in 2001, many of the internally displaced persons were escaping the conflict in Chechnya.

Besides the three main groups discussed above, the UNHCR is also concerned with refugees and internally displaced persons who have decided to return to their place of origin. Figure 3.3 shows the numbers for the six countries in the region that had the most returnees in 2001. The grey bars show the number of refugees who returned to the countries named in the Figure. The green bars show the number of internally displaced persons who moved within the same country from their area of refuge back to the town or district from which they had fled. In sum, the grey and green bars should represent 'resolved cases': the number of people who had left their homes in the face of conflict or persecution and who were now opting to return. In the case of FYR Macedonia, thousands of people had left their homes during the brief conflict between ethnic Albanians and Government forces in the summer of 2001, but most had returned by the end of the year. A large proportion of the refugees and displaced persons returning to their homes in Bosnia and Herzegovina were going back to areas

where their ethnic group was not the dominant one, suggesting that concerns regarding their safety had diminished. However, the US Committee for Refugees reports that some people did encounter violence from majority ethnic groups, and many more had difficulties in asserting their property rights.[6]

Not all returns are unambiguously positive. Most of the 47,000 displaced persons in Russia indicated in Figure 3.3 voluntarily returned to their home areas in 2001. However, UN agencies report that, in 2002, many Chechen displaced persons were left with few options but to go to temporary accommodation centres in Grozny, the capital, which was still considered unsafe, or to other centres in Ingushetia, after the camps where they had been staying were closed by local authorities. In these accommodation centres not only are overcrowding and very poor sanitation reported to be common, but many displaced persons are worried because of the insecurity of their situation.[7]

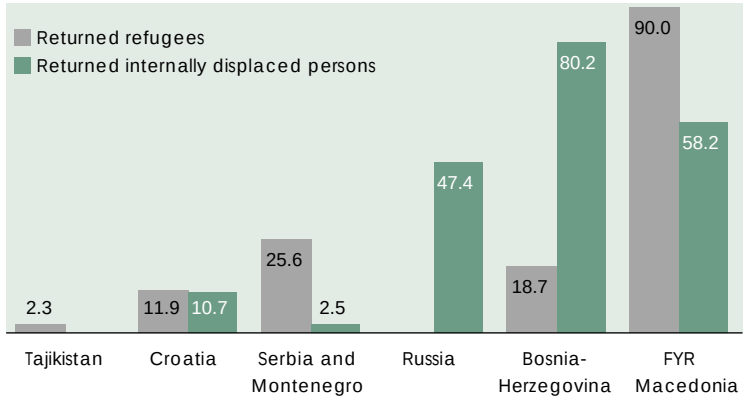
The UNHCR also monitors the security and well-being of other groups. One such group is 'forced migrants', people from countries of the former Soviet Union in which large-scale population movements occurred during the 1990s, often reversing forced mass migrations that took place during the 1930s and 1940s. In particular, the term 'forced migrants' has been applied in Russia to ethnic Russians who have left the former Soviet republics that had become independent, who have settled in Russia and who have usually been entitled to Russian citizenship. There were a half million forced migrants in Russia at the end of 2001, but the number has been decreasing, as more of these people acquire Russian citizenship.[8]

3.3 People seeking refuge in advanced industrialized countries

The trends and numbers discussed so far do not include people from countries in the region who have sought asylum in industrialized countries, mostly outside the region. Almost a million applications for asylum were made by people fleeing conflict in the former Yugoslavia between 1989 and 2001. Over 360,000 applications were made by people from Romania after 1989, as were 200,000 from Poland and 130,000 from Bulgaria.[9] People from these latter three countries were escaping adverse economic conditions rather than conflict or persecution, as well as exercising their new-found freedom of movement.[10] In such cases, the proximity and relative wealth of Western Europe provided important incentives for migration, and asylum-seeking was one method used to surmount stringent immigration control in Western countries.

Figure 3.3

Returned refugees and internally displaced persons, 2001 (thousands)



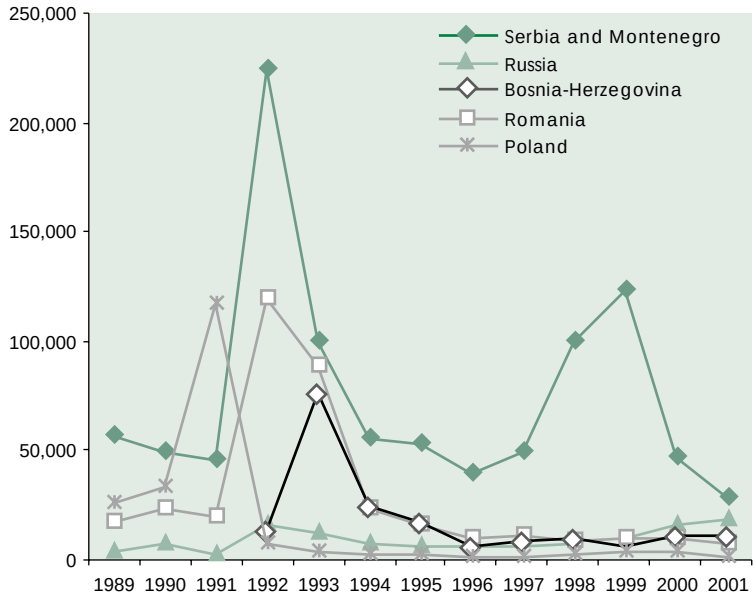
Source: UNHCR (2002), op. cit. (Figure 3.1), Table I.1.

Note: 'Returned refugees' are those people who have returned from other countries to the countries in the Figure. 'Returned internally displaced persons' are those people who have returned to the towns or districts that they left due to conflict or fear of persecution.

Figure 3.4 shows the annual flow of new asylum applicants to industrialized countries between 1989 and 2001. A progressive tightening of asylum procedures throughout the 1990s in Europe is one reason why the flow of asylum seekers from Central and Eastern Europe declined.[11] However, the decline may also be associated with improving economic conditions and greater political stability in the region. Conflict in Serbia and

Figure 3.4

Asylum applications in industrialized countries, by country of origin (absolute numbers)



Source: UNHCR (2002), op. cit. (Figure 3.1), Annexes C.6 and C.7.

Note: Some people may have made more than one asylum application in any given year. Industrialized countries: Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, UK and US.

Montenegro over Kosovo was associated with a reversal of this trend in the late 1990s, when asylum applications rose. Asylum applications by people from Russia also edged up towards the end of the 1990s.

3.4 Long-term disadvantage

Despite the large reductions in the totals of refugees and displaced persons in recent years, this has been a long-term crisis for these people. Armed conflict between Armenia and Azerbaijan ended in 1994, but there were still almost a million refugees and displaced persons in these countries at the end of 2001. Throughout the 1990s and into the new century, conflicts in Chechnya and the former Yugoslavia have forced hundreds of thousands of people to flee their homes. A survey of refugees and displaced persons in Serbia and Montenegro in 2000 shows that, among those living in collective centres (for example, public buildings converted for communal living), the majority had been there since before 1996.[12]

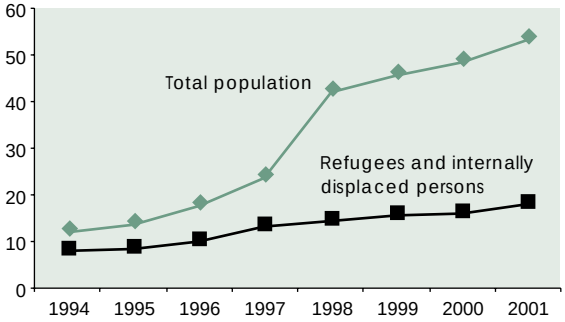
Studies of the areas and districts where refugees and displaced persons have been concentrated for several years often reveal a picture of severe disadvantage. Several factors specific to the situation of refugees and displaced persons contribute to this disadvantage: lack of access to farmland, poor or unrecognized educational qualifications, lack of investment capital and the absence of informal social networks for finding employment and other opportunities.[13] Figure 3.5 offers one such manifestation of this in the case of Azerbaijan, where refugees and displaced persons comprise 7 per cent of the total population. The Figure shows UN Development Programme estimates suggesting that, although the average per capita income among these people has risen since 1994, it has not kept pace with the rise in the average income among the total population of Azerbaijan. One reason for this growing disparity is the low employment rate among refugees and displaced persons and the continued dependence of these people on aid from governmental and non-governmental agencies and international organizations. In 2001, seven years after the conflict had ended that had produced this refugee and displaced population, the UNDP reported that fewer than a fifth of these people were living in housing suitable for long-term habitation. A fifth were still living in temporary asylum facilities, a fifth with relatives, and 8 per cent in tent camps.[14]

Similar disadvantage is apparent in other countries. A survey of displaced persons in Georgia in 2000 found that half were living in collective centres. The survey also determined that displaced persons living in collective centres had substantially lower levels of paid employment than did the settled population.[15] In Chechnya in Russia, hostilities continue, and international organizations report that the situation is difficult among displaced persons there and in neighbouring Ingushetia, where many people have fled. One indicator of the poor living conditions and poor level of health among the population in these republics is the prevalence of new tuberculosis infections. Figure 3.6 shows that these were more than double the infection rates in North Caucasus (which includes Chechnya and Ingushetia) and in all of Russia in 2000 and 2001. It is not hard to imagine that displaced persons are well represented among these new tuberculosis cases in both republics.

Although information on trends in the number of chil-

Figure 3.5

Average monthly per capita income, Azerbaijan
(dollars at market exchange rates)

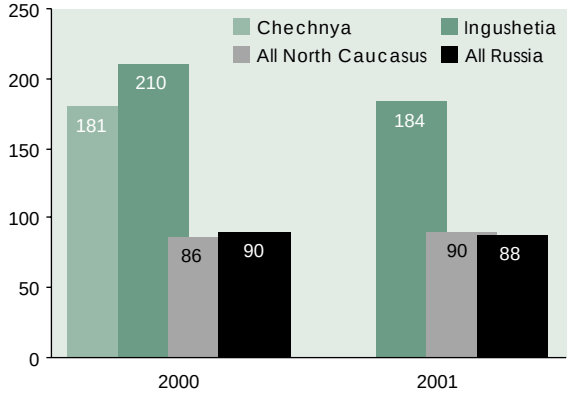


Source: Table 5.31, UNDP (2002), *Azerbaijan Human Development Report 2002*, UN Development Programme: <*www.un-az.org/undp/*>.

Note: Estimates based on data of the Azerbaijan State Statistical Committee and the Azerbaijan State Committee for the Affairs of Refugees and Internally Displaced Persons.

Figure 3.6

Newly registered cases of tuberculosis in Chechnya, Ingushetia, North Caucasus and Russia
(per 100,000 population)



Sources: Russian Federal Ministry of Health data: personal communication, World Health Organization, Moscow; Statistical Annex, Table 6.6.

Note: Chechnya and Ingushetia are republics within the Russian Federation. They are located in North Caucasus. Total data for North Caucasus include data on the two republics.

dren who are refugees or displaced is scarce, such children likely share in the poverty and other hardships that many refugees and displaced persons endure. In addition, schooling among these children is often limited because of insufficient resources. A UNICEF report on Serbia and Montenegro shows that many refugee and displaced children have suffered severe disruption in their education, for example because of non-recognition of school certificates issued in their regions or countries of origin. Moreover, among children living in collective centres, school attendance rates are significantly lower than the national average.[16] In the case of Russia, the UN Commission on Human Rights states that, because of difficulties in registration, displaced children from Ingushetia and Chechnya often do not receive the education and medical assistance to which they are entitled.[17] Disadvantages such as these cannot easily be made up or compensated for in later years.

3.5 Political obstacles

Resolving the longer term situation of refugees and internally displaced persons has proved difficult. As the Azerbaijan Government's "Interim Poverty Reduction Strategy" argues:

> "Providing normal living conditions for refugees and internally displaced persons remains an extremely difficult problem. The prolonged uncertainty in resolving the conflict between Armenia and Azerbaijan has created a paradoxical situation: on the one hand, if all efforts are concentrated on solving problems related to the survival of this category of the population in the areas where they are currently located, this will create considerable constraints for their return to the places which they were forced to leave; on the other hand, it is extremely unfair to leave some 1 million refugees and displaced persons in such socially disadvantaged circumstances."[18]

Though the conflicts that have caused millions of people to flee their homes have complex roots and are difficult to resolve, the long-term needs of displaced and refugee children demand special attention. Most of all, these children and their families require resettlement and help in integrating smoothly into their communities. As the number of refugees and internally displaced persons falls, this task should become easier. Such is now the case in Bosnia and Herzegovina, for instance. But, in some other countries, resettlement still seems a distant prospect. This is an issue in which the international community can play an active role by supporting the well-being of refugee and displaced families in the region and encouraging long-term political settlements that allow these families to live in more well integrated and less vulnerable communities.[19]

Notes and references

1. The totals in 1998 and 2001 represent refugees, asylum seekers and internally displaced persons as counted by the UNHCR. See UNHCR (1999), "Refugees and Others of Concern to UNHCR: 1998 Statistical Overview", Office of the UN High Commissioner for Refugees: Geneva, Table I.1; UNHCR (2002), *Statistical Yearbook 2001*, Office of the UN High Commissioner for Refugees: <*www.unhcr.ch*> (accessed 28 January 2003), Table I.1.
2. It is important to note that the estimates compiled by the UNHCR may differ from the estimates of other bodies, including government estimates.
3. For a discussion of gender and age in refugee and displaced person statistics, see UNHCR (2002), op. cit., Chapter II.
4. The 1951 Convention relating to the Status of Refugees is the key legal document in determining who is a refugee, the rights of refugees and the legal obligations of states. See <*www.unhcr.ch*> (16 March 2003). Definitions of groups with which UNHCR is concerned are taken from UNHCR (2002), op. cit., pages 72-73. UN guiding principles define internally displaced persons as "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border." See UNOCHA (no date), "Introduction: Scope and Purpose", *Guiding Principles on Internal Displacement*, UN Office for the Coordination of Humanitarian Affairs: <*www.reliefweb.int/idp*>.
5. Most asylum seekers are located in advanced industrialized countries, where the bureaucratic machinery exists for the processing of claims, which can take considerable time. See UNHCR (2002), op. cit., Table I.1.
6. US Committee for Refugees (2002), *World Refugee Survey 2002*, US Committee for Refugees: <*www.refugees.org*> (1 February 2003).
7. Norwegian Refugee Council (2002a), "No Viable Alternative for IDPs Forced to Leave Tent Camps in Chechnya"; Norwegian Refugee Council (2002b), "Russian Federation: Sanitation and Water in Temporary Accommodation Centres not Satisfactory". Both reports can be found at: <*www.db.idpproject.org*> (1 February 2003).
8. During the 1990s, UNHCR did provide assistance to forced migrants, but currently does not do so except to include them in legal counselling networks (personal communication: Kemlin Furley, UNHCR). Besides forced migrants, the UNHCR in 2001 was also concerned with the situation of an estimated 100,000 Afghan asylum seekers in Russia, 100,000 stateless persons in Kazakhstan and 85,000 local residents at risk in Serbia and Montenegro. For fuller information on UNHCR categorizations, see UNHCR (2002), op. cit., pages 72-73.
9. UNHCR (2002), op. cit., Annexes C.6 and C.7.
10. UNHCR (2000), *The State of the World's Refugees: Fifty Years of Humanitarian Action*, Office of the UN High Commissioner for Refugees: <*www.unhcr.ch*> (7 March 2003), page 158.
11. UNHCR (2000), op. cit., pages 158-65.

12. Dr. Milan Jovanovic Batut Institute of Public Health of Serbia (2000), "Health Status, Health Needs and Utilization of Health Services in 2000: Report on the Analysis of the Adult Population in Serbia, Differences between Domicile Population, Refugees and Internally Displaced Persons", Dr. Milan Jovanovic Batut Institute of Public Health of Serbia: <*www.db.idpproject.org/*> (6 February 2003), Tables 3-6.
13. UN (2002), "Specific Groups and Individuals: Mass Exoduses and Displaced Persons", E/CN.4/2003/86/Add.5 (27 November), UN Economic and Social Council: New York.
14. UNDP (2002), *Azerbaijan Human Development Report 2002*, UN Development Programme: <*www.un-az.org/undp/*> (29 January 2003), Table 5.28.
15. MONEE project country report, Georgia (2001).
16. UNICEF (2001), "Comprehensive Analysis of Primary Education in the Federal Republic of Yugoslavia", UNICEF-Belgrade: Belgrade, pages 100-101. See also Norwegian Refugee Council (2002c), "Influx of IDPs Have Put Extraordinary Pressure on Already Deteriorated School Systems (2000-2002)", Norwegian Refugee Council: <*www.db.idpproject.org*> (9 March 2003).
17. UN (2002), op. cit.
18. Government of Azerbaijan (2001), "Interim Poverty Reduction Strategy", Section 20, Government of Azerbaijan: Baku, Azerbaijan. See <*www.worldbank.org/poverty/strategies*> (31 March 2003).
19. See also Articles 44 (27) and 44 (28), UNICEF (2002), *A World Fit for Children*, UNICEF: <*www.unicef.org*> (19 December 2002).

4 Intercountry adoption: trends and consequences

Intercountry adoption can be seen as a positive measure to remove children from unsatisfactory care situations to a permanent family environment.[1] However, where it happens on a large scale, it can also be interpreted as a failure by states and societies adequately to care for their most vulnerable members. Since the start of the transition, at least 100,000 children from Central and Eastern Europe and the Commonwealth of Independent States have been adopted by parents abroad, mainly in North America and Western Europe. The number of children from the region adopted by foreigners rocketed from a few hundred in 1989 to more than 12,000 in 2001. The increase in intercountry adoptions from the region is an important element in the global rise in intercountry adoptions. Intercountry adoptions from the CEE/CIS now constitute one third of the world total of officially recorded intercountry adoptions to advanced industrialized countries.

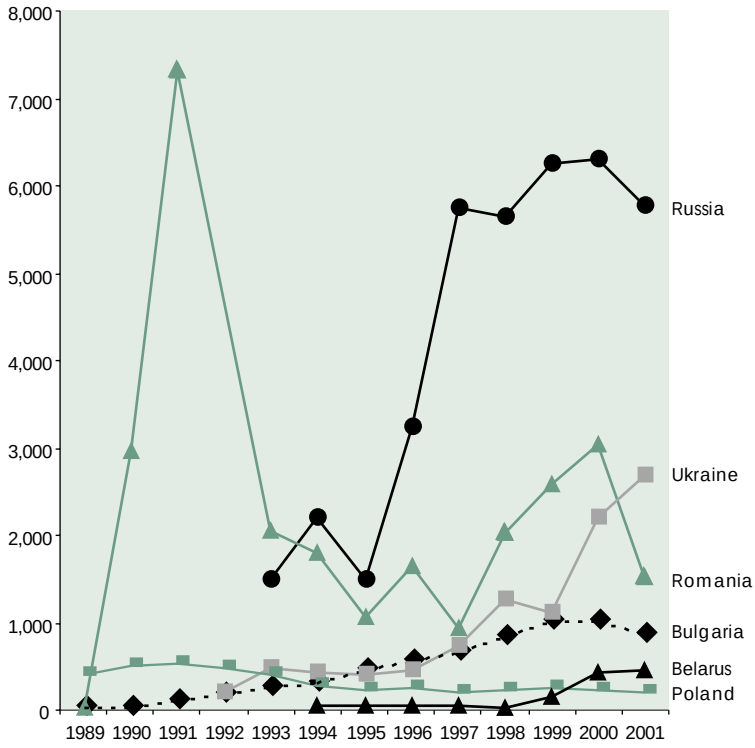
Intercountry adoption, a legal procedure that entails a change in the habitual country of residence for the adopted child, has produced positive outcomes for many children. Research shows that children who are so adopted do benefit from the support and opportunities they receive in their new family environments. But the growth in intercountry adoption has also provoked concern. There are worries that, in the sending countries, the promotion of preferred alternatives to intercountry adoption, such as foster care, domestic adoption and programmes to help birth families keep their children, is being neglected. There are also fears that processes of intercountry adoption are not properly regulated and, in some cases, are being abused. These are clearly important issues for governments in the region, as is demonstrated by the numerous moratoriums imposed on intercountry adoption since the start of the transition.

4.1 'Supply and demand'

Figure 4.1 shows the annual number of intercountry adoptions reported in six CEE/CIS countries between 1989 and 2001. These six countries have accounted for the majority of intercountry adoptions from the region.[2] In 1989, before the end of the communist era, relatively few children were subject to intercountry adoptions. In most countries, this situation did not change greatly in the early 1990s. In Poland, the number of intercountry adoptions increased during the initial turmoil of the transition, but only briefly. In other countries, the numbers began to accelerate only after the mid-1990s, for example, reaching over 6,000 in Russia in 1999.

Figure 4.1

Intercountry adoptions, 1989-2001 (absolute numbers)



Sources: MONEE project database, except for Romania, 1990-91 and 1993-94: Zamfir, E. and C. Zamfir (1996), "Children at Risk in Romania: Problems Old and New", *Innocenti Occasional Papers,* No. EPS 56, UNICEF Innocenti Research Centre: Florence.

Note: Data for some countries may also include international adoptions. See the Glossary for definitions. Data for Romania in 1992 are missing.

The first concerns about abuses in intercountry adoption in the region emerged because of the situation in Romania in the early 1990s. Within weeks of the December 1989 revolution which brought down the Ceauçescu regime, adoption agencies and individuals began arriving in the country to adopt 'orphans' from children's institutions after reports in the Western media about the appalling conditions there. Romania registered fewer than 30 intercountry adoptions in 1989, but is estimated to have witnessed the departure of more than 10,000 children between January 1990 and July 1991, when the president called a moratorium on intercountry adoptions because of the abuses that were taking place.[3] Adoptions from Romania rose again during the late 1990s, but declined in 2001, after a second moratorium was imposed.

Table 4.1 shows information from major receiving countries on total intercountry adoptions and on intercountry adoptions from the CEE/CIS region. The number of intercountry adoptions registered in the 16 major receiving countries jumped by more than 75 per cent between 1988 and 2001, from over 19,000 to more than 34,000. The CEE/CIS countries account for most of this difference. This suggests that the rise in the number of adoptions from the CEE/CIS has been a major factor in the worldwide growth in intercountry adoptions since 1990. The US is the most important receiving country. It has accepted more than half of all intercountry-adopted children over the last decade. Other important receiving countries are Canada, France, Germany, Italy and Spain.

Table 4.1

Intercountry adoptions towards 16 major receiving countries, 1988, 1998 and 2001

	1988	1998			2001		
	Total	Total	From CEE/CIS	%	Total	From CEE/CIS	%
US	9,120	15,774	5,586	35.4	19,237	7,651	39.8
France	2,441	3,777	–	–	2,850	945	33.2
Italy	2,078	2,263	1,072	47.4	2,127	1,335	62.8
Germany	875	1,889	362	19.2	1,789	360	20.1
Canada	232	2,222	251	11.3	1,874	262	14.0
Spain	93	1,522	216	14.2	3,428	1,569	45.8
Sweden	1,075	928	–	–	1,044	212	20.3
Switzerland	492	733	–	–	–	–	–
Netherlands	577	825	–	–	–	–	–
Norway	582	803	94	11.7	721	49	6.8
Belgium	662	254	–	–	–	–	–
Denmark	523	624	–	–	383	30	7.8
Australia	516	245	–	–	289	24	8.3
Finland	78	181	–	–	–	–	–
UK		277	–	–	326	–	–
Ireland		147	–	–	–	–	–
Total	19,344	32,464	7,581	23.4	34,068	12,437	36.5

Sources: Selman, P. (2002), "Intercountry Adoption in the New Millennium: The Quiet Migration Revisited", *Population Research and Policy Review*, Vol. 21, pages 205-25, Table 1; US: US Department of State (<*www.travel.state.gov*>), Holt International (<*www.holtintl.org*>); Spain: Ministerio de Trabajo y Asuntos Sociales (<*www.mtas.es/estadisticas*>); Italy: Commissione Adozioni (<*www.commissioneadozioni.it*>); Germany: Federal Statistical Office (<*www.destatis.de*>); France: Ministère des Affaires Etrangères (<*www.france.diplomatie.fr*>); Canada: Family Helper (<*www.familyhelper.net*>); Sweden: National Board for Intercountry Adoptions (<*www.nia.se*>); Norway: Statistics Norway (<*www.ssb.no*>); Denmark: DanAdopt (<*www.danadopt.dk*>); Australia: AIHW (2002), "Adoptions Australia, 2000-01", No. CWS 15, Australian Institute of Health and Welfare: <*www.aihw.gov.au*>. (The websites were accessed on 26 March 2003, except AIHW, which was accessed on 31 March.)

Note: Data are incomplete for Germany in 1988, Belgium in 1998 and Denmark in 2001. 1988 data for Canada refer to Quebec Province. 1998 data for Italy and Switzerland refer to 1997, and for Spain (covering Catalonia only) to 1999. 1998 data for UK refer to applications processed rather than actual intercountry adoptions. Data for US are for the year ending in October, and for Australia for the year ending in June. In many cases, the number of adoptions from CEE/CIS is reported only for leading countries (those sending the greatest number of children to receiving countries) rather than for all countries.

In 2001, 4 in 10 children adopted from abroad by US parents, more than 7,600 children in total, arrived from the CEE/CIS region. Over 1,500 children from the region were adopted by parents in Spain, and more than 1,300 by parents in Italy. In contrast, parents in the Nordic countries and Canada appear to adopt few children from the region.

The information on receiving countries enhances the data available on the sending countries. For example, while no intercountry adoption data have been reported to the MONEE project from Kazakhstan, US data show that there were 819 adoptions from Kazakhstan to the US in the year beginning October 2001, more than double the number two years previously. The extent to which children from Kazakhstan are adopted towards other countries is not clear. However, the data for the US alone suggest that Kazakhstan has recently become one of the most important sources of children for intercountry adoption from the region.[4]

Intercountry adoptions to advanced industrialized countries typically involve fees or service charges paid by the adoptive parents to agencies, which find children available for adoption and act as intermediaries between the adoptive parents and authorities in both the sending and the receiving countries. The fee paid to US-based agencies for the adoption of a child is often in the $10,000-$15,000 range and usually includes a contribution to support child-care services in the sending country. Most advanced industrialized countries and CEE/CIS countries attempt to ensure that adoptions occur only towards parents who fulfil certain basic criteria and who have been subjected to an assessment procedure.

4.2 Rules governing intercountry adoption

Adoption entails the definitive legal separation of children from their birth parents. Therefore, it should be viewed as an enduring and last-resort care solution for the small minority of children who are unable to stay permanently with their parents. For such children, adoption may be the preferable solution, promising a stable family environment. When, in specific cases, it becomes evident that adoption is probably the best possible welfare measure for a child, efforts should be made to find adoptive parents living in the same country. Only when these efforts fail should an intercountry solution be considered.

The 1993 Hague Convention on Intercountry Adoption, the international agreement which sets out rules for the intercountry transfer of children for adoption, emphasizes the subsidiary or last-resort nature of this child welfare measure.[5] The Hague Convention has so far been ratified by more than 50 countries, including 12 in the CEE/CIS region.[6] Romania was one of the first countries in the world to ratify the convention, in 1994. Most of the major sending countries in the region have also acceded or are in the process of doing so. Kazakhstan and Ukraine, however, have yet to sign.

In many respects, the processes governing intercountry adoption are well regulated. There is little evidence to suggest that the abuse and exploitation of children so adopted are anything but rare. Research shows that welfare outcomes for intercountry-adopted children tend to be favourable, and longitudinal follow-up studies demonstrate that children can flourish after adoption. For example, one UK study tracked the social, developmental and cognitive progress of 165 children adopted from institutions in Romania by families in England between 1990 and 1992. The study found that, despite the deprivation they had often suffered in their early lives, the majority of the Romanian adoptees had caught up with English children of the same age physically and cognitively within a few years.[7]

4.3 Impact on child protection

The focus of concern has not only been the children who are adopted, but also the children who remain without family care, as well as the influence of intercountry adoption on entire child protection systems. Over the 1990s, most worries centred on Romania, where corruption in the system for intercountry adoption quickly became apparent.[8] Reforms in the mid-1990s sought to improve child protection services, particularly foster care, and strengthen the controls on adoption. They also obliged agencies engaged in securing children for intercountry adoption to make financial contributions to support child welfare services. But, in so doing, the reforms also cemented the role of intercountry adoption as a child welfare measure in Romania and created an explicit financial link between intercountry adoption and the funding of child protection services. From the late 1990s, before a second moratorium was introduced in 2001, the number of intercountry adoptions from Romania increased, while domestic adoptions fell. One expert summed up the reforms thus:

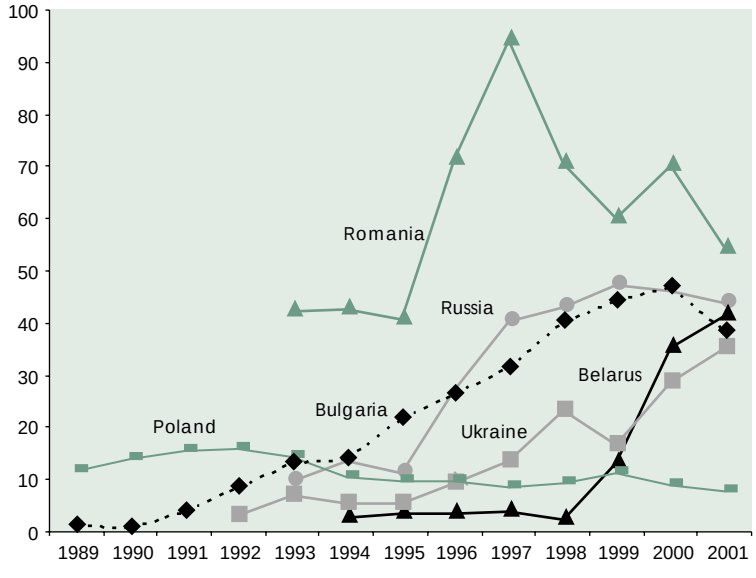
> "So the policy uses inter-country adoption to secure some financial gain for domestic services, albeit limited: but it only achieves this by building inter-country adoption into the mainstream of Romania's child welfare system. The consequence of this is that inter-country adoption becomes normalized, ever more acceptable to policy makers and readily used by practitioners. In effect, it comes to be regarded as a routine child welfare option rather than as a 'last resort' that should only be used when no suitable alternatives are available (the approach prescribed in Article 21 of the UN Convention on the Rights of the Child)."[9]

To what extent is the Romanian experience representative of the experience of other sending countries in the region? In one sense, Romania is an exception. Figure 4.2 shows that it is the only country where, in some years, a majority of adopted children have gone abroad. In Belarus, Bulgaria, Russia and Ukraine, however, the share of intercountry adoptions in the total increased markedly over the second half of the 1990s, reaching about 4 in 10 in 2001.

In these countries, too, as the share of intercountry adoptions in the total rose, the number of 'national' adoptions changed little or even declined. Figure 4.3 shows national, intercountry and total adoptions in Russia as a proportion of the population of children aged 0-3. Over the 1990s, the total adoption rate increased, but, while the intercountry adoption rate climbed in the mid-1990s, the national adoption rate dropped. Similar patterns are apparent in the case of Bulgaria and

Figure 4.2

Share of intercountry adoptions in all adoptions, 1989-2001 (per cent)

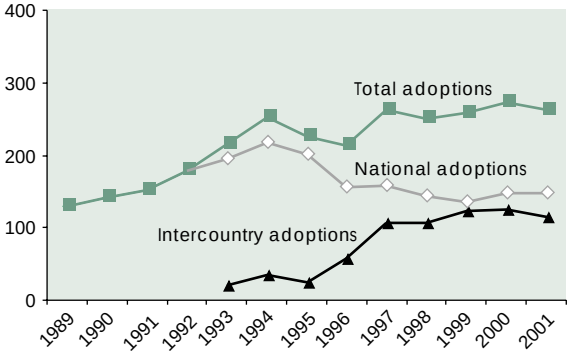


Sources: MONEE project database; Zamfir and Zamfir (1996), op. cit. (Figure 4.1).

Note: Data for some countries may also include international adoptions. See the Glossary for definitions.

Figure 4.3

National and intercountry adoptions in Russia, 1989-2001 (per 100,000 population aged 0-3)



Source: MONEE project database.

Ukraine. In Bulgaria, for example, the number of national adoptions fell by a quarter between 1994 and 2001, but the number of intercountry adoptions almost tripled. This suggests that, while intercountry adoptions have resulted in an expansion in the total number of adoptions, they have to some extent replaced rather than augmented national adoptions.

The growth in intercountry adoptions from these countries, coupled with the contraction in domestic adoptions, suggests that a pattern similar to the one evident early on in Romania is now taking hold: intercountry adoptions are gradually becoming a more widespread alternative for dealing with children who are left without parental care in these countries. The fact that commercial exchanges are often an established part of the intercountry adoption process has added to fears that this option is not always seen as a 'last resort' welfare measure.[10]

Yet, the picture is complicated by economic and social developments in these countries during the 1990s, when poverty was spreading rapidly, as was the share of children who were being left by their parents in public care. (See Statistical Annex, Tables 8.2 and 8.3).[11] The rise in poverty in many countries has almost certainly been a factor in the growth in the proportion of children left without parental care, and it may also explain some of the drop-off in national adoptions. Likewise, declining public expenditure may have caused child protection workers and administrators, who were struggling with limited budgets to provide social services for large numbers of children, to consider intercountry adoption as a relatively attractive option for some children in their care because it often involved financial contributions for child protection services.

However, the supply of children both to institutions and for national and intercountry adoption varies widely across the region, as Figure 4.4 demonstrates. The bars in the Figure indicate national and intercountry adoption rates in 2001, and the triangular points show the rates of children in infant homes (all per 100,000 children aged 0-3). The adoption rates represent movements of children out of child protection systems and into new families, while the infant home rates represent the 'stock' of young children in infant homes at a given time.

The countries are listed in Figure 4.4 in terms of total adoption rates (the sum of national and intercountry adoption rates). Bulgaria, Latvia and Romania stand out with high rates of children in infant homes and high levels of both total and intercountry adoptions, although it is important to note that the infant home rate for Romania is for 2000 and that it may have dropped in 2001.[12] Belarus, Russia and Ukraine also have significant levels of intercountry adoptions and children in infant homes.

The Czech Republic, Estonia, Hungary and Lithuania, on the other hand, have low intercountry adoption rates, but relatively high rates of children in infant homes. In these countries, intercountry adoption has not featured as an important child welfare measure, although Estonia and Hungary have significant levels of national adoption.

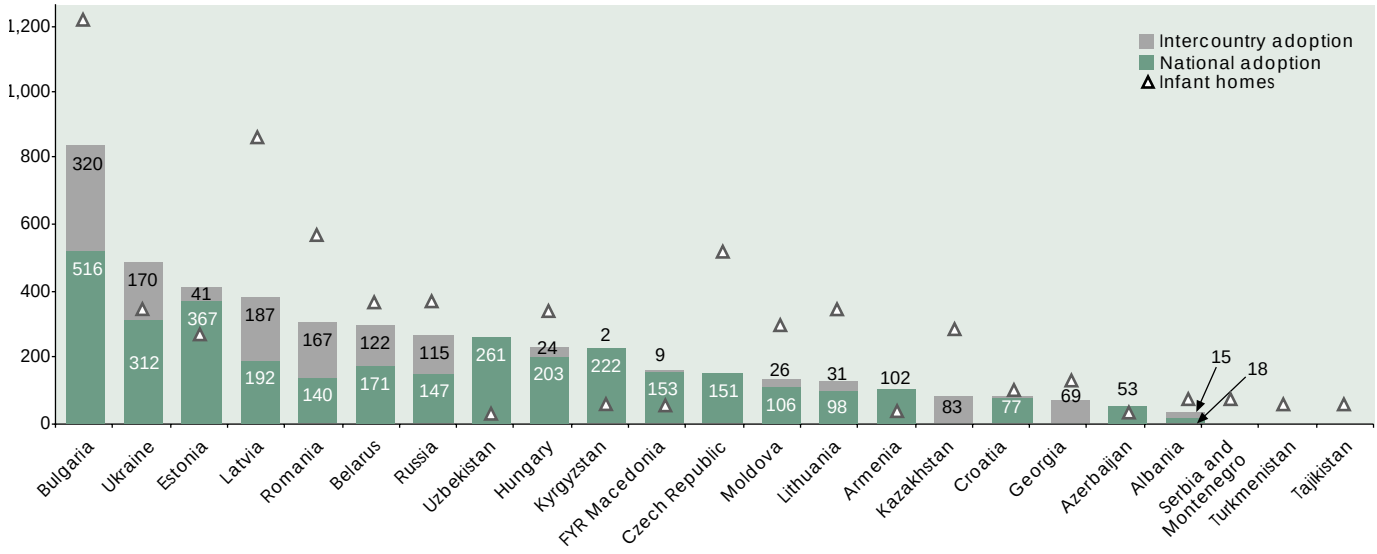
In the remainder of the region, most of the countries of South-Eastern Europe, the Caucasus and Central Asia have low rates of children in infant homes and low adoption rates. (As discussed above, this is not the case in Bulgaria, Kazakhstan, or Romania.) In Kyrgyzstan and Uzbekistan, national adoption rates are high by regional standards, although the number of intercountry adoptions is not significant.

This overall picture points to some factors that may contribute to trends in intercountry adoption. Social and economic problems associated with the transition can help explain the expansion in the supply of infants for institutional care, as well as for meeting the increased overseas demand for children for adoption. Yet, intercountry adoption did not grow in the poorest countries in the region, but rather in countries which were hit hard by the transition and in which an institutional framework for child protection was already in place. Thus, intercountry adoption never became an established alternative in Estonia, Lithuania and the countries of Central Europe (with the exception of Poland in the early 1990s). The relative wealth and more rapid recovery of these nations from the worst of the transition may have safeguarded them, despite their large populations of young children in institutions.

In most of the countries of South-Eastern Europe, the Caucasus and Central Asia, the lack of institutional accommodation, coupled with strong family traditions, may have played a part in reducing both the supply of children for adoption and the demand for them.

Figure 4.4

Children adopted or in infant homes, 2001 (per 100,000 population aged 0-3)



Sources: Statistical Annex, Tables 8.3 and 8.6; MONEE project database.

Note: Data on children in infant homes for Estonia are for 1997, and for Serbia and Croatia for 2000. Data on children in infant homes for Romania are for 2000 and are calculated based on the MONEE project country report, Romania (2001), page 90. Data on adoptions for Uzbekistan are for 1999, and for Azerbaijan for 2000. Data for intercountry adoptions from Kazakhstan refer to immigrant visas issued for adopted children entering the US from Kazakhstan and are calculated from information of the US State Department. See <*www.travel.state.gov*> (26 March 2003).

Meanwhile, in Bulgaria, Romania, Latvia, the four countries of the western CIS and, more recently, Kazakhstan, a tradition of institutional care and the severe and prolonged effects of the transition combined to produce a supply of infants for adoption. The care institutions themselves also provided a conduit through which the demand for children by adoptive parents and adoption agencies could be channelled for adoption.

4.4 Policy concerns and action

Romania has been the subject of considerable international scrutiny regarding its policies towards intercountry adoption. In response to domestic and international concerns, the Romanian Government has imposed two moratoriums on intercountry adoption, one in 1991 and one in 2001. Similarly, seven other countries have imposed temporary moratoriums at different times: Albania, Belarus, Georgia, Kazakhstan, Moldova, Russia and Ukraine. One impact of these bans, particularly in large sending countries such as Romania, has been to displace demand rather than reduce it. Thus, the increase in intercountry adoptions from Kazakhstan in 2001 can perhaps be seen as one effect of the moratorium imposed by Romania in that year.

Factors leading to the imposition of moratoriums have included the discovery of irregularities, such as the falsification of documents, or rumours (often unfounded) that children adopted abroad have disappeared. In some cases, the moratoriums reflect the failure of child protection laws and institutions to promote children's interests.[13] Finally, in some instances, such measures have been considered necessary so as to hold back the rising number of adoptions while new regulatory procedures are being implemented. The Romanian Government has extended its moratorium of June 2001 several times, and the moratorium is scheduled to remain in effect at least until June 2003 pending approval of new child welfare legislation.[14]

The design and enforcement of policies to regulate intercountry adoption are clearly a challenge for many countries in the region. This is because of the relative novelty of adoption as a child placement option, weaknesses in staff training and in child protection systems, rapidly changing social and legal environments, and difficulties in coping with the demand for children for adoption. Some experts have expressed fears that intercountry adoption is being transformed from a child-centred welfare measure of last resort into a revenue-raising activity for child protection services, that it is driven by the demand of adoptive parents and that it paradoxically undermines the effectiveness of services for the children who are left behind.[15]

Many countries are now trying to reestablish the protection of the best interests of the child through extra safeguards and restrictions. Russia, for instance, requires persons wishing to adopt to make two trips to the country. Most countries now only allow adoption abroad after

a specified period (up to a year), during which the child is officially registered as eligible for domestic placement.[16] Some countries are encouraging foreigners to adopt 'hard-to-place' children, including older children, children with a medical condition or disability, and ethnic-minority children.

Countries in the region can do more to reorient intercountry adoption within the framework of a wider child-centred approach. Most of all, they can take steps to reduce the number of children in institutions, to promote greater reliance on foster care and national adoptions and, especially, to keep or reunite children with their birth parents. Recent economic growth in the region means that more funding to implement such steps should be available so that child protection services can focus on the best interests of the child.

Notes and references

1. An intercountry adoption occurs when a child living in one country is adopted by parents living in another country. See 'Adoption' in the Glossary. For a general introduction to the issues surrounding intercountry adoption, see UNICEF (1998), "Intercountry Adoption", *Innocenti Digest*, No. 4 (December), UNICEF Innocenti Research Centre: Florence.
2. Among the 17 countries that reported adoption data to the MONEE project in 2001, 9 in 10 intercountry adoptions came from Belarus, Bulgaria, Poland, Romania, Russia and Ukraine. It should be noted that Kazakhstan, a major source of intercountry adoptions to the US, did not report adoption data to the MONEE project.
3. UNICEF (1998), op. cit.
4. See the US Department of State website, <*www.travel.state.gov*> (accessed 26 March 2003). There was also a small number of adoptions from Kazakhstan towards Ireland in 1998-99. See Adoption Board (2000), *The Report of An Bord Uchtála 1999*, Adoption Board: <*www.adoptionboard.ie*> (26 March 2003).
5. The Hague Convention of 29 May 1993 on the Protection of Children and Cooperation in Respect of Intercountry Adoption: see <*www.hcch.net*> (28 March 2003).
6. In the CEE/CIS, the Hague Convention has been ratified by Albania (2000), Bulgaria (2002), Czech Republic (2000), Estonia (2002), Georgia (1999), Latvia (2002), Lithuania (1998), Moldova (1998), Poland (1995), Romania (1994), Slovakia (2001) and Slovenia (2002). Belarus and Russia have signed, but not ratified.
7. Rutter, M. et al. (2000), "Developmental Catch-Up and Deficit: Following Adoption after Severe Global Early Privation", *Journal of Child Psychology and Psychiatry*, Vol. 39, pages 465-76.
8. UNICEF (1997), "Children at Risk in Central and Eastern Europe: Perils and Promises", *Regional Monitoring Reports*, No. 4, UNICEF Innocenti Research Centre: Florence.
9. Dickens, J. (2002), "The Paradox of Intercountry Adoption: Analysing Romania's Experience as a Sending Country", *International Journal of Social Welfare*, Vol. 11, No. 1, pages 76-83.
10. See Masson, J. (2001), "Intercountry Adoption: A Global Solution or a Global Problem?", *Journal of International Affairs*, Vol. 55, No. 1, pages 141-68.
11. See also UNICEF (2001), "A Decade of Transition", *Regional Monitoring Reports*, No. 8, UNICEF Innocenti Research Centre: Florence.
12. *Social Monitor 2002* highlighted an apparent fall in the proportion of children in infant homes in Romania between 1997 and 2000 and an increase over the same period in children being cared for by foster parents, suggesting some success in the stated Romanian policy shift towards non-institutional care. See Section 1.5 in UNICEF (2002), "Social Monitor 2002", *Innocenti Social Monitors*, UNICEF Innocenti Research Centre: Florence.
13. This occurred in Romania, for example, where there is evidence that the subsidiary or 'last-resort' nature of intercountry adoption was undermined by dependence on the financial contributions of international adoption agencies. See Ambrose, M. W. and A. M. Coburn (2001), "Report on Intercountry Adoption in Romania", 22 January, USAID and US Department of Health and Human Services: <*www.acf.hhs.gov/programs/cb/publications/*> (28 March 2003).
14. Moratoriums are not always absolute. Sometimes, 'hard-to-place' children – particularly children with disabilities – are exempted. Moratoriums may also exempt intercountry adoption applications already registered with the court at the time of the enactment of the moratorium. This has happened in Belarus (1997), Moldova (2001), Romania (2001) and Ukraine (1996).
15. See Dickens (2002), op. cit.; Masson (2001), op. cit. Dickens, for example, argues that the best social workers in Romania were enticed away with higher salaries by international adoption agencies, while social workers who remained in domestic child protection services often became demoralized.
16. It is worth noting that, unless genuine efforts are made to place a child through domestic adoption or foster care, the waiting period may not always be in the child's best interests, particularly when the child's stay in institutional care is greatly extended.

5 Confronting HIV?

By the end of 2002, an estimated 1.2 million people were infected with HIV/AIDS in Central and Eastern Europe and the Commonwealth of Independent States, up from a million a year earlier.[1] This increase, though massive in terms of absolute numbers, represents a slight decline in the rate at which the epidemic is spreading through the region. Nonetheless, this small drop in the rate of expansion of the epidemic is no cause for complacency. While the number of new infections fell in Estonia and Russia in 2002, it climbed in Belarus and Ukraine, two countries where the epidemic first became apparent on a large scale.

Unless policy action is taken to promote safer behaviour and to encourage people in marginalized groups, including injecting drug users, to come forward for advice and treatment, it seems likely that HIV will continue to harm many young people.

The purpose of this article is to chart the recent course of HIV in the CEE/CIS, particularly the infections through sexual contact and the rise in the exposure of young women to the virus. The impact of inadequate treatment and care of people with HIV is discussed, as are the high rates of transmission of the infection from mothers to their children.

5.1 Recent trends in HIV

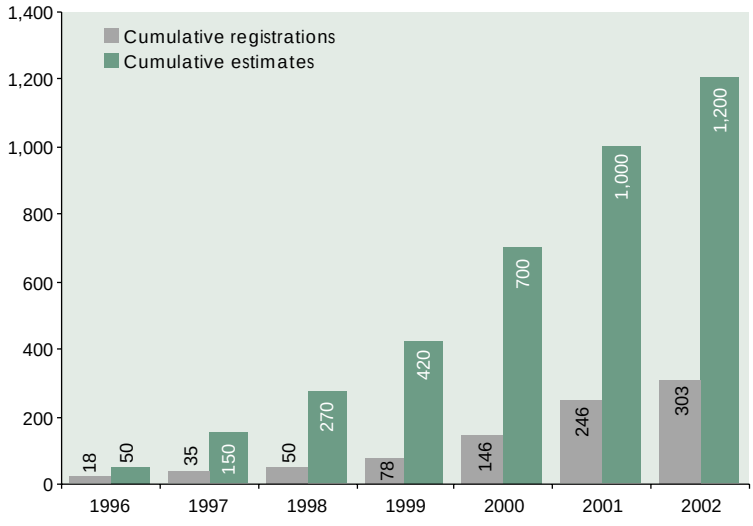
The total of 1.2 million people with HIV is an estimate produced by experts at UNAIDS on the basis of information from several sources, including official statistics on registered diagnoses of HIV and the monitoring of behaviour among high-risk groups such as sex workers and injecting drug users. Official statistics indicate the size of the known HIV population, that is, the number of people who have been diagnosed with HIV at hospitals or clinics. By the end of 2002, over 300,000 people in the region had received such a diagnosis.

Figure 5.1 shows cumulative trends in official registrations of HIV and UNAIDS estimates of the number of people infected. The biggest rise in the absolute number of infections in the region occurred in 2001, when an additional 100,000 people were registered with HIV and the estimated number of infected people soared from 700,000 to a million. In 2002, the pace of the epidemic slowed. Registrations increased by 50,000, and estimates by 200,000.

Figure 5.2 shows recent trends in newly registered HIV infections as a proportion of the population in some countries where the epidemic has been most pronounced. In Estonia, Latvia and Russia, where expansion in 2000 and 2001 was particularly serious, the growth in new registrations slowed in 2002. However, the extent of this drop in the rate should not be exaggerated. At 66 per 100,000 population in 2002, the number of new HIV registrations in Estonia, for example, was still 10 times

Figure 5.1

Cumulative growth in estimates and official registrations of HIV infections, CEE/CIS (thousands)

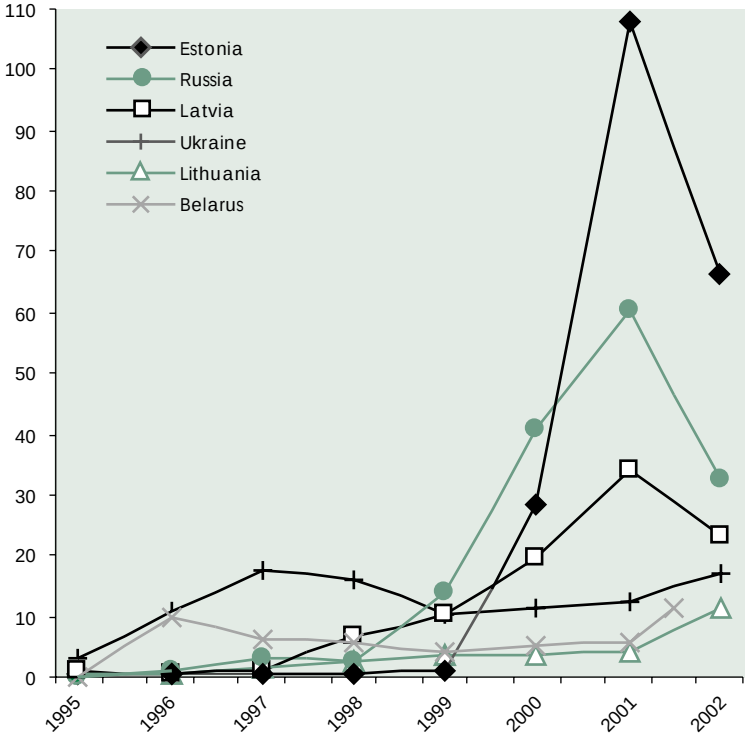


Sources: Statistical Annex, Table 6.9; AIDS Prevention Centre of Estonia: <*www.aids.ee*> (accessed 19 February 2003); AIDS Prevention Centre of Latvia: <*www.aids-latvija.lv*> (18 February 2003); Lithuanian AIDS Centre: <*www.aids.lt*> (19 January 2003); AIDS Foundation East-West: <*www.afew.org*> (18 February 2003); EuroHIV (2002), "HIV/AIDS Surveillance in Europe", *Mid-Year Reports*, No. 67 (2002), European Centre for the Epidemiological Monitoring of AIDS: <*www.eurohiv.org*> (20 January 2003), Table 13; UNAIDS (various years), *AIDS Epidemic Update*, UNAIDS: <*www.unaids.org*>.

Note: Except for Estonia, Latvia, Lithuania and Russia, registration data for 2002 are only part year.

Figure 5.2

Newly registered HIV infections, 1995-2002 (per 100,000 population)

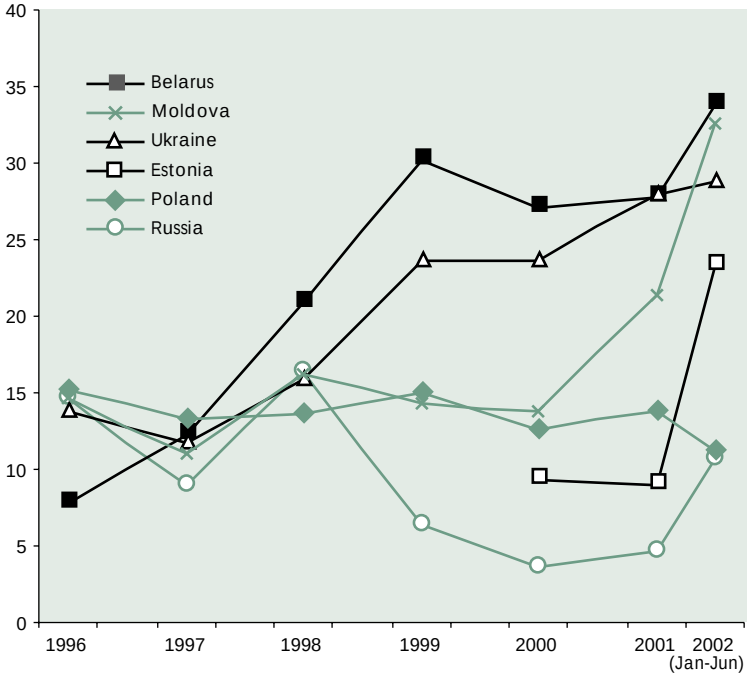


Sources: To 2001: Statistical Annex, Tables 1.1 and 6.9. 2002: AIDS Prevention Centre of Estonia, AIDS Prevention Centre of Latvia, Lithuanian AIDS Centre, AIDS Foundation East-West, and Table 13, EuroHIV (2002): all op. cit. (Figure 5.1).

Note: Data refer to the total number of newly registered infections per calendar year. 2002 data for Belarus are to the end of June, and for Ukraine to 1 October.

Figure 5.3

Sexual transmission as a cause of newly diagnosed HIV infections
(per cent of infections where the cause is known)



Source: EuroHIV (2002), op. cit. (Figure 5.1), Tables 14 and 16.

Note: Includes heterosexual and homosexual transmissions. The overwhelming majority of sexual transmissions is attributable to heterosexual activity. The share of infections not attributable to any source is small in most countries (less than 5% of all infections), but large in Poland and Russia, where the share has been up to 50% during some years.

higher than the European Union average.[2] In Belarus and Ukraine, moreover, the infection rate accelerated in 2002. This is worrying for two reasons. First, in the region, these were among the first countries in which the epidemic became established in the mid-1990s. Second, in both countries, the number of new infections grew rapidly in the mid-1990s, but then declined in the late 1990s. In 2000, however, the upward trajectory began again. The lesson for other countries is clear. A decline in newly registered infections leaves little room for complacency about the future growth of HIV.

Figure 5.2 also shows that, in Lithuania, the number of new infections rose dramatically in 2002. This growth (to twice the EU rate) mirrors that which occurred in Latvia in 1999 and illustrates the dangers that all countries face from the epidemic. Most of the increase in Lithuania has been attributed to the detection of HIV among a large number of prisoners at one penitentiary in the south of the country. Prison populations across the region are highly vulnerable to HIV infection through the sharing of injecting equipment and through sexual activity. In Russia, the number of prisoners registered with HIV has risen rapidly, from 4,000 in 1999 to almost 37,000 in July 2002. In other words, 4 per cent of Russian prisoners are now known to be infected, a considerably greater proportion than that among the adult Russian population as a whole.[3]

In most countries in the region, the number of HIV diagnoses among the general population has remained low. Among the 12 countries of Central and South-Eastern Europe, Romania had the highest rate of newly registered infections in 2001, at 2.0 per 100,000 population. This compares with a new infection rate of 5.4 per 100,000 in the EU. Newly recorded infection rates in the Caucasus and Central Asia were also generally low, although they increased sharply in Uzbekistan in 2001. While new diagnoses reached worrying levels in Kazakhstan in 2001, the number appeared to decline in 2002.[4]

The main source of new infections continues to be injecting drug use. In the region in 2001, this accounted for 9 in 10 new diagnoses where a cause was known.[5] In terms of the future spread of the epidemic, however, people who inject drugs are not the only ones in danger. Most HIV infections around the world are transmitted through sexual contact. Through sex, the epidemic can spread into the wider community from a particular group such as drug users. Figure 5.3 shows that the percentage of people infected with HIV through sexual (overwhelmingly heterosexual) transmission has increased in several countries. In Belarus, Moldova and Ukraine, about 3 in 10 of all the newly diagnosed infections in the first half of 2002 occurred as a result of sex-

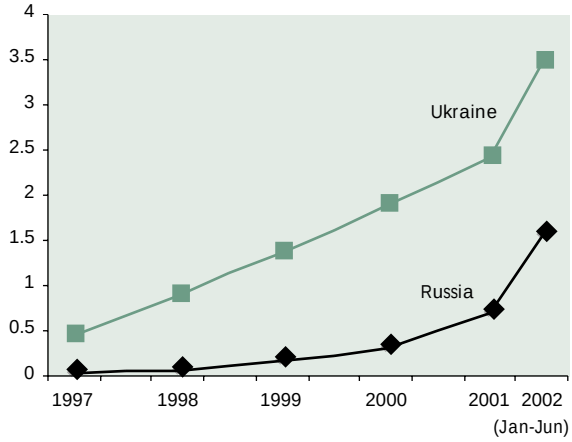
ual contact. In Estonia, 1 in 10 new infections in 2001 were due to sexual contact, but this rose to almost a quarter in the first half of 2002.

The gender balance in new infections is also changing. In 1998, one in five of the people who were newly diagnosed with HIV in the CIS and the Baltic States were girls and women aged between 13 and 29. By the first half of 2002, this proportion had increased to a quarter. UNAIDS estimates that, in the region, there were 140,000 women of childbearing age who had HIV at the end of 2001.[6]

The explosion in the sexual transmission of HIV and the growth in the number of young women with the infection are causes for grave concern. They are also linked. More women than men in the region are being infected through sexual contact (although the majority of both sexes are still being infected through injecting drug use).[7] The implications for the spread of the epidemic both to the wider population and from mothers to their children at or after birth are immense.

Figure 5.4

Births to mothers with HIV, Russia and Ukraine
(per 1,000 live births)



Source: EuroHIV (2002), op. cit. (Figure 5.1), Table 17.

Note: Data represent births of seropositive children. Children who develop HIV through mother-to-child transmission form a subset of this group.

5.2 Preventing the mother-to-child transmission of HIV

As the number of fertile-age women with HIV rises, the problem of preventing the mother-to-child transmission of HIV becomes more serious. Figure 5.4 shows that, as a proportion of all births, the number of children born to women with HIV has increased in Russia and Ukraine every year since 1997 and jumped steeply in the first half of 2002.[8]

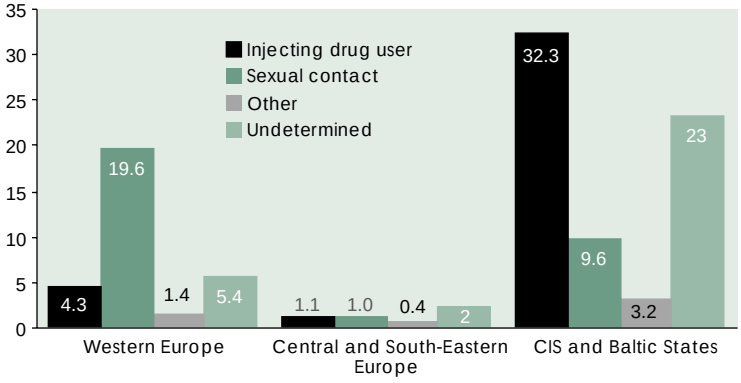
Infants born to women with HIV do not always themselves become infected. Indeed, much can be done to prevent mother-to-child infection. Treatment is most effective if it starts early in the pregnancy. At the prenatal stage, possible care includes ensuring that the woman has proper nutrition and adequate vitamin intake and that she receives antiretroviral therapy, a course of drug treatment that can suppress HIV and prevent the onset of AIDS. Sometimes, a Caesarean section is seen as the safest form of delivery, and, for vaginal delivery, the birth canal should be cleansed. After the infant is born, strict feeding guidelines should be followed. Antiretroviral therapy should also be administered to the infant. Throughout pregnancy and after birth, women with HIV generally need a high degree of support, counselling and advice to ensure that safe practices are followed and to help them care for themselves and their children adequately. With treatment such as this, the proportion of births to women with HIV where the child becomes infected can fall from about a third (in cases where there is no intervention) to about 3 per cent, the share achieved in some advanced industrialized countries.[9]

In medical practice, children born to HIV-positive mothers are usually given a presumptive preliminary diagnosis of HIV infection, which is later withdrawn for the majority of children by the age of 3 years. UNAIDS reports that, in Belarus, there were 225 births to HIV-positive mothers up to the end of 2001, and, in mid-2002, there were 23 children who had contracted the virus, a transmission rate of about 11 per cent.[10] The AIDS Foundation East-West cites an estimate of the Russian Federal AIDS Centre that HIV infection is eventually confirmed in 19.5 per cent of the cases of Russian children born to mothers with HIV. However, in areas where antiretroviral treatment is used to prevent perinatal transmission, the infection rate drops to 9.5 per cent.[11]

Reducing the mother-to-child transmission of HIV perhaps represents a tougher challenge in the CIS and Baltic States than it does in other parts of Europe. Figure 5.5 shows that, in this subregion, among all women diagnosed as HIV positive up to mid-2002, 32,000 – 7 in 10 of those for whom the source of transmission is known – were infected through injecting drug use. This compares with 5,000 women in Central, South-Eastern and Western Europe. The non-governmental organization Médecins Sans Frontières reports that, in Ukraine, many pregnant women who are drug users do not have any contact with the health care system until they are about to give birth.[12] Thus, early opportunities to monitor and improve the health of these mothers and increase the chances of the infants to remain free of infection are already lost. Often, women who arrive in hospital to give birth do not know they are HIV positive. Even if they are tested, they may have started unsafe feeding practices before the results of the tests are

Figure 5.5

Sources of HIV infection among women in Europe (absolute numbers, thousands, to June 2002)



Source: EuroHIV (2002), op. cit. (Figure 5.1), Table 18.

Note: 'Other' includes blood transfusions, mother-to-child transmission and nosocomial infections. 'Undetermined' includes a small proportion of cases where the cause is known, but no details are reported. 'Western Europe' covers the EU, plus Andorra, Iceland, Israel, Malta, Monaco, Norway, San Marino and Switzerland. 'Central and South-Eastern Europe' covers the countries listed in Figure 1.1 under 'Central Europe' and 'Other South-Eastern Europe', plus Bulgaria, Romania and Turkey.

known. Under such conditions, the reduction of mother-to-child transmissions in countries such as Ukraine towards the lower levels achieved in Western Europe requires concerted action.

Much of this action involves the provision of specialized services for highly vulnerable women such as injecting drug users. These women need to have access to appropriate, non-punitive advice about health and lifestyles not only when they give birth, but also before, during and after their pregnancies. Médecins Sans Frontières has attempted to facilitate such access in one project in Ukraine by recruiting HIV-positive mothers to act as peer counsellors during pregnancy and after birth.[13] A UNICEF project to provide antiretroviral therapy to pregnant women in Ukraine may also prove helpful in terms of the treatment given and because it may act as an incentive for pregnant women to come forward for screening and care.[14] Such treatment is also cost effective as it greatly reduces the number of children with HIV. Ultimately, it is the responsibility of public health services in the region to ensure that women who inject drugs, as well as those who have HIV, are offered adequate, appropriate and user-friendly care. Without this attention, mother-to-child transmission of HIV will continue on a large scale.

5.3 Care and treatment of people with HIV

As in the case of pregnant women, the proper care of all people who have HIV or who are at high risk of infection is vital for two reasons. First, the level of care and treatment available will help influence people to come forward for testing, treatment and education about safe practices. If people who are at high risk of contracting HIV, for example drug users, are marginalized and oppressed and if proper care and treatment are not offered to them, then it is more likely they will remain at the margins and continue to engage in unsafe practices that put their own lives and the lives of others at risk. Second, the provision of adequate treatment and care is an important indicator of society's commitment to protect and nurture life and to respect human rights and dignity.

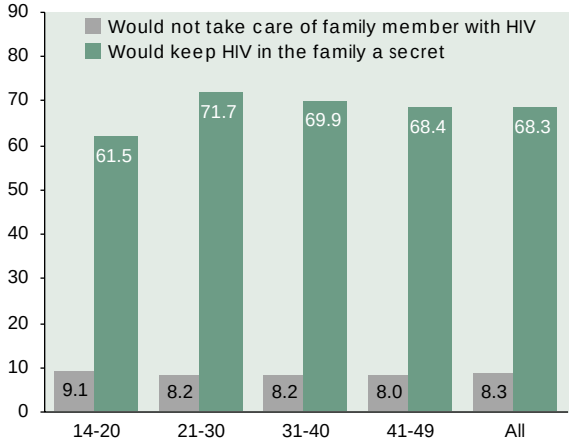
To what extent are people with HIV discriminated against? Survey evidence suggests that, in countries where the epidemic is most serious, discrimination is high. Figure 5.6 shows that, in a recent Russian survey, only 8 per cent of respondents said they would be unwilling to care for an HIV-infected family member. However, almost 7 in 10 said they would want to keep secret that a family member was HIV positive. In the same survey, more than 6 in 10 men and women aged 15-29 agreed with at least one of two statements: that they would not buy food from a grocer with HIV and that a teacher infected with HIV should not be allowed to continue teaching.[15] *Social Monitor 2002* reported that almost 9 in 10 women aged 15 to 29 who were respondents in the Ukraine Multiple Indicator Cluster Survey in 2000 answered negatively to comparable questions.

Anecdotal evidence supports the view that the stigmatization of people with HIV/AIDS, even within health care settings, is not uncommon:

> "Doctors are the professionals to whom people with HIV turn for help. But how can doctors help when they themselves are unprofessional and afraid?

Figure 5.6

Attitudes towards family members with HIV in Russia, by age, 2001 (per cent of respondents)



Source: Calculated from data of the Russia Longitudinal Monitoring Survey (Round 10): Laura Henderson, Carolina Population Center, University of North Carolina at Chapel Hill (personal communication).

> Rather than the concern for the patient that should be foremost, doctors show inaction, ignorance and neglect."[16]

People who express discriminatory attitudes and doctors who show inaction and neglect when confronted with HIV are, to a large extent, mirroring the inertia shown until recently by the political leadership and health care administrations in countries such as Russia and Ukraine. It is perhaps not surprising that large and often cumbersome health care systems have been slow to provide an adequate response to the epidemic, given the low level of resources available to them. Although it has increased in real terms during the last two years, public health care expenditure in Ukraine in 2001 still amounted to less than $50 per person per year at market exchange rates.[17] Even if such sums are used efficiently, the treatment that they can buy for the thousands of mostly young people with HIV is likely to be limited.

The Central and Eastern European Harm Reduction Network attempted to measure the number of people with HIV who were receiving antiretroviral therapy in 2002. Its estimates, some based on information from government HIV/AIDS agencies and others on expert opinion, are shown on Table 5.1. The Table also indicates the number of people registered with HIV at the end of 2001. Nearly 9 in 10 people registered with HIV were estimated to be receiving therapy in Romania, as were about half of such people in Croatia, Czech Republic and Slovakia. But in Russia and Ukraine, where 220,000 people were registered with the virus, fewer than 3,000 were reckoned by the Harm Reduction Network to be receiving any antiretroviral therapy.

The number of people receiving therapy indicated in Table 5.1 are expert guesses and may not reveal the whole picture. For example, the UNICEF project (discussed above) to provide antiretroviral therapy to pregnant women in Ukraine treated 782 pregnant women, over three quarters of the women with HIV who gave birth in the year of the study.[18] Nonetheless, there is considerable evidence that injecting drug users, in particular, are encountering difficulties in obtaining therapy. The Harm Reduction Network reports that, while drug users comprise 9 in 10 of the people with HIV in Russia, they make up only half of the very small percentage of the people who receive therapy.[19] Even with the recent dramatic fall in the price of antiretroviral drugs, from up to $10,000 per person per year in 2000 to between $300 and $600 more recently, many people with HIV will be unable to afford the therapy without considerable help.[20] In wealthier countries such as Estonia and Latvia, governments can do more to make therapy affordable for all. In poorer countries such as Ukraine, governments need to provide leadership and commitment. Multilateral agencies and donor countries can supply greater resources.[21]

One mechanism being used to guide comprehensive HIV strategies and offer a sound basis for international assistance is the "Poverty Reduction Strategy Papers" that have now been developed in several countries in the region. The aim of the strategies is to provide coherent policy frameworks within which plans to reduce poverty and increase people's well-being can be implemented. The policies are locally designed and agreed among government, social partners and civil society and with the participation of international organizations such as the World Bank and the International Monetary Fund. Within these frameworks, policy priorities are outlined and the means to pay for them are made explicit. In the Poverty Reduction Papers of some countries, HIV/AIDS is given a high priority. The strategies for Albania and Kyrgyzstan propose dedicated funds, while the Armenian strategy pledges to develop a comprehensive policy to combat

Table 5.1

People with HIV and people receiving antiretroviral therapy, 2001-2002

	A. Registered with HIV (end 2001)	B. Receiving antiretroviral therapy (May 2002)	A/B (%)
Czech Republic	551	310	56.3
Hungary	963	326	33.9
Poland	7,306	1,300	17.8
Slovakia	154	70	45.5
Slovenia	184	73	39.7
Estonia	1,931	40	2.1
Latvia	1,763	102	5.8
Lithuania	337	4	1.2
Bulgaria	359	80	22.3
Romania	5,129	4,410	86.0
Albania	72	0	0.0
Bosnia-Herzegovina	42	–	–
Croatia	297	135	45.5
FYR Macedonia	59	0	0.0
Serbia and Montenegro	1,361	220	16.2
Belarus	3,826	10	0.3
Moldova	1,448	1	0.1
Russia	177,559	2,800	1.6
Ukraine	43,600	50	0.1
Armenia	166	0	0.0
Azerbaijan	347	0	0.0
Georgia	239	8	3.3
Kazakhstan	2,621	30	1.1
Kyrgyzstan	204	0	0.0
Tajikistan	55	0	0.0
Turkmenistan	5	0	0.0
Uzbekistan	748	30	4.0
Total	251,326	9,999	4.0

Sources: A: Statistical Annex, Table 6.9; Table 13, EuroHIV (2002), op. cit. (Figure 5.1). B: Central and Eastern European Harm Reduction Network (2002), "Injecting Drug Users, HIV/AIDS Treatment and Primary Care", Central and Eastern European Harm Reduction Network: <*www.soros.org/harm-reduction*> (9 March 2003), Figure III.

Note: Estimates. 'Registered with HIV' represents the cumulative total of new HIV registrations up to end 2001. Some of those registered may therefore have died or migrated from the country where they were registered.

HIV.[22] If progress is to be made against the HIV epidemic, concrete steps have to be taken and budgets must be allocated. International organizations and donor countries can continue to play an important role in encouraging and funding these activities, but governments in the region can also act decisively to reduce the threat of HIV.

Notes and references

1. UNAIDS and WHO (World Health Organization) (2002), "AIDS Epidemic Update 2002", UNAIDS: Geneva. The speed of the spread of the virus is such that information on the extent of the problem is quickly out of date. New estimates are periodically published by UNAIDS, and official estimates are published by the European Centre for the Epidemiological Monitoring of AIDS (EuroHIV). The reader is encouraged to visit the websites of these organizations for recent information: <*www.unaids.org*> and <*www.eurohiv.org*>.
2. EuroHIV (2002), "HIV/AIDS Surveillance in Europe", *Mid-Year Reports*, No. 67, European Centre for the Epidemiological Monitoring of AIDS: <*www.eurohiv.org*> (accessed 20 January 2003), Table 13.
3. Data of the Russian Ministry of Justice show that there were 1,460 HIV-positive inmates in Russia in 1997, 2,300 in 1998, 4,100 in 1999, 15,100 in 2000, 33,000 in 2001 and 36,850 on 30 July 2002. See AIDS Foundation East-West: <*www.afew.org*> (19 February 2003). Data of the International Centre for Prison Studies, Kings College London, suggest that the Russian prison population on 1 October 2002 was 905,000. See <*www.kcl.ac.uk/depsta/rel/icps/worldbrief/*> (21 February 2003). The registered HIV infection rate among the total Russian population aged 15-49 was 295 per 100,000 (less than 0.3%) at the beginning of 2003. It should be noted that part of the difference in the registered infection rates among the inmates and the overall population may be due to more systematic HIV testing among inmates.
4. Data published by the AIDS Foundation East-West show that the number of newly registered HIV infections in Kazakhstan declined from 1,171 to 571 between 2001 and 1 October 2002, or from 7.9 to 3.8 per 100,000 population. See <*www.afew.org*> (18 February 2003). As in other countries that experienced a decline in 2002, it remains to be seen whether the decline in Kazakhstan will be sustained in coming years.
5. EuroHIV (2002), op. cit., Table 15.
6. UNAIDS (2002a), "Report on the Global HIV/AIDS Epidemic 2002", UNAIDS: <*www.unaids.org*> (20 February 2003).
7. In 2001 and the first half of 2002, 4,621 women in the CEE/CIS were infected with HIV through sexual contact compared to 3,850 men. See EuroHIV (2002), op. cit., Table 18.
8. EuroHIV (2002), op. cit., indicates that the number of new diagnoses of HIV in children as a result of mother-to-child transmission also rose steeply in Poland, from 6 in all of 2001 to 28 in the first half of 2002. It is important to note that the overall number of children born to HIV-positive mothers in Poland is likely to be considerably in excess of these values since only a small portion of the children born to mothers with HIV become infected with the virus.
9. For a discussion of the changing characteristics and management of HIV-infected women in Europe from the mid-1980s to the end of the 1990s, see Thorne, C., M. L. Newell, L. Gray, S. Fiore and C. S. Peckham (2001), "HIV-Infected Pregnant Women and Vertical Transmission in Europe since 1986", *AIDS*, Vol. 15, No. 6 (13 April). The paper argues that, among a sample of pregnant women with HIV, the transmission rate to the children declined from 15.5% in 1994 to 2.6% after 1998.
10. UNAIDS (2002b), "HIV/AIDS Epidemic Situation in the Republic of Belarus", UNAIDS: <*www.un.minsk.by/en/unaids/aids/epidemic/*> (19 January 2003).
11. AIDS Foundation East-West: <*www.afew.org*> (19 February 2003).
12. See Meade, T. (2001), "Confronting HIV/AIDS in Ukraine", *Sexual Health Exchange 2001-2*, KIT Information Services, Royal Tropical Institute, Netherlands: <*www.kit.nl/information_services/exchange_content/*> (20 January 2003).
13. Meade (2001), op. cit.
14. Knai, C. and V. Mangiaterra (2002), "Protecting Infants from HIV Infection: The Role of Breastfeeding", *Entre Nous: The European Magazine for Sexual and Reproductive Health*, No. 53, WHO: Copenhagen.
15. Calculated from data of the Russia Longitudinal Monitoring Survey (Round 10): Laura Henderson, Carolina Population Center, University of North Carolina at Chapel Hill (personal communication).
16. Stanislav Kazikin, MD, of the AntiAIDS Foundation, Penza, Russia, quoted in Central and Eastern European Harm Reduction Network (2002), "Injecting Drug Users, HIV/AIDS Treatment and Primary Care", Central and Eastern European Harm Reduction Network: <*www.soros.org/harm-reduction*> (9 March 2003), page 14.
17. Data of the MONEE project database.
18. Knai and Mangiaterra (2002), op. cit.
19. Central and Eastern European Harm Reduction Network (2002), op. cit., Figure III.
20. Médecins Sans Frontières (2002), "Ukraine/ART: Developing an Affordable and Viable ART Programme", press release, 1 December: <*www.msf.org*> (19 January 2003).
21. UNAIDS reports that, up to December 2001, international financial assistance for national responses to HIV in the CEE/CIS amounted to about $52 million. See UNAIDS (2002c), "International Assistance for National Responses to the HIV Epidemic in Eastern and Central Europe and Central Asia by 31 December 2001, as Reported by UNAIDS Cosponsors, Bilateral Agencies and NGOs", April, UNAIDS: Geneva.
22. Republic of Armenia (2001), "Interim Poverty Reduction Strategy Paper", March, page 10; Council of Ministers, Republic of Albania (2001), "National Strategy for Socio-Economic Development", November, page 112; Kyrgyz Republic (2003), "Expanding the Country's Capacities: National Poverty Reduction Strategy 2003-2005", pages 13, 65, 69 and 167. See: <*www.worldbank.org/poverty/strategies*> (9 March 2003).

Special Feature

6 Counting infant mortality and accounting for it

This special feature article examines the way infant mortality is counted and the factors associated with infant deaths in the countries of Central and Eastern Europe and the Commonwealth of Independent States. Since the 1980s, infant and child mortality has been one of the biggest single issues in international development. At the World Summit for Children in 1990, the first goal agreed upon was the significant reduction of infant and under-5 mortality. Since then, the focus on infant and under-5 mortality rates has been reinforced by the Millennium Development Goals and the commitments in *A World Fit for Children*, the outcome document of the UN General Assembly Special Session on Children, held in May 2002.[1]

In several countries in the CEE/CIS, mortality rates are low and approach or even surpass averages in advanced industrialized countries. Nonetheless, official information suggests that, across the region in 2001, over 60,000 infants died before they reached the age of 1. This compares with fewer than 19,000 deaths among infants in the countries of the European Union (EU), a region with a slightly lower number of births overall.[2] It is becoming increasingly clear that, in some countries, the actual number of infant deaths is considerably higher than official statistics indicate. Moreover, a large proportion of infant deaths can be prevented.

There is nearly universal consensus about how infant and child deaths should be counted. But implementing the protocols remains difficult, particularly in countries that lack effective administrative systems. Yet, the importance of counting births and children's deaths accurately cannot be overstated. Public acknowledgment of birth, in the form of registration, brings with it legal and moral obligations to protect and nurture. Non-registration reduces the probability of access to public support and services and denies children their rights to a name and to citizenship. Policy aimed at improving children's survival chances also depends on reliable information about births and deaths. In addition, infant and child mortality are key indicators of the health and well-being of entire nations and crucial determinants of priorities in public health and social spending.[3]

Much of the analysis in this article focuses on the low-income countries of the Caucasus and Central Asia because it is there that the twin problems of high infant mortality and the inadequate counting of births and infant deaths are most severe. There are five sections. Section 6.1 outlines the large gap between infant mortality rates as reported in official statistics and in survey data. Section 6.2 looks at the impacts of the two different definitions of live birth on the resulting infant mortality counts: one recommended by the World Health Organization (WHO) and one developed in the Soviet Union and still used in some countries today. In Section 6.3, the misreporting of births and infant deaths by medical staff and problems in the registration of births and infant deaths are examined. Section 6.4 analyses the social and medical factors associated with infant death. Section 6.5 concludes by mapping out steps that need to be taken in order to reduce infant deaths in the region and to improve record-keeping on pregnancy outcomes and indicators of infant well-being.

6.1 Alternative estimates of infant mortality

Across the region, official information paints a positive picture of trends in infant mortality since the start of the transition in 1989. In many countries in 2001, official infant mortality rates compared favourably with those of other countries at similar levels of development. Yet, information from alternative sources indicates that there may be problems with the official data for a number of countries.

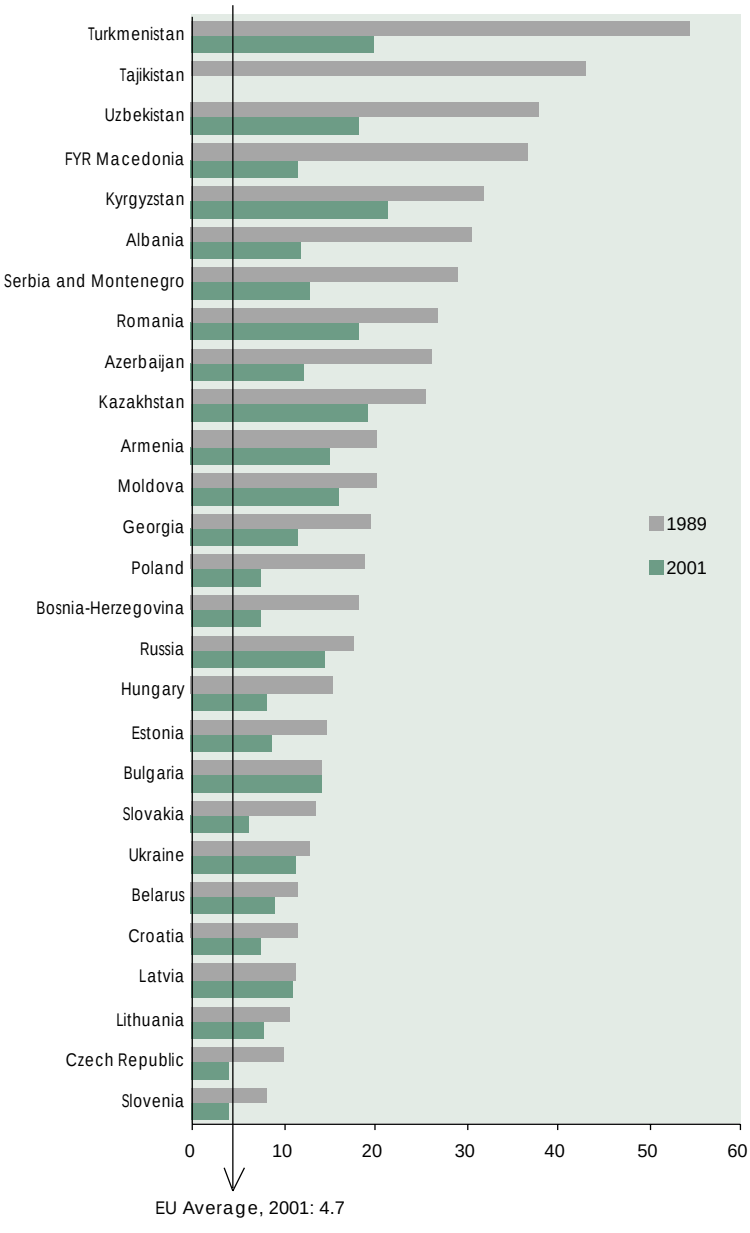
Official estimates of infant mortality

The infant mortality rate is the number of live-born infants under 1 year of age who die in a given 12-month period per 1,000 infants born alive in the same period.[4]

Official information on infant mortality implies that there has been remarkable progress in almost every country in the region since the late 1980s in reducing infant deaths. Figure 6.1 shows that Turkmenistan had the highest official rate in 1989 (55 in every 1,000 babies died before they reached 1 year of age), but that this rate was reduced to 20 deaths per 1,000 live births by 2001. FYR Macedonia, with the fourth highest rate in 1989, also experienced a large decline. At the other end of the scale, official death counts fell to near the EU average in several countries that are due to become EU member states in 2004.[5] In Bulgaria and Latvia, however, mortality rates in 2001 were little changed from those in 1989. It is also worth noting that Russia and Ukraine, with almost half the region's population, reported only small reductions in infant mortality over the 1990s.

Figure 6.1

Official infant mortality rates (infant deaths per 1,000 live births)



Sources: Statistical Annex, Table 3.1; New Cronos database, Eurostat: <*www.europa.eu.int*>.

Note: There are currently no official data reported to the MONEE project for Tajikistan after 1994.

From a global perspective, it is reasonable to expect that infant mortality declined in transition countries over the 1990s. It fell in advanced industrialized countries and in developing countries during the decade. Other factors, such as an accelerated drop in fertility during the 1990s, also point to reduced infant mortality. In Turkmenistan, for example, the fertility rate (as reported in official statistics) more than halved between 1989 and 2001. (See Statistical Annex, Table 2.9.) While there is little consensus on the precise nature of the relationship between fertility and infant mortality, birth outcomes among women who have fewer children tend to involve fewer deaths.[6] In addition, lower fertility may mean better nutrition for both mothers and children and more health care resources for each birth, thus increasing the survival chances of newborn infants.

On the other hand, the upheaval associated with the end of the communist era caused disastrous declines in national income in some countries, resulting in generalized poverty and severe cutbacks in public services. In the case of the CIS countries after the break-up of the Soviet Union, the end of Union transfers led to drastic and immediate falls in public expenditure. In Kyrgyzstan, annual GDP per capita stood at $290 in 2000, and public health expenditure amounted to $10 per person per year at market exchange rates, lower than the expenditure in many sub-Saharan African countries and also considerably lower than the expenditure in Kyrgyzstan in 1989.[7] In 2001, only two thirds of all officially counted births in Tajikistan were attended by skilled personnel, compared with 94 per cent in 1989 (Statistical Annex, Table 6.1). Countries such as Armenia, Azerbaijan, Georgia and Serbia and Montenegro (formerly FR Yugoslavia) also experienced violent conflict during the 1990s, resulting in general impoverishment, in a partial or total breakdown in public services, and in millions of refugees and internally displaced persons.

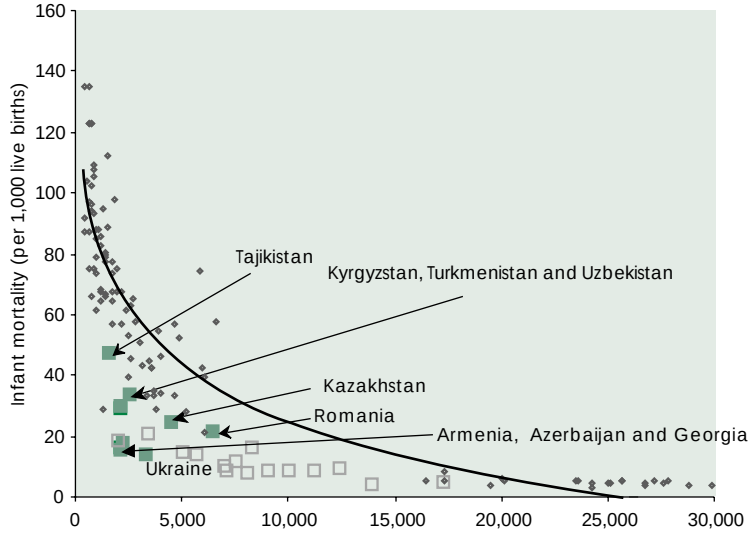
The massive declines in economic and social well-being therefore need to be reconciled with the large decreases in infant death rates. In general, there is a high degree of correlation between GDP and infant mortality rates in countries.[8] Mortality rates are positively influenced by the advantages that higher income can buy, including improved living conditions, better child and maternal nutrition and greater access to services such as health care and education. This is not to say that, when GDP declines, a rise in infant mortality will necessarily follow in quick succession. However, a severe deterioration in national income over several years may not be

conducive to an *improvement* in infant mortality rates. As Figure 1.1 in Article 1 in this *Social Monitor* shows, real national income fell particularly steeply in the 12 countries of the CIS over the 1990s.

Figure 6.2 plots the relationship between GDP per capita and infant mortality rates for 102 developing and industrialized countries and for 25 countries in the CEE/CIS region for different years in the 1990s. The CEE/CIS countries are indicated by the green squares (10 mostly poor countries in the Caucasus and Central Asia, plus Romania and Ukraine) and other squares (15 additional countries in the region). The Figure demonstrates that, in general, transition countries have lower infant mortality rates than might be expected given their level of national income. It suggests that the human capital and infrastructural gain from the communist period, when education was universal and public services such as health care were widely available, may still be playing an important role in reducing infant mortality.

Figure 6.2

National income and official estimates of infant mortality, 1990s



Sources: Infant mortality rates are taken from "Measure DHS+ Demographic and Health Surveys", ORC Macro: <*www.measuredhs.com*> (accessed 1 March 2003), World Bank (2002), *World Development Indicators 2002*, World Bank: Washington, DC, and MONEE project database. GDP per capita for all countries are from World Bank (2002), cited above.

Note: Infant mortality rates for 25 CEE/CIS countries (denoted by the green and empty squares) and advanced industrialized countries represent official counts. Those for the remaining countries are survey estimates.

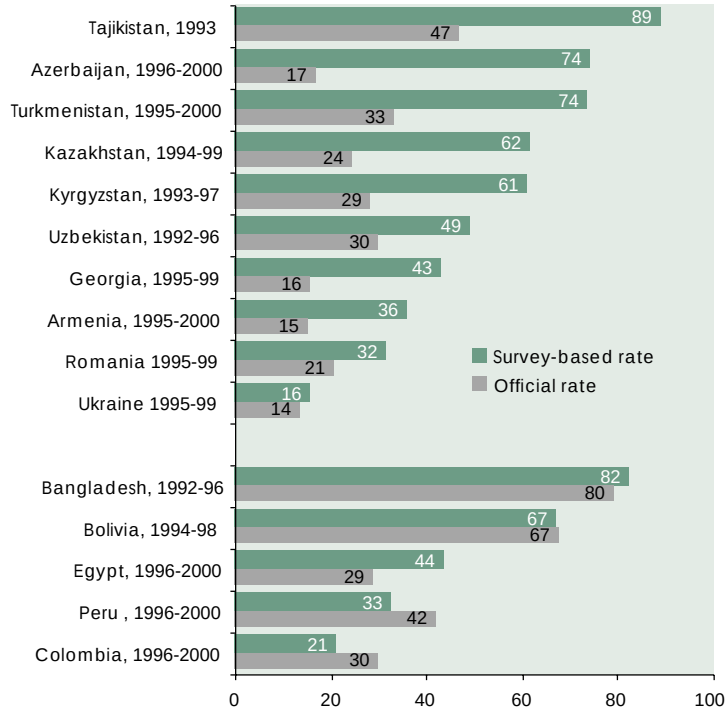
Survey-based estimates of infant mortality

Could real infant mortality levels in the region be higher than the official rates? Figure 6.3 compares official infant mortality rates in 10 countries in the region with estimates calculated from recent survey data. These are the same 10, mostly poor, countries indicated by the green squares in Figure 6.2 and are the only countries in the region for which survey estimates are available.[9] The survey estimates are based on the demographic and health surveys, the multiple indicator cluster surveys and the reproductive health surveys that have been carried out since the 1970s in many developing countries, where there are usually few official data available for monitoring well-being and for planning public services in areas such as health care. (These surveys are discussed in more detail in the Appendix to this article.) Figure 6.3 shows that, in all countries in the region except Ukraine, estimates of infant mortality rates calculated from survey data are considerably higher than the official rates. In the case of Uzbekistan, the survey estimate is a third greater. In Azerbaijan, it is four times greater.

The official count is a reflection of how births and infant deaths are recorded by medical staff who attend these events and by parents who provide information for civil registries. Survey estimates, on the other hand, are derived from the answers of representative samples of women to questions about their reproductive histories, including their pregnancies and the births and deaths (if any) of their children. Because these surveys are carried out mostly in developing countries with weak administrative capacities, there are relatively few countries in the

Figure 6.3

Official and survey-based estimates of infant mortality
(infant deaths per 1,000 live births)

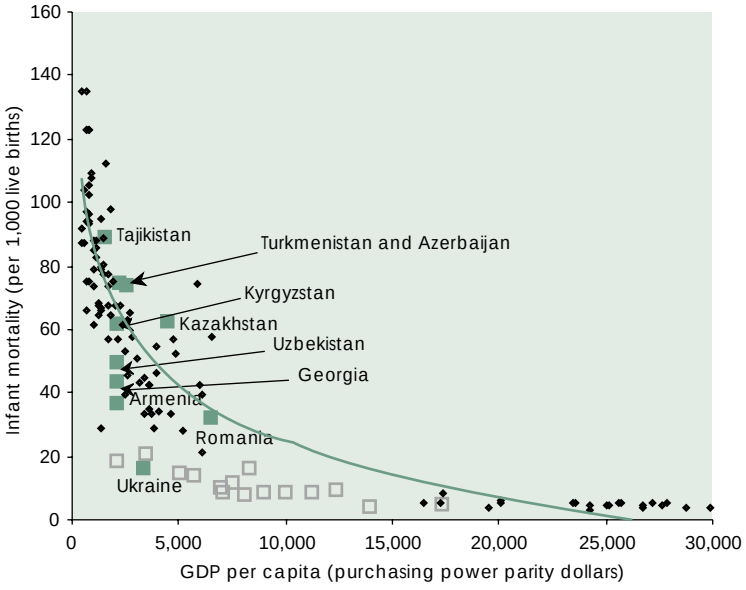


Sources: Survey rates are derived from: a multiple indicator cluster survey (Tajikistan 2000), see <*www.childinfo.org*>; reproductive health surveys (Azerbaijan 2001, Georgia 1999, Romania 1999, Ukraine 1999), see <*www.cdc.gov/nccdphp/drh/*>; demographic and health surveys (in CEE/CIS: Armenia 2000, Kazakhstan 1999, Kyrgyzstan 1997, Turkmenistan 2000, Uzbekistan 1996; outside the region: Bangladesh 1996, Bolivia 1998, Colombia 2000, Egypt 2000, Peru 2000), see <*www.measuredhs.com*>. Official data: for CEE/CIS, see Statistical Annex, Table 3.1; for other countries, see World Bank (2002), op. cit. (Figure 6.2).

Note: Data are averages for years denoted. Reproductive health surveys have been carried out in countries in the CEE/CIS other than those reported above, including Moldova (1997) and three cities in Russia (1999). However, infant mortality data were not reported. Multiple indicator cluster surveys were carried out in 2000 in Albania, Azerbaijan, Bosnia and Herzegovina, Georgia, Moldova, Serbia and Montenegro, Ukraine and Uzbekistan. In several of these, too, information on infant mortality rates was not reported.

Figure 6.4

National income and survey-based estimates of infant mortality, 1990s



Sources: See Figures 6.2 and 6.3.

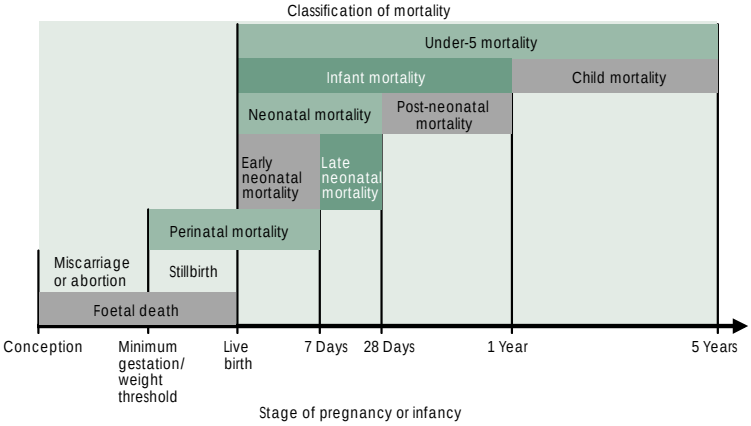
Note: Infant mortality rates are taken from multiple indicator cluster surveys, demographic and health surveys and reproductive health surveys in the CEE/CIS countries denoted by the green squares; see the note to Figure 6.3. All other data are identical to those in Figure 6.2.

world where infant mortality rates are calculated from both administrative and survey data. Figure 6.3 shows information for five developing countries outside the region where both official counts and survey estimates are available. In contrast to 9 of the 10 transition countries, differences between the two sources in the case of the developing countries are mostly modest. Moreover, in three of the countries, the official count is greater than or equal to the survey estimate.

Figure 6.4 offers a picture of how the relationship between GDP and infant mortality would look if the official statistics used in Figure 6.2 were replaced by survey estimates in the 10 transition countries indicated by green squares. In Ukraine, both the official and the survey estimates of infant mortality are low given the level of income in that country. For the other nine countries, the survey-based infant mortality estimates fit more closely with the global pattern based on what is known about the relationship between national income and infant mortality across the world.[10] This implies that either these countries do not enjoy the comparative edge in social and human capital that other post-communist countries tend to possess, or that special factors prevent this comparative edge from influencing maternal and child health.[11]

Figure 6.5

Terminology for classifying mortality during pregnancy and early childhood



Sources: Adapted from Ministry of Health of Armenia and UNICEF (2002), *Infant Mortality in Armenia: A Review of Procedures and Registration, Classification and Related Medical Services*, Ministry of Health of Armenia and UNICEF-Yerevan: Yerevan, Armenia, Figure 1.

Note: The minimum gestation or weight threshold above which a foetal death is described as a stillbirth is defined by WHO as 22 weeks or 500 grams, respectively, and, according to the Soviet definition, as 28 weeks or 1,000 grams. A live birth can theoretically occur at any stage in the pregnancy.

6.2 Births and deaths: the Soviet legacy

How can the differences between official and survey-based infant mortality rates be explained? The approach taken in this article is, first, to examine the reliability of official and survey-based statistics in the countries involved and, second, to look at some factors associated with infant mortality. History is important. More than a decade after the break-up of the Soviet Union, the legacy of the communist period continues to exert a powerful influence on data collection and health care delivery. This section looks at the influence of this communist legacy on the definition of pregnancy outcomes, particularly in the CIS.

Births and infant deaths

Many poor pregnancy outcomes are not registered as infant deaths because the foetuses are not acknowledged to have been born alive. Such acknowledgement depends on how an infant death is defined. For an understanding of the sensitivity of measurements of infant mortality to the definition employed, it is useful to summarize the stages in a pregnancy and infancy and the terminology commonly used to distinguish foetal death and stillbirth from early childhood death. Figure 6.5 outlines the main stages and terms.

In some countries, including Romania, Russia and Ukraine, a very high proportion of pregnancies are voluntarily terminated through abortion. (See Statistical Annex, Table 2.10.) Many pregnancies also end in involuntary miscarriages, which often occur soon after conception and are not officially recorded. Most countries

have developed policies for deciding the point at which miscarriages should be counted as stillbirths in official statistics. The WHO definition of a stillbirth allows for a minimum gestation period (22 weeks) or a minimum weight (500 grams) as the threshold above which a foetus with no signs of life is considered stillborn.

Each pregnancy therefore has the possibility of an outcome that is not officially recorded at all (as in the case of a miscarriage) or that is recorded as an abortion, a stillbirth, or a live birth. The implications of these definitions are profound for parents. Miscarried foetuses usually have no legal status. Often, there is no body released to the parents for burial; funeral grants are not payable; the mother has no entitlement to maternity leave, and there is likely to be no legal or medical investigation into the matter. Details about infants who are stillborn, on the other hand, must be officially registered. In some cases, there may be an investigation. The body of the infant may be released for burial, and the parents may be entitled to maternity or parental leave and a birth or funeral grant.

For an infant who is born alive, a birth certificate should be issued even if he or she survives only a short time. The infant is legally given a name; parents can often obtain access to a range of health and public benefits, and medical staff have a legal and moral obligation to help the infant survive into childhood. If the infant dies, details of the circumstances of the death must be registered, and there may be a compulsory autopsy or investigation.[12]

Table 6.1 shows outcomes for pregnancies that were studied (using official records) in the Ukraine cities of Kyiv and Dniprodzerzhinsk in the early 1990s. Almost two thirds of these were unwanted pregnancies and were voluntarily terminated. Among the remainder, the foetal death rate ranged from 100 per cent for pregnancies that ended at less than 20 weeks (these would usually be termed miscarriages) to 1 in 200 for pregnancies that ended after 37 weeks or more (usually described as full-term pregnancies). In total, there were 29 stillbirths per 1,000 births, which was five times the rate in the US at the time.[13]

Of those pregnancies resulting in a live birth, it is also likely that some of the infants died in the days or months following the birth. In the CEE/CIS region, about a third of all deaths of born-alive infants and children aged under 5 have tended to occur at the early neonatal stage, that is, among infants less than a week old. Infants aged between 1 week and 1 year accounted for about 5 in 10 deaths. Children from the age of 1 year and upwards accounted for the remaining two tenths.[14] The high relative concentration of deaths very soon after birth is common in many countries around the world and often

Table 6.1

Pregnancy outcomes in two cities, Ukraine 1992-94

	Number	% Of all pregnancies	% Ending in foetal death
Abortion	10,363	60.5	100.0
Born at less than 20 weeks	318	1.9	100.0
Born at 20-27 weeks	130	0.8	92.3
Born at 28-36 weeks	425	2.5	7.3
Born at 37 weeks or more	5,617	32.8	0.5
Unknown	284	1.7	–
Total pregnancies surveyed	17,137	100.0	

Source: Adapted from Little, R., S. Monaghan, B. Gladen, Z. Shkyryak-Nyzhnyk and A. Wilcox (1999), "Outcomes of 17,137 Pregnancies in Two Urban Areas of Ukraine", *American Journal of Public Health*, Vol. 89, No. 12, pages 1,832-36, Table 2.

Note: Because some pregnancies involved twins, it is not possible to produce a precise foetal death rate using these data.

increases as the infant mortality rate declines. It is of special relevance to this analysis because the old Soviet protocols used in some countries in the region have a particular influence on the measurement of early neonatal deaths.

Live births

Attempts to standardize the definition of live birth were initiated by the League of Nations in the 1920s and continued by WHO, which developed the following definition in 1950:

> "The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached."[15]

The Soviet definition of live birth differs from the WHO definition in several important respects, as Table 6.2 shows. It predates the WHO definition and shows some similarities to the definition originally drawn up by the League of Nations in 1925. Under the Soviet definition, the only indicator used to establish if infants are born alive is the presence of breathing; other signs of life are not taken into account. Moreover, infants born before 28 weeks of gestation have been completed, or who weigh less than 1,000 grams, or who are less than 35 centimetres in length are designated 'live foetuses' and are only counted as live births if they survive seven days.[16]

Along with other countries, including nearly all advanced industrialized nations, several countries in Central and South-Eastern Europe moved towards the WHO definition of live birth beginning in the 1960s. For example, the Czech Republic adopted the WHO defini-

Table 6.2

Soviet and WHO definitions of 'live birth'

	No signs of life	No breath, but other signs of life	Dies during the first seven days	Survives the first seven days
Infant born after the end of the 28th week of pregnancy				
USSR:	Stillbirth		Live birth	
WHO:	Stillbirth	Live birth		
Infant born before the end of the 28th week of pregnancy, or weighing under 1,000 grams, or under 35 centimetres in length				
USSR:	Miscarriage			Live birth
WHO:	Stillbirth	Live birth		

Source: Anderson, B. and B. Silver (1986), "Infant Mortality in the Soviet Union: Regional Differences and Measurement Issues", *Population and Development Review*, Vol. 12, No. 4 (December), pages 705-36.

Note: According to the WHO definition, all infants born with no signs of life and who weigh less than 500 grams or whose gestational age is less than 22 weeks are considered miscarriages.

tion in 1965.[17] By 1992, soon after they had gained independence, the three Baltic States had also officially adopted the WHO definition.

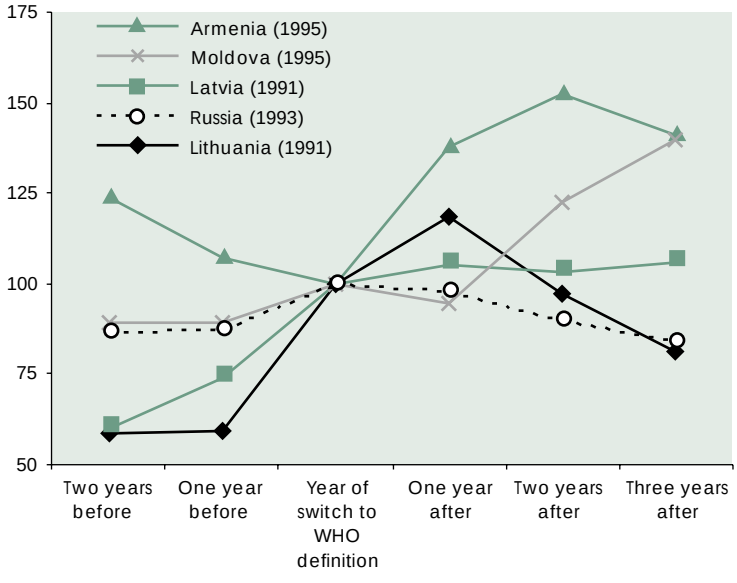
Some countries undertook partial efforts in the 1990s to adopt the WHO definition. This was the case, for example, in Russia and in Armenia and Ukraine, where the WHO definition was adopted in law, but extra criteria were applied for the inclusion of births and deaths in civil registries. Some of these criteria were similar to those involved in the Soviet definition of live birth. In Azerbaijan and the five countries of Central Asia, the Soviet definition was still being used recently.[18]

The influence of the narrower Soviet definition on the infant mortality count has been widely studied, and there is some consensus that, with no other adjustments, the proper application of the WHO definition would result in an infant mortality rate that is 20-25 per cent higher.[19] As is clear from Table 6.2, most of the difference between the Soviet and WHO definitions should affect stillbirths and early neonatal mortality counts, that is, deaths which occur within seven days of birth. Figure 6.6 shows trends in the neonatal mortality rate for some countries that switched from the Soviet towards the WHO definition of live birth during the 1990s. (The year of the switch is noted in parentheses next to the country's name.) In general, the switch resulted in an increase in the number of early neonatal deaths recorded.

Since surveys attempt to define infant mortality according to WHO protocols, the continued recent use of the Soviet definition of live birth in most of the countries covered in Figure 6.3 may be responsible for some of the gaps between the official and survey-based estimates of infant mortality shown in the Figure. However, because, with the exception of Ukraine, the gap in all the countries between official rates and survey-based estimates is greater than 20-25 per cent, it is unlikely that this explains all the differences.

Figure 6.6

Trends in the recording of early neonatal deaths (index, the year of the switch from the Soviet to the WHO definition = 100)



Source: WHO Health for All database: <*www.who.dk*> (1 March 2003).

6.3 Counting births and deaths

What other factors besides the definition of live birth can account for the differences in infant mortality rates between official data and survey estimates? This section examines the impact of other Soviet legacies: the loose interpretation by medical staff of the live birth definition and failures in civil registration systems. Potential errors in survey-based estimates are also considered.

Misreporting of births and infant deaths

Under the Soviet definition, a birth must fulfil several criteria in terms of breathing, period of gestation, weight and length in order to be counted as a 'live birth'. Medical staff may therefore have some discretion as to the final application of the criteria:

> "Thus, if an infant died and there was doubt regarding one of these measures, it would have been to the benefit of the hospital or the clinic to err on the side of stating that the infant was extremely premature, or intentionally to misreport the birth as a stillbirth, because infant mortality rates were one criterion used to evaluate hospitals and clinics."[20]

Many experts suggest that misreporting was widespread in the Soviet Union. Misreporting was not simply

a problem of incentives, but of institutional structures and culture. One analyst argues that, like the production system, the health care system was driven by national plans developed under the tutelage of the political leadership, which also controlled the flow of resources for health care. Authority was highly centralized, with top-down decision-making. The medical profession was mostly isolated from the international medical community, leading to the persistence of obsolete medical practices.[21] It is not difficult to imagine that, over several decades, the strong hierarchy, coupled with the need of hospitals and clinics to play their part in achieving national plans and with their isolation from the best international practices, encouraged a culture of fulfilling the letter of the plans through the loose interpretation of individual clinical results, a process which was fostered by punishments meted out for certain categories of poor patient outcomes.

Despite efforts to modernize the management of health care, such approaches may persist. A 1997-98 study in one oblast hospital in Kazakhstan reports that all infant deaths were investigated, and, if the physician in charge was found 'guilty' of the infant's death because of malpractice, he or she was penalized. To avoid being investigated, physicians interpreted the live birth definition to their advantage so as to reduce the number of infants who 'officially' died in their care. The study concluded that medical staff were motivated to perform actions aimed at avoiding punishment, which could include fines, professional demotion, or even imprisonment.[22]

Limited knowledge is also a factor in misclassification. A survey in Armenia in 2001 found that only 26 per cent of obstetricians, neonatologists and gynaecologists showed sufficient knowledge to complete accurately the necessary documentation relating to the death of an infant. Although Armenia had replaced in 1995 the Soviet concept of live birth with a concept more closely aligned to the WHO definition, 14 per cent of the staff surveyed continued to classify pregnancy outcomes according to the Soviet definition.[23]

Recording early neonatal deaths as stillbirths

The Soviet concept of live birth led to reduced infant mortality figures (counts of early neonatal mortality in particular) relative to results based on the WHO definition, but the loose interpretation of the Soviet concept and the deliberate or accidental misreporting of infant deaths lowered the figures further. How widespread was this misreporting, and how did it affect official statistics?

In general, it is possible to predict the level of stillbirths from the level of early neonatal mortality. Given the mortality rate that prevailed (according to official counts) in several CIS countries during the 1990s, one might expect to find a ratio of about one stillbirth for every early neonatal death. A 'stillbirths ratio' far in excess of 1:1 suggests that some early neonatal deaths were being misreported as stillbirths.[24]

Figure 6.7 shows that this expected 1:1 stillbirths ratio prevailed in Belgium and Greece in the 1970s, when the early neonatal mortality rates there were comparable with recent official rates in many countries in the CEE/CIS. The ratio also prevailed in Estonia in the 1980s, when the Soviet definition of live birth was being used in that country. In Armenia, the stillbirths ratio remained high, at almost 2:1, through the late 1980s and early 1990s, but in 1996, after the WHO definition of live birth was introduced, the ratio fell sharply. A recent report on infant mortality in Armenia argues that, apart from the adoption of the WHO definition, a policy shift whereby medical staff were no longer held responsible for high infant mortality rates may have been critical in reducing the level of recorded stillbirths.[25]

Figure 6.7 also shows that the stillbirths ratio calculated from official counts rose to about 2:1 or even 3:1 in Georgia, Turkmenistan, Ukraine and Uzbekistan during the 1990s. This suggests that, in these countries, the 'over-counting' of stillbirths and the 'under-counting' of early neonatal deaths increased. Georgia officially adopted the WHO definition of live birth in 1994. This should perhaps have caused recorded early neonatal deaths to go up, while leading to little change in the number of stillbirths, thus reducing the stillbirths ratio. But the stillbirths ratio grew steeply in the following years, from 1:1 to well over 2:1. In other words, the number of recorded stillbirths doubled relative to the number of early neonatal deaths. This may have been the result of the inadequate implementation of the WHO definition or of concerns about possible negative perceptions if infant mortality counts should suddenly appear to climb. Factors such as these may have influenced medical staff or administrators sometimes to record infant deaths as stillbirths. This possibility is supported by evidence from an independent study of 15,000 births at obstetrics clinics in Tblisi, Georgia, in 2000. From this sample, a stillbirths ratio of less than 1.5:1 was calculated.[26]

If infant deaths are misreported or inaccurately counted, it is not only statistics that are affected. As the 1997-98 study in an oblast hospital in Kazakhstan points out, the misclassification of infant deaths has serious implications for every aspect of public health and clinical practice.[27] The impact of programmes to reduce infant morbidity and mortality will also be severely curtailed if they are based on incomplete information.

Reliability of registration

The accurate recording of all births and deaths is important not only for the production of more precise vital statistics, but also for the achievement of children's rights. Birth registration is a passport to citizenship and participation in society.

The registration systems in most of the countries in the CEE/CIS function effectively, and the vast majority of births and deaths are captured in official statistics. This is a positive legacy from the past. In the Soviet Union, parents were expected to register the births of their children with village executive committees, if they lived in rural areas, or at special registry offices, if they lived in towns and cities. In the case of a stillbirth or infant death that had taken place before the mother left the hospital, the hospital administration had to make the declaration.[28] In some CIS countries, similar procedures exist today.

A recent UNICEF study estimates that the proportion of births that remain unregistered across the world is 4 in every 10; within the CEE/CIS region, it proposes a figure of 1 in every 10.[29] Most of the cases occur in the countries of the Caucasus and Central Asia, where civil registration has historically been problematic. Table 6.3 shows that non-registration is acute in war-torn and impoverished Tajikistan, where the births of 4 in 10 children aged between 6 and 11 months were not being registered in the late 1990s. If an infant's birth is not registered, it is likely that his or her death will not be registered either.

Table 6.3

Share of births still unregistered at 6 and 11 months
(per cent)

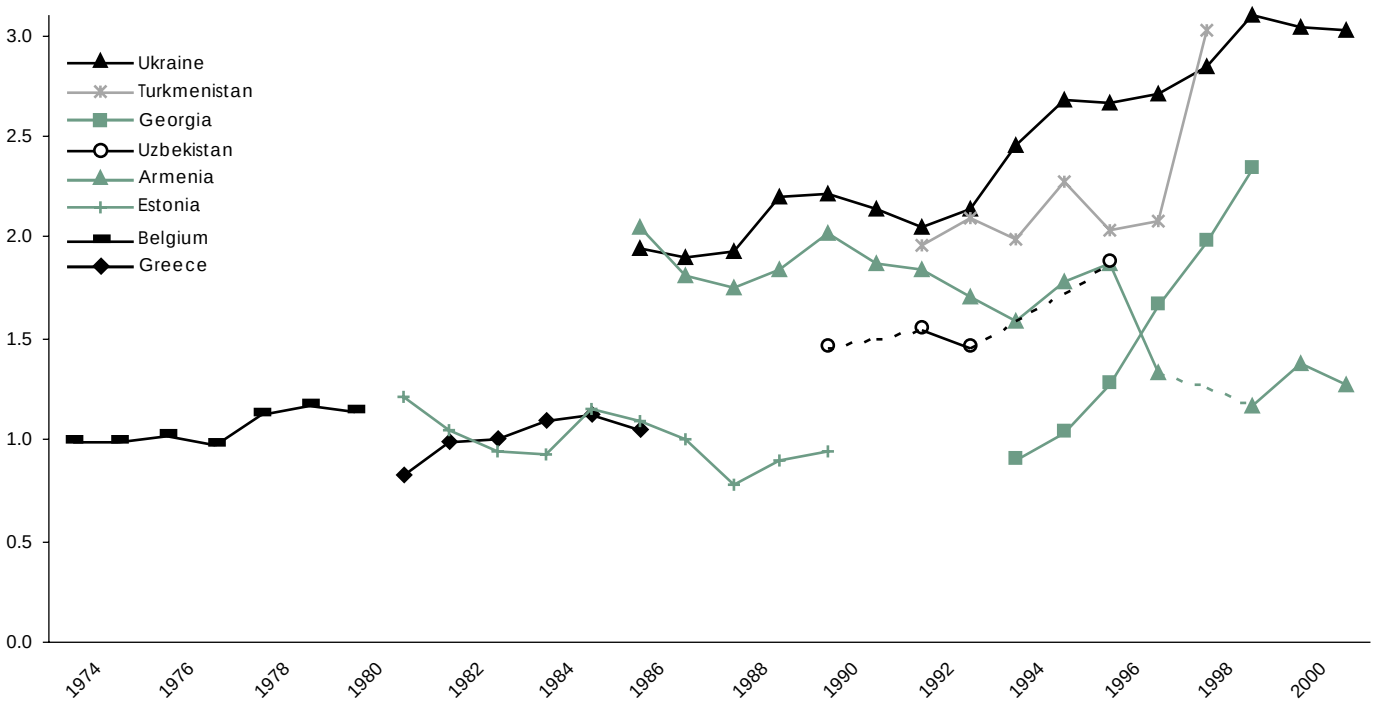
	Children under 6 months	Children 6-11 months
Azerbaijan	13.6	6.0
Georgia	12.0	5.3
Tajikistan	55.1	39.4
Uzbekistan	2.5	0.3

Source: National multiple indicator cluster survey reports, 2000. See UNICEF: <*www.childinfo.org*> (20 March 2003).

Why do parents not register the births of their children? In Tajikistan in the late 1990s, one reason was the high fee that applied. In 1999, it was equivalent to half the average monthly wage.[30] Since then, the fee has fallen significantly, and registration is now formally free of charge, although 3 somoni ($1) is charged for printing the birth certificate. This reduction gives hope that the proportion of births currently being registered has increased. In Georgia in 2003, a fee of 7 lari (more than $3) is being charged. In Kazakhstan, on the other hand, no official birth registration fee has been charged since April 2002. Indeed, a recent Government decree specifies a monthly allowance for newborn children of 872 tenge (about $5.80), which is conditional on birth registration.[31]

Figure 6.7

Ratio of stillbirths to early neonatal deaths, 1970-2000

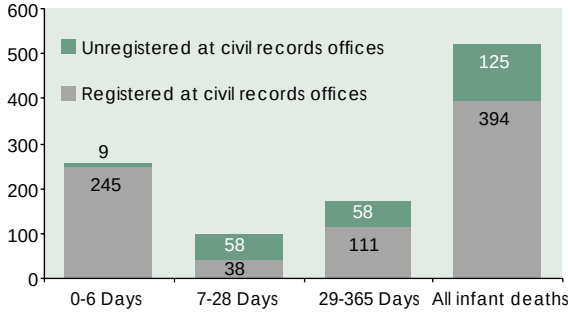


Source: WHO Health for All database: <*www.who.dk*> (1 March 2003).

Note: Only those countries and years are selected for which the early neonatal mortality rate was between 6.5 and 11 per 1,000 live births. Depending on the country and the year, the definition of live birth may vary.

Figure 6.8

Infant deaths registered at medical facilities, but unregistered at civil records offices, Armenia, 2000 (absolute number from a survey of 519 deaths)



Source: Ministry of Health of Armenia and UNICEF (2002), op. cit. (Figure 6.5), Table 15.

Note: Based on a follow-up of medical death certificates issued by health authorities in 2000. Medical facilities issue such a death certificate when they are involved in the treatment of the infant. If the infant is less than a week old, medical facilities are responsible for registering the death with the civil records office, which compiles official vital statistics for the National Statistical Service. If the infant is older at the time of death, the parents are responsible for registering the death directly with the office, without which the infant's death will be excluded from the official count. The total number of infant deaths reported by the National Statistical Service in 2000 was 540. (Source: MONEE project database.)

However, fees are not the only difficulty. While birth registration in Kyrgyzstan is free, legal obstacles mean that refugee parents have great difficulty in registering the births of their children.[32] A UNICEF report on Armenia shows that many parents do not register their children's births because of transportation difficulties and administrative barriers and because there is little incentive to do so. An investigation of over 500 medical death certificates issued for Armenian infants through hospitals and other health facilities in 2000 revealed that a quarter of these deaths had not been subsequently recorded in civil registries and therefore remained uncounted in official vital statistics. Figure 6.8 shows that, for infants whom medical staff recorded as live born and who died at less than seven days of age, death registration was reasonably effective because it was the hospital's responsibility. But in the case of older infants, for whom the parents were responsible for the registration at civil offices, compliance was poor.[33]

In several CIS countries, official infant mortality statistics are based only on civil registration data. Where civil registration systems do not work effectively, this presents a barrier to the production of accurate information on births and deaths. Thus, in some places, even if a medical certificate of birth or death is issued, the event may not be included in official statistics unless parents also report it at a civil registry office (as in the case of the deaths of infants aged seven days or more in Armenia). Births and deaths as recorded on medical certificates, on the other hand, are usually reported to ministries of health. Infant mortality statistics published by ministries of health are therefore sometimes different from those published by central statistical offices, which rely on civil registry data. In Georgia, while the official infant mortality rate in 2000 was 14.9 per 1,000 live births, the Ministry of Health estimate was 21.1.[34]

The reliability of survey data

While there are evident problems with official infant mortality statistics in several countries in the region, alternative estimates derived from surveys also need to be carefully appraised. Official counts attempt to capture 100 per cent of vital events such as births and deaths among the population, although, as shown above, coverage is sometimes less than complete. Surveys, on the other hand, count events among a sample that is randomly selected from the population, whereby each person or household has an equal probability of being sampled. The infant mortality rate in a sample survey therefore gives only an estimate of the value in the population.

However, statistical theory provides a method for calculating the precision of this estimate: the '95 per cent confidence interval'. This shows the range of values of the infant mortality rate within which one can be 95 per cent sure the true value in the population is to be found. The estimate drawn from the sample is the central value in this range. The size of this confidence interval depends principally on the sample size in the survey and the method used to select the sample. Figure 6.9 gives a graphic picture of the confidence that can be placed in the results of the surveys used to estimate infant mortality. The vertical bars surrounding the survey estimates of infant mortality represent the 95 per cent confidence intervals for the estimates. (The calculation of confidence intervals is discussed in greater detail in the Appendix to this article.)

Figure 6.9 shows that the confidence intervals around estimates of infant mortality from the surveys usually lie well above the official estimates. This suggests that real infant mortality rates among the populations of most of these countries are quite probably higher than the official figures. The exceptions are Romania and Ukraine. In Ukraine, the official estimate is well within the confidence interval for the survey estimate. This implies that the official figure is consistent with the estimate based on the sample survey. The same is (only just) true in Romania.

In most other countries, even the lower boundary of the confidence interval is far above the official estimate. The largest difference is found in Azerbaijan: 62 infant deaths per 1,000 live births compared with an official rate of 17. Moreover, the true population values of the infant mortality rates could as easily be in the top half of the

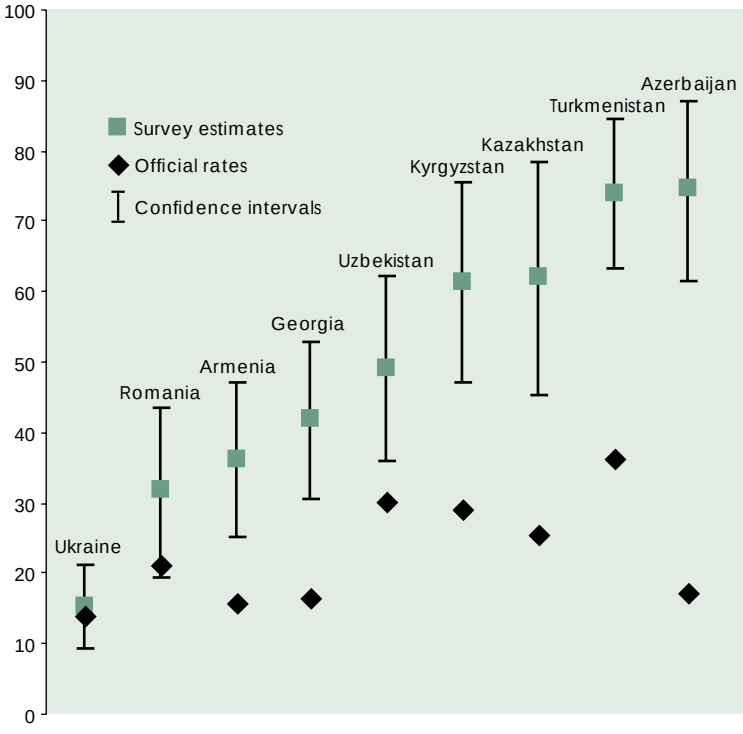
illustrated ranges as in the bottom half, that is, *above* the central values provided by the estimates from the sample surveys.

To summarize, the official reporting of births and infant deaths in some countries in the region, particularly in the Caucasus and Central Asia, is clearly incomplete. The problems are threefold: the failure fully to adopt and implement the WHO definition of live birth, the misreporting of pregnancy outcomes by medical staff and the under-registration by parents of births and infant deaths. The net effect of these problems is to reduce the infant mortality counts produced by official sources. These problems may predate the collapse of the Soviet Union. They also mean that trends in infant mortality during the 1990s are uncertain.

Although surveys such as multiple indicator cluster surveys, demographic and health surveys and reproductive health surveys are also subject to uncertainty, there is no reason to assume that they systematically overreport the incidence of infant death. In the countries of the Caucasus and Central Asia in particular, all the surveys considered in this analysis yield results that are significantly higher than official counts. This is a far-reaching conclusion. It has implications for the achievement of the Millennium Development Goals and the *A World Fit for Children* priorities in some of the poorest countries in the region. It also suggests that the infant mortality rates in these countries are high despite the generally positive legacies of the Soviet period: universal education and extensive health care infrastructures.

Figure 6.9

Infant mortality: official rates, survey estimates and 'confidence intervals' (infant deaths per 1,000 live births)



Sources: Serbanescu, Florina, Leo Morris, Shafag Rahimova and Lisa Flowers (2002), *Reproductive Health Survey: Azerbaijan, 2001*, Centers for Disease Control and Prevention and others: Atlanta, Table 6.8.1; Statistical Annex, Table 3.1.

Note: Official and survey estimates are averages for five or six years prior to the survey year. See Figure 6.3. The black lines represent 95% confidence intervals. (See also the Appendix to this article.) No confidence intervals are reported for the multiple indicator cluster survey estimate for Tajikistan.

6.4 The circumstances of infant deaths

"Disease started with vomiting, and on the second day he had watery stool and fever. I went to a paediatrician, who prescribed drugs, but I did not have any money to purchase drugs. I went to a healer. But the child's condition became worse. On the seventh day he died." *–The account of a mother in Tajikistan*[35]

Many infant deaths in the CEE/CIS could be prevented. They are the result of inadequate nutrition and curable infections among mothers and infants. They also occur because, as the quotation above demonstrates, parents cannot always afford to pay for the medical care that their children need. However, avoidable deaths also take place within hospitals and other medical care settings.

The global context

Infant and child mortality rates are of global significance and should be judged in a global context. If survey estimates represent an accurate picture of infant mortality in countries of the Caucasus and Central Asia, then, in global terms, the infant mortality rates in these countries are high. Table 6.4 shows mortality rates and selected associated factors in the eight countries of the Caucasus and Central Asia, the rest of the CEE/CIS, and other regions in the world. Regions are ranked by mortality rate. The Caucasus and Central Asia is the third most poorly performing region. In other CEE/CIS countries, average infant mortality rates are about twice those in the advanced industrialized countries.

One of the most important determining factors associated with infant mortality is national income, as noted above. Table 6.4 shows that this relationship is generally also valid in terms of regional averages, although East Asia, with high per capita income and high infant mortality rates, is an exception. Similarly, greater urbanization is associated with lower mortality rates. In terms of female adult literacy and immunization coverage, the countries of the Caucasus and Central Asia are somewhat anomalous in that they perform better, on average,

Table 6.4

Infant mortality and related indicators, regions of the world, 2000

	Sub-Saharan Africa	South Asia	Caucasus and Central Asia	East Asia	China	Middle East and North Africa	Latin America	Other CEE/CIS countries	Advanced industrialized countries
Infant mortality rate	90.5	77.3	59.1	41.7	32.0	31.3	26.6	11.6	4.8
GDP per capita ($)	2,138	2,149	3,036	8,121	3,976	7,056	5,822	8,173	25,204
Share of urban population (%)	35	25	48	49	32	72	66	61	77
Female adult literacy (% of population age 15 and above)	52.2	43.2	93.7	83.3	76.3	65.1	84.9	95.5	99.1
Child immunization (% of children under 12 months)	57.1	65.5	94.3	75.2	90.0	90.3	83.3	95.9	92.6
Hospital beds (per 1,000 population)	1.2	0.8	7.7	3.1	2.4	2.2	2.2	7.7	7.5
Public health expenditure per capita ($)	50	27	85	144	83	262	176	436	1,559
Number of countries	42	6	8	14	1	18	23	19	21

Sources: World Bank (2002), op. cit. (Figure 6.2); infant mortality survey data for the Caucasus and Central Asia: see Figure 6.3; female adult literacy: UNDP (2002), *Human Development Report 2002*, New York: Oxford University Press.

Note: Data are the simple unweighted means of the countries in each region. Where data for 2000 are not available, the most recent data are used. The bottom row shows the number of countries for which infant mortality estimates are available. For other indicators, the number of countries varies up to the maximum of countries in the bottom row. The number of countries is significantly smaller for "Female adult literacy rate". GDP and public health expenditure are expressed in dollars converted at purchasing power parity exchange rates. A dollar converted at these rates will buy the same basket of goods in all countries. Child immunization refers to the percentage of children immunized with the DPT3 vaccine before they reach age 1.

than other regions with lower infant mortality rates. The generally high levels of female literacy in the CEE/CIS are a positive legacy of the Soviet past. The wide immunization coverage in the CEE/CIS may also be partly a result of the extensive health care infrastructure built up during communist times. However, in a global context, these positive factors do not appear to be associated with low infant mortality rates.

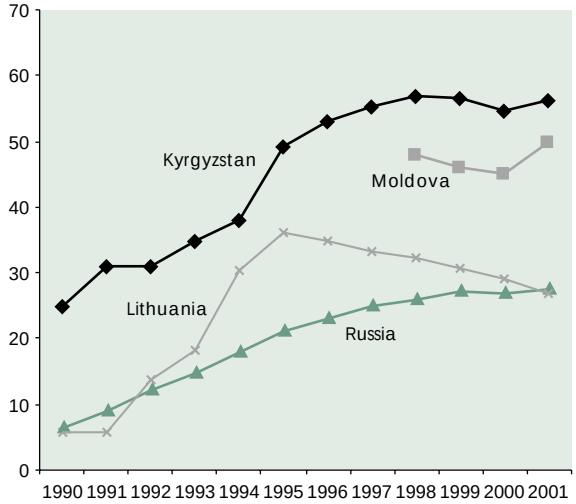
Moreover, health expenditure in the Caucasus and Central Asia is low, and the high ratio of hospital beds per capita in this subregion (higher than in advanced industrialized countries) suggests that much of this expenditure is dedicated to the maintenance of a resource-intensive network of hospitals. This is also a legacy of the communist period.[36] As Article 1 in this *Social Monitor* shows, the countries of the Caucasus and Central Asia in particular have encountered difficulties in maintaining the levels of public expenditure needed for this large infrastructure and for the trained staff to run it. Often, the result has been inadequate care and preventable infant deaths.

Nutrition during pregnancy and antenatal care

The most direct way in which poverty affects infant well-being is through inadequate nutrition. A malnourished mother is more likely to give birth to an underweight infant. Underweight and poorly nourished infants are more susceptible to infection or illness than are well-fed infants. Although there is little information on the nutritional status of women and children before the start of the transition, there seems little doubt that the number experiencing poor levels of nutrition increased through the 1990s. The 2001 *Regional Monitoring Report* reveals

Figure 6.10

Women with anaemia giving birth (per cent of all women giving birth)



Source: MONEE project database.

that, in 1996, 4 in 10 children in Tajikistan showed low height for their age, usually because of malnutrition, as did 3 in 10 children in Albania and Uzbekistan in 2000. These high percentages compare with rates of 1 in 10 in Brazil and Turkey and only 2 in 100 in the US during the 1990s.[37]

Anaemia can result from inadequate iron intake. It greatly increases the risk of haemorrhage and complications during birth. Figure 6.10 shows that the proportion of women with anaemia during the final weeks of pregnancy rose in Kyrgyzstan, Lithuania and Russia during the first half of the decade. While levels fell back in Lithuania, they continued to climb in the other two countries.

Inadequate nutrition among mothers and young

Table 6.5

Low birthweight and infant mortality, Bulgaria 1987-95

	Birthweight (% of all live births)		Infant mortality rate (per 1,000 live births)		Deaths among low birthweight infants (% of all infant deaths)
	Less than 2,500 grams	2,500 grams or more	Less than 2,500 grams	2,500 grams or more	
1987	6.6	93.4	83.4	9.0	65.6
1991	8.2	91.8	82.8	9.8	75.9
1995	7.4	92.6	85.8	9.1	75.3

Sources: Carlson, E. and S. Tsvetarsky (2000), "Birthweight and Infant Mortality in Bulgaria's Transition Crisis", *Paediatric and Perinatal Epidemiology*, Vol. 14, pages 159-62, Table 1.

Note: Data are extracted from official sources. Calculations include all born-alive infants with a weight of 500 grams or more.

children is likely to be reflected in higher infant mortality rates, as well as more negative values in other intermediate indicators, such as low birthweight, one of the most reliable predictors of neonatal mortality risk.[38] Table 6.5 shows that, in Bulgaria, the number of low birthweight babies as a share of total births increased from 6.6 to 8.2 per cent between 1987 and 1991. Between 1991 and 1995, the proportion of low birthweight babies fell back slightly, but the infant mortality rate among low birthweight babies rose. Overall, the share of infant deaths that occurred among low birthweight infants climbed from 66 to 75 per cent of the total over the eight years.

Access to medical advice and care is important. One of the main purposes of antenatal care is to screen pregnant women for conditions such as anaemia so that remedies can be prescribed. Surveys show that, in most countries, the majority of women have antenatal consultations during pregnancy. However, the quality of antenatal care is uncertain. A study of antenatal care in Ukraine suggests that, among women attending medical centres for regular antenatal check-ups, conditions associated with premature births were often not identified, and, although ultrasound examinations were frequently carried out, the results were poorly analysed.[39]

Medical care at birth

Suboptimal care for infants during and after birth is also a cause for concern. Multiple indicator cluster survey data for 2000 show that 4 in 10 infants in Azerbaijan and over half those in Tajikistan were not weighed at birth.[40] Thus, a crucial piece of information on the health status of these newborns was not recorded. In some cases, this inadequacy may have been associated with a lack of basic medical equipment. An Armenian study of infant mortality found that fewer than 4 in 10 facilities that cater for births in that country had all the basic infrastructure necessary, including water supply, toilets, telephones or radio transmitters, and refrigerators.[41] A representative of HealthProm, a non-governmental organization, has reported on the poor conditions in a maternity clinic in Bilesuvar refugee camp, Azerbaijan, as follows:

> "We were shown two very sparse clinics with handwritten public health posters on the walls. One of the clinics was a two-roomed maternity unit where we met Aziza and her baby girl, Carolina, delivered that morning by a local midwife, Dinara. The baby was doing well, swaddled in a delivery room heated with one electric bar. However, there was no modern equipment, and complications during delivery may have been fatal."[42]

A common method of measuring the condition of infants immediately after birth is the APGAR score. This is, in effect, a simple, non-technological medical examination. Five dimensions are tested: activity (or muscle movement), pulse, grimace (or reflex actions showing discomfort), appearance (or skin colour) and respiration. A score of 0-2 is given for each of the five dimensions at one minute and five minutes after the birth. An overall score of 7-10 is considered normal, while 4-7 might require some resuscitative measures, and an infant with an APGAR score of 3 or below would require immediate resuscitation. This simple test was not carried out among almost half the sample of newborns in a study of infant death in Kazakhstan, signifying, according to the authors of the study, a "negligent attitude" on the part of the health workers. Among those infants upon whom the test was carried out, 8 per cent had APGAR scores in the 0-3 range at five minutes after birth. This was attributed to poor environmental conditions in the hospital, particularly low temperature, that led to further complications:

> "Faulty newborn assessment, late and most often inadequate resuscitation and intensive therapy measures determine the worsening of the newborn's initial condition. They are transferred from delivery ward to intensive therapy ward, where mothers, as a rule, are not allowed. Thus, a vicious cycle is formed: separation of mother and her child – delay in breastfeeding – hypothermia and as a consequence – severe syndrome development, . . . disease development and lethal outcome. Delay in breastfeeding was deduced from the record of care, but could not be proved."[43]

Post-neonatal infant death

Among those infants who survive the neonatal stage, environmental factors become more important in determining health and well-being. These factors

include the nutrition and hygiene of the infants and the knowledge of parents about these issues. Figure 6.11 shows that, in those countries where demographic and health surveys and reproductive health surveys have been carried out, the proportion of infant deaths that occur during the post-neonatal stage have varied from a third of all infant deaths in Romania to over half of all such deaths in Azerbaijan, Turkmenistan and Uzbekistan.

Small-scale studies in Central Asia have looked at the factors associated with post-neonatal death. A UNICEF analysis of infant deaths in Tajikistan has found that, among 51 post-neonatal deaths examined, the major cause of death was meningitis-encephalitis, followed by acute diarrhoea. Malnutrition and anaemia were also important causes.[44]

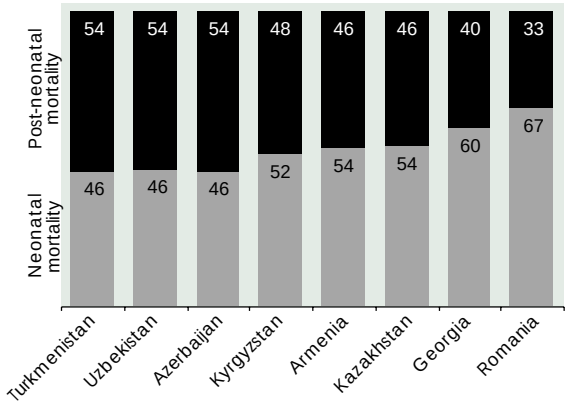
Most of the infant deaths surveyed in this Tajikistan study were considered preventable. However, although medical care was usually sought, treatment was often ineffective.

> "Fever. We invited health workers; they did some injection, but fever continued. Child was hospitalized to rayon hospital for four days. Child received intravenous drugs and antibiotics; diarrhoea continued for two months, 2-12 times per day. He lost weight."[45]

Infant mortality studies in Armenia and Kazakhstan likewise argue that, with higher standards of medical care, many post-neonatal infant deaths could be prevented. However, not only the deaths are preventable in most cases, but also the related illnesses. For example, malnutrition, diarrhoea and infectious disease are associated with poverty and poor living conditions. As Article 1 in this *Social Monitor* indicates, the proportion of people in poverty is now declining in several countries of the Caucasus and Central Asia. As the incidence of poverty decreases, the prevalence of fatal illnesses should also fall. Better parental education and greater awareness may also play a role in reducing the number of post-neonatal deaths. For the three countries of the Caucasus, Figure 6.12 shows neonatal and post-neonatal infant mortality rates according to the level of education among the mothers. In all three countries, neonatal mortality rates varied less according to education of the mother than did post-neonatal mortality rates. These were considerably greater where mothers had less education than was the case where mothers had more education. As infants grow older, the knowledge of parents about nutrition, hygiene and environmental risks may play an increasingly important role in ensuring children's survival.

Figure 6.11

Neonatal and post-neonatal deaths (per cent of all such deaths)



Sources: Sullivan, J. and H. Goldberg (2003), "Infant and Child Mortality", in CDC and ORC Macro, *Reproductive Health in Eastern Europe and the Central Asian Republics: A Comparative Report*, Centers for Disease Control and Prevention and ORC Macro: Calverton, MD (in press), Table 13.1. Data for Azerbaijan: Serbanescu et al. (2002), op. cit. (Figure 6.9), Figure 6.8.

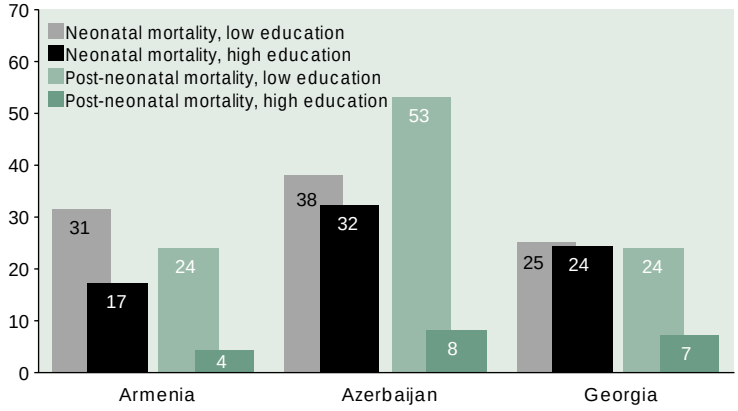
Note: Data represent averages for the five years preceding the surveys, except for Azerbaijan, where they represent averages for the ten years preceding the survey. For survey years, see Figure 6.3.

6.5 The challenge: to reduce infant mortality

Most of the difficulties countries in the CEE/CIS face in the effort to reduce infant mortality are not unique to the region. What is different about the region is the communist heritage: part blessing and part handicap. Countries must strengthen those parts of the health care, education and social infrastructure that are effective, while radically changing or replacing those parts

Figure 6.12

Infant mortality by the education of the mothers (infant deaths per 1,000 live births)



Sources: Sullivan and Goldberg (2003), op. cit. (Figure 6.11), Table 13.3; Serbanescu et al. (2002), op. cit. (Figure 6.9), Table 6.8.3.

Note: Data represent average neonatal mortality rates (death at 0-27 days) and post-neonatal mortality rates (death at 28-365 days) for the 10 years prior to the surveys. See Figure 6.3 for the survey years. Mothers with lower education have secondary education or less, while mothers with higher education have at least some post-secondary education.

that do not lead to positive results: that is the real test. Recent economic growth, declines in poverty and expanding international exchanges should facilitate and reinforce policy action to improve the well-being of mothers and infants and bring down infant mortality. In this section, policy initiatives that can make a difference are discussed. These initiatives cover both the collection of statistics on births and deaths and the adoption of reforms to improve the care of pregnant women and their infant children.

Implement WHO definitions

Nearly all countries in the region have now officially adopted the WHO definition of live birth and stillbirth or will do so soon. Armenia and Georgia formally adopted the WHO definition in the mid-1990s. Decrees to adopt it were issued in Azerbaijan and Kazakhstan in 2001. The governments of Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan have also pledged to adopt the WHO definition.

However, the Armenian and Georgian experience shows that adoption is not the same as proper implementation, which requires the training of medical staff, enhanced administrative systems and effective monitoring mechanisms, including, for example, measures to ensure that all infants' life signs and weights are fully recorded.

If it is implemented fully, the potential gains from the adoption of the WHO definition are large. Because it is less open to loose or arbitrary interpretation than the Soviet definition, because it can create greater moral pressure to save the lives of premature and underweight infants and because it represents an international standard that allows for more sharing of knowledge, the definition, if fully adopted, will facilitate best practices among medical staff and thus help protect the lives of infants.

Improve the recording of births and deaths

Infant mortality is a key indicator of the performance of individual medical staff, of hospitals and of national policies. For this reason, there is often strong pressure to find ways to hide a high relative level of infant deaths. In the Soviet Union in the 1970s, when the infant mortality rate appeared to be rising, data were simply not published.[46] In the 21st century, when all nations are committed to achieving the Millennium Development Goals and the priorities set out in *A World Fit for Children*, data on key indicators such as infant mortality should no longer be hidden. Indeed, they are open to scrutiny as never before. Studies in the countries of the Caucasus and Central Asia indicate, however, that data on birth and death events are sometimes misreported either deliberately, or because of lack of knowledge. The net effect of this misreporting is to reduce official infant mortality rates, for example, by reclassifying early neonatal deaths as stillbirths. The pressure to misreport needs to be eliminated. Policies to remove blame from individual medical staff for high infant death rates were implemented in Armenia in the mid-1990s with apparently positive results. Policies to improve the reporting of medical statistics are currently being proposed in Azerbaijan.[47]

Disincentives for parents to register births and infant deaths should also be removed. Registration fees have generally been lowered or abolished. However, distances to registry offices and the bureaucracy involved may still discourage parents from registering. The feasibility of incentives to register, such as a birth grant (being introduced in Kazakhstan) or funeral grant, should be evaluated.

Finally, it may take several years to implement all the policies needed in order to develop effective official registration systems. In the meantime, representative surveys can provide useful estimates of infant mortality. Moreover, even where official registration systems work effectively, surveys can supply information on the social, economic and health-related factors associated with infant and child health and mortality. Administrative records rarely contain this sort of detail. For these reasons, it is important that surveys such as the demographic and health surveys, the reproductive health surveys and the multiple indicator cluster surveys continue to be carried out.

Improve medical care and parental skills

Throughout the region, the provision of basic and, particularly, preventive health care must be enhanced. This is generally happening. Progress has been reported in Kyrgyzstan and Uzbekistan.[48] Moreover, countries in the region have a good record in some areas of preventive care, such as immunization. Recently, efforts have been made in some countries to plan health care reforms through Poverty Reduction Strategies. In the current "Poverty Reduction Strategy Paper" of Armenia, for example, the development of basic medical care to "gradually replace the existing overstaffed system of polyclinics and dispensaries" is identified as a key priority.[49]

It is important that both preventive and curative mother and child health care be free or affordable for all. In most countries in which health care is formally free, informal payment systems and a lack of affordable medicines represent significant barriers to wider access to the necessary advice and treatment. The earnings of health care workers across the region are low and have declined over the last decade relative to average earnings.[50]

Increased earnings should boost the morale of health care staff and limit reliance on informal payments.

The training of medical staff is also a key issue. Several studies suggest that infants have died because of inadequate or inappropriate care by poorly trained medical staff. Often, basic procedures, such as weighing infants at birth and carrying out APGAR tests, are not performed. Moreover, many health care systems have not developed protocols for major areas of practice such as delivery and the care of newborns. International organizations can play an important role in the retraining of medical staff so as to ensure healthier pregnancies and safer neonatal care. Mother and child health care programmes aimed at raising the skills of both medical workers and parents have already been introduced in the region. These include:

- M*aking Pregnancy Safer* and *the Promotion of Effective Perinatal Care:* WHO training and research initiatives to develop effective midwife services and to enhance the quality of care during pregnancy, whereby the emphasis is placed on the 'demedicalization' of normal pregnancies and births.
- *The Baby Friendly Hospitals Initiative:* a joint WHO-UNICEF 10-point plan to ensure the early and effective breastfeeding of newborn infants in hospitals and throughout infancy.
- *The Integrated Management of Childhood Illness:* an integrated approach to child health developed by WHO and UNICEF that combines preventive and curative elements by medical workers, but also within families and among communities. Special emphasis is placed on the prevention of disease through immunization and better nutrition and through education among parents.[51]

Taking advantage of economic growth

Recent economic growth and falling levels of poverty throughout the region, but particularly in the Caucasus and Central Asia, mean that there is now an opportunity to make real progress towards reducing infant and under-5 mortality in accordance with the Millennium Development Goals and the *A World Fit for Children* priorities. With long-term support from the international community, governments can invest more resources in mother and child health care. The collection of accurate birth and death statistics can be promoted. Steps can be taken to eliminate the misreporting of infant deaths. Parents can be offered incentives to register the births and, where necessary, the deaths of their children. WHO definitions of live birth and stillbirth can be implemented to facilitate optimum standards of medical care, to raise knowledge-sharing and international comparability and to protect infant lives.

Notes and references

1. At the 1990 World Summit for Children, countries agreed to reduce infant and child mortality either by one third, or by between 50 and 70 deaths per 1,000 live births. See Annan, K. (2001), *We the Children: Meeting the Promises of the World Summit for Children*, UNICEF: New York. At the UN Special Session on Children, held in May 2002, nations resolved to achieve reduction in the infant and under-5 mortality rates by at least one third by 2010 in pursuit of the Millennium Development Goal of reducing the under-5 mortality rate by two thirds between 1990 and 2015. See UNICEF (2002a), *A World Fit for Children*, UNICEF: New York.
2. In 2001, there were 4,339,200 births and 60,200 infant deaths in the CEE/CIS and 4,010,600 births and 18,660 infant deaths in the EU. Data from MONEE project database and New Cronos database, Eurostat: <*www.europa.eu.int*>.
3. Indeed, many international organizations (UNICEF included) use under-5 mortality rates as a determinant of aid flows.
4. The mortality rate computed using this formula is an approximation of the true probability that an infant will die before the age of 1 because not all deaths in a given year involve infants born in that same year. For a discussion of the measurement issues, see Shryock, H. S., J. S. Siegel and Associates (1976), "The Methods and Materials of Demography", *Studies in Population*, Academic Press: San Diego, CA, pages 235-37.
5. The countries that will join the EU in 2004 are Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. Bulgaria and Romania are scheduled to join in 2007.
6. Setty-Venugopal, V. and U. D. Upadhyay (2002), "Birth Spacing: Three to Five Saves Lives", *Population Reports*, Series L, No. 13 (Summer), Population Information Program, Johns Hopkins Bloomberg School of Public Health: Baltimore.
7. GDP information: EBRD (2002), *Transition Report 2002: Agriculture and Rural Transition*, European Bank for Reconstruction and Development: London, page 169. Health expenditure information: World Health Organization (WHO) country indicators, <*www.who.int*> (accessed 22 February 2003).
8. One study claims that 80% of the international variation in infant mortality can be explained by the variation in GDP per capita. See Filmer, D. and L. Prittchet (1997), "Child Mortality and Public Spending on Health: How Much does Money Matter?", *Policy Research Working Papers*, No. 1,864, World Bank: Washington, DC.
9. An alternative estimate of infant mortality, 28 deaths per 1,000 live births, has also been made for Albania for the multiple indicator cluster survey carried out in that country in 2000. However, it is not clear to which years this calculation refers. See UNICEF (Tirana) (2000), "Multiple Indicator Cluster Survey Report", draft, UNICEF: <*www.childinfo.org*> (2 January 2003).
10. See Filmer and Prittchet (1997), op. cit.
11. See UNICEF (2001), "A Decade of Transition", *Regional Monitoring Reports*, No. 8, UNICEF Innocenti Research Centre: Florence, Chapter 1.
12. This is the policy in Ukraine, for example. See Mogilevkina, I., B. Bødker, A. Orda, J. Langhoff-Roos and G. Lindmark (2002), "Using the Nordic-Baltic Perinatal Death Classification to Assess Perinatal Care in Ukraine", *European Journal of Obstetrics and Gynaecology and Reproductive Research*, Vol. 100, pages 152-57.
13. Little, R., S. Monaghan, B. Gladen, Z. Shkyryak-Nyzhnyk and A. Wilcox (1999), "Outcomes of 17,137 Pregnancies in Two Urban Areas of Ukraine", *American Journal of Public Health*, Vol. 89, No. 12, pages 1,832-36.
14. These proportions of deaths at different stages of infancy have been calculated using official data for 2000 for three countries – Czech Republic, Lithuania and Moldova – from the WHO Health for All database. See <*www.who.dk*> (20 December 2002).
15. WHO (1992), *International Statistical Classification of Diseases and Related Health Problems*, 10th Revision (ICD-10), Vol. 1, World Health Organization: Geneva, (definition 3.1).

16. Gourbin, C. and G. Masuy-Stroobant (1995), "Registration of Vital Data: Are Live Births and Stillbirths Comparable All Over Europe?", *Bulletin of the World Health Organization*, Vol. 73, No. 4 (July-August), pages 499-511. See also Anderson, B. and B. Silver (1986), "Infant Mortality in the Soviet Union: Regional Differences and Measurement Issues", *Population and Development Review*, Vol. 12, No. 4 (December), page 709. One expert suggests that the key indicator is the infant's weight rather than gestational age, which is often difficult to estimate. Therefore, it may be the case that, in some areas or hospitals, an infant weighing over 1,000 grams is considered 'a live birth' and an infant under 1,000 grams is considered a miscarriage if he or she survives for less than a week (Iryna Mogilevkina, personal communication).
17. Gourbin and Masuy-Stroobant (1995), op. cit.
18. In Russia, Decree 380/190 of Minzdrav and Goskomstat (issued on 4 December 1992) defines a live birth according to the WHO standard and states that health facilities must register all births. However, the civil registration of births only takes place for births and stillbirths showing a birthweight of 1,000 grams or more, or a length of 35 centimetres or more and a gestation of 28 weeks or more; or for infants with a birthweight of 500-999 grams who survive 168 hours (seven days). In Armenia and Ukraine, civil registration of births and infant deaths is also restricted. See Decree 31 (issued 19 February 1996) of the Ministry of Health of Ukraine; Ministry of Health of Armenia and UNICEF (2002), *Infant Mortality in Armenia: A Review of Procedures and Registration, Classification and Related Medical Services*, Ministry of Health of Armenia and UNICEF-Yerevan: Yerevan, Armenia. The Government of Tajikistan issued an order in 1995 that the WHO definition be adopted, but this has not been implemented. See European Observatory on Health Care Systems (2000a), "Health Care Systems in Transition: Tajikistan, 2000", European Observatory on Health Care Systems: <*www.euro.who.int/observatory*> (16 February 2002), page 4.
19. Velkoff, V. and J. Miller (1995), "Trends and Differentials in Infant Mortality in the Soviet Union 1970-90: How Much is Due to Mis-reporting?", *Population Studies*, Vol. 49, No. 2, pages 241-58.
20. Velkoff and Miller (1995), op. cit., page 243.
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22. Wuhib, T. (1998), "Trip Report: Child Deaths Survey, Zhambyl Oblast, Kazakhstan", mimeo, Ministry of Health of Kazakhstan and Centers for Disease Control and Prevention: Atlanta.
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Appendix: survey-based estimates of infant mortality rates

This Appendix presents some brief technical details about the surveys used in this article to estimate infant mortality rates in 10 countries in the CEE/CIS. It is not intended to be comprehensive. However, it also contains a list of references for further reading.

Demographic and health surveys

The Demographic and Health Survey programme has conducted more than 100 surveys, mostly in developing countries, since 1984. The purpose of these surveys is to produce reliable estimates of fertility, childhood mortality rates, maternal and child health indicators, and contraceptive knowledge and use for countries as a whole, for rural and urban areas separately within countries and for a number of regions. Demographic and health surveys are relatively standardized through the use of model questionnaires, manuals and survey methods.

The sampling procedure employed in demographic and health surveys aims at achieving a nationally representative sample of women between ages 15 and 49. In the surveys considered in this analysis, a stratified, two-stage sampling method has been used. At the first stage, primary sampling units (geographical areas) are selected, with the probability of selection proportional to population size. At the second stage, respondents are randomly selected from within each primary sampling unit. Sample sizes for the surveys referred to in this analysis range from 3,800 women in Kyrgyzstan (1997) to 8,000 women in Turkmenistan (2000). For more information, see <*www.measuredhs.com*>.

Reproductive health surveys

Reproductive health surveys have been organized by the US Centers for Disease Control and Prevention since 1975. The purpose of these surveys is to measure a wide variety of health and demographic indicators such as fertility, contraceptive use, infant and child mortality, child health, maternal morbidity and mortality, and knowledge and attitudes about HIV/AIDS and sexually transmitted infections at the national level and, occasionally, at the subnational level. The sampling methodology employed in reproductive health surveys is generally similar to the one used in the Demographic and Health Survey programme. Samples usually consist of about 8,000 women. Additional information on these surveys is available at <*www.cdc.gov/nccdphp/drh/*>.

Multiple indicator cluster surveys

Two rounds of multiple indicator cluster surveys have been organized by UNICEF to date, the first in 1995 and the second in 2000. The second round of surveys was carried out in more than 50 countries. The surveys have been designed specifically to produce estimates of indicators issuing from the 1990 World Summit for Children. They aim to be national in scope and coverage and representative of populations of women aged 15 to 49 in both rural and urban areas.

The recommended sampling procedure for the multiple indicator cluster surveys is similar to that in the demographic and health surveys, with households randomly chosen from geographical sampling units that in turn have been chosen with a probability of selection proportional to population size. The sample size in the Tajikistan survey, the only one employed in this analysis to estimate infant mortality rates, was 3,720 households. For more information, see <*www.childinfo.org*>.

Information on births and deaths

Demographic and health surveys, as well as reproductive health surveys, collect complete maternity histories from each woman surveyed, including the dates of children's births and, if applicable, the age at death. The information requested from respondents aims at describing births and deaths in accordance with WHO protocols. For example, for the Armenian Demographic and Health Survey 2000, women were asked: "Have you ever given birth to a boy or girl who was born alive but later died?". Negative answers are further probed with the question: ". . . any babies who cried or showed signs of life soon after childbirth?". After this, the mother is queried in some detail about the outcome of each pregnancy. Based on these data, mortality rates for 5- or 10-year periods (and sometimes 15-year periods) prior to the survey are directly computed.

In the multiple indicator cluster survey, detailed information on each birth and death is not sought from the mother. Rather, information is collected on the number of children born, the number who have died and the birth date of the first and of the most recent child. Combined with information on the age of the mother, this information is used to estimate infant mortality indirectly. One common technique for indirect estimation is the Brass method, which involves the application of model life-tables to esti-

mate the probability of a child dying by a given age. For a discussion of the Brass method, see UN (1983), "Manual X: Indirect Techniques for Demographic Estimation", *Population Studies*, No. 81, United Nations: New York.

Sampling and non-sampling error

Unlike administrative records, which attempt to capture events among an entire population, surveys capture events among a sample that is randomly chosen from the population. In all surveys, the extent to which a sample is representative of the population from which it is drawn is uncertain. Another sample randomly drawn from the same population could produce different results. Analysts attempt to take account of sampling error by presenting survey results as falling within a range of values (the *confidence interval*), with the central value being presented as the most likely result. The size of this confidence interval depends principally on the sample size in the survey and the method used to select the sample.

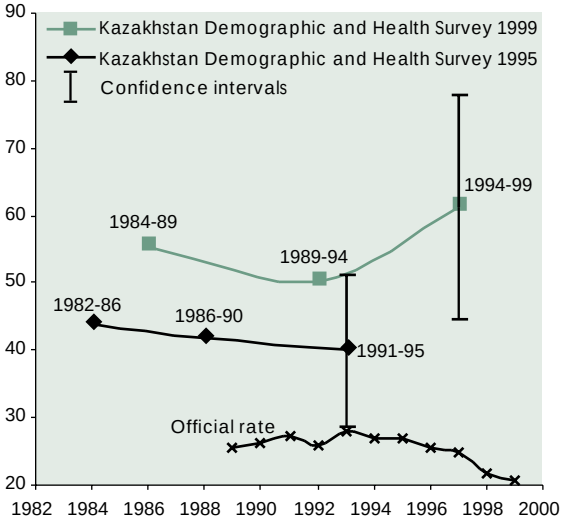
Figure 6.9 of the article contains 95 per cent confidence intervals for the infant mortality rates estimated from the demographic health surveys and reproductive health surveys. These confidence intervals can be interpreted as follows: if one were to take 20 samples from the same population, with the same sample size and the same method of selection as the single sample that was actually taken for each of the surveys, statistical theory suggests that, in 19 of the 20 samples, the 95 per cent confidence interval would contain the real population value. In other words, if we were to repeatedly take 20 samples, the confidence interval would indeed contain the actual population value in, on average, 19 of them.

The uncertainty in the estimates of infant mortality for countries in the Caucasus and Central Asia, exemplified by the size of the confidence intervals, might be reduced through larger sample sizes. Because the fertility levels in the countries of the Caucasus and Central Asia are generally lower than those in many developing countries, the number of births from which the infant mortality rates are estimated also tends to be smaller. The infant mortality rate estimated from the Kenya Demographic and Health Survey, for example, is 61 per 1,000 live births, which is similar to that in Kazakhstan. However, the sample of infants from which the infant mortality rate is calculated is 7,319 in Kenya, compared to 1,501 in the case of Kazakhstan, and the confidence interval of the Kenya estimate is narrower, ranging from 52.2 to 69.3 per 1,000 live births, compared with a range of 45.3 to 78.6 for Kazakhstan.

Apart from the sampling error discussed in Section 6.3 of the article, the survey data used in this analysis are also subject to other forms of error. Non-sampling errors include the possibility that some respondents may not recall the details of pregnancy outcomes accurately. For example, failure to mention a child's death is believed to be common among women whose children have died very shortly after birth. This problem becomes more acute if women are asked to remember events that perhaps occurred 10 years prior to the interviews. In contrast to the errors due to sampling, which could result in overestimates or underestimates of infant mortality, non-sampling errors are more likely to lead to underestimates.

Figure 6.13

Change in infant mortality over time: survey estimates, Kazakhstan 1995 and 1999



Sources: APM and ORC Macro (2000), *Kazakhstan Demographic and Health Survey 1999*, Academy of Preventive Medicine (Kazakhstan) and ORC Macro: Calverton, MD; ORC Macro and USAID (US Agency for International Development) (1995), "Kazakhstan: Demographic and Health Survey III, 1995 (DHS III)", ORC Macro: <*www.measuredhs.com*>; Statistical Annex, Table 3.1.

Note: Vertical bars show the 95% confidence intervals for the estimates of infant mortality rates for the five years preceding each of the two surveys.

Change over time

Because respondents to the surveys used in this analysis are asked about their reproductive histories going back 10 or even 15 years prior to the interview, it should, in theory, be possible to estimate changes in infant mortality rates over time from the same survey. However, problems of non-sampling error and the confidence intervals surrounding the survey estimates mean that the extent of change over time is sometimes difficult to measure accurately. Figure 6.13 shows estimates of infant mortality calculated from two demographic and health surveys carried out in Kazakhstan, in 1995 and 1999, as well as

official rates. Both surveys suggest a decline in infant mortality in the 1980s. The 1999 survey indicates an increase in the 1990s. However, it is difficult to determine the statistical significance of these trends over time. Nonetheless, the survey estimates are well above the official rates for all years in the 1990s. This supports the view that the official rates are underestimates of the real population value.

Further reading

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