Social Statistics Research Centre
University of Southampton

Inequality and Poverty in the CIS-7, 1989-2002

Jane Falkingham

Abstract

This paper examines the impact of a decade of transition on the living standards of people living in seven of the poorest Republics of the former Soviet Union – Armenia, Azerbaijan, Georgia, Kyrgyzstan, Moldova, Tajikistan, and Uzbekistan (known as the CIS-7). Data are drawn from a wide variety of sources, providing a comprehensive overview of household and individual welfare within the region. The picture painted is a bleak one, with rising income inequality, high levels of material poverty, and deterioration in health status and in access to health and education services. However, there are now the green shoots of economic recovery. Since 2000 all countries have experienced positive economic growth. The challenge for policy makers is to ensure that the benefits of this growth are shared equally amongst the population and that human capabilities are protected and strengthened.

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Jane Falkingham[1]

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[1] Department of Social Statistics, University of Southampton, UK. This paper was prepared for the Lucerne Conference of the CIS-7 Initiative, January 20-22, 2003.

1. INTRODUCTION

This paper examines the impact of a decade of transition on living standards and welfare in seven of the poorest Republics of the former Soviet Union – Armenia, Azerbaijan, Georgia, Kyrgyzstan, Moldova, Tajikistan, and Uzbekistan (known as the CIS-7). At independence all of the newly formed CIS-7 Republics inherited high levels of human capital. Education and health care were universal and provided free at the point of delivery, and there were extensive social services and transfers. The Republics also, however, inherited economic structures that were heavily dependent on Soviet supply and trade networks. Russia was the main source of inputs and the main market for outputs. Transport and other infrastructure was designed with the view to meeting these needs and not necessarily those of the local economy. High social spending was supported by large budgetary transfers from Moscow. It is estimated that in the late 1980s/early 1990s such transfers were worth as much as a third of GDP in Armenia and over a fifth in Moldova (Vandycke, 2002).

The withdrawal of subsidies from Moscow following independence, combined with the interruption of inter-republican trade within the former USSR and the impact of tight government stabilisation policies resulted in a dramatic reduction in output across the region. The economic shock accompanying the break up of the USSR was further exacerbated by a series of natural disasters and by armed conflicts and boarder disputes[2].

Figure 1 shows the annual change in real GDP since 1989. Growth was negative in all countries up to 1994/5, since when there has been a gradual reversal of fortunes. The decline in economic output was most marked in Georgia, where real output in 1994 was just a quarter of the level enjoyed five years previously. Elsewhere, GDP fell to between a third and a half its previous level. To put these changes into perspective, even at the lowest point of the Great Depression of the 1930s, GDP in the USA did not fall to below three-quarters of its pre-depression level[3]. Recovery faltered somewhat following the 1998 Russian fiscal crisis, with Moldova actually experienced a return to negative growth (Table 1). All countries have experienced positive growth during the last three years. Growth has been particularly strong in Azerbaijan, Armenia and Tajikistan – although the latter has been from a low base. Nevertheless, real output remains significantly *below* pre-transition levels in all countries except Uzbekistan.

[2] Armenia and Azerbaijan 1988-94; south Ossetia and Abkhazia, Georgia 1990-94; Transdniestr in Moldova 1992; Civil War in Tajikistan 1992-3 and on-going armed conflict 1993-7; and the Ferghana Valley, affecting Kyrgyzstan, Tajikistan and Uzbekistan, 1989-91.)

[3] In 1933, four years after the Wall Street Crash, real GDP in the USA was around 75 percent of its 1927 level. This was the low point of the depression and after 1933 positive growth was resumed (Milanovic, 1998).

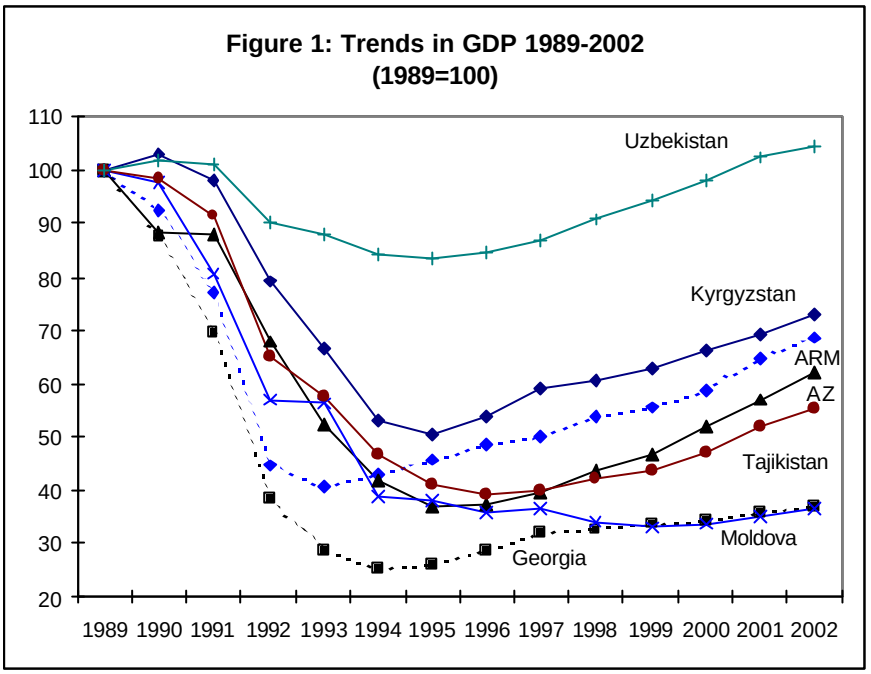


Table 1 Average annual growth rates in GDP, CIS-7 1989-2002

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Armenia	-7.4	-17.1	-52.6	-14.8	5.4	6.9	5.9	3.3	7.2	3.3	6.0	9.6	6.5
Azerbaijan	-11.7	-0.7	-22.6	-23.1	-19.7	-11.8	1.3	5.8	10.0	7.4	11.1	9.9	8.5
Georgia	-12.4	-13.8	-44.8	-25.4	-11.4	2.4	10.5	10.8	2.9	3.0	2.0	4.5	3.0
Kyrgyzstan	3	-5	-19	-16	-20.1	-5.4	7.1	9.9	2.1	3.7	5.1	5.3	5.0
Moldova	-2.4	-17.5	-29.0	-1.0	-31.2	-1.4	-5.9	1.6	-6.5	-3.4	2.1	4.5	3.5
Tajikistan	-1.6	-7.1	-29.0	-11.0	-18.9	-12.5	-4.4	1.7	5.3	3.7	8.3	10.2	6.0
Uzbekistan	1.6	-0.5	-11.1	-2.3	-4.2	-0.9	1.6	2.5	4.4	4.1	4.0	4.5	2.0

Source: 1990-1993 EBRD Transition Report 1997; 1994-2002 EBRD Transition Report Update, May 2002.

Not only has the magnitude of the decline in real GDP in the CIS-7 been greater than elsewhere, but the duration of the economic depression has also been longer. Most of the countries in Eastern Europe and the Baltics experienced three to four years negative growth in GDP (Milanovic, 1998), whereas GDP declined for six successive years in Moldova and Azerbaijan (1989-1995) and seven in Tajikistan. It is acknowledged that Figure 1 and Table 1 may over-estimate the fall in output and under-estimate subsequent economic growth as they reflect *measured* output only. It is clear that as the old state enterprises have contracted or closed they have been replaced by private sector activity, much of which is in the 'grey' or 'informal' sector. A study by Kaufman and Kaliberda (1996) estimated the size of the informal sector in the mid 1990s to vary from less than 10 percent of GDP in Uzbekistan to over 60 percent in Georgia. By 2001, the informal sector had grown to account for a third of GDP in Uzbekistan and nearly two-thirds in

Georgia (Djankov and Murrell, 2002)[4]. However, even after accepting that there may be measurement problems, it remains clear that the region has suffered a severe decline in economic output, which in turn has had a considerable deleterious impact on both current living standards and confidence in, and perceptions of, long-term well-being.

Section 2 of the paper examines changes in the level, composition and distribution of incomes and what that has meant in terms of the number of persons and households living in material poverty. The factors associated with an increased risk of poverty are discussed in Section 3, with a focus on the particular issues faced by specific groups. Some groups are more vulnerable to poverty than others due to their limited earning potential, dependency and marginalisation. Given armed conflicts and boarder disputes in Armenia/Azerbaijan, Georgia and Tajikistan, the position of internally displaced persons (IDPs) and refugees warrant special attention. However the position of other vulnerable groups such as families with many children and the elderly are also discussed. Poverty amongst rural households is the subject of a separate background paper by Cord *et al* (2002).

Increasingly it is being recognised that material resources, or rather lack thereof, reflect just one, albeit very important, dimension of poverty. Being poor goes well beyond a narrow lack of material consumption to encompass poor health outcomes, low achievement in education and a sense of vulnerability to external events. The multi-dimensional nature of poverty is explicitly recognised by the International Development Goals (IDGs) and their more recent reincarnation, the Millenium Development Goals (MDGs). Each of the goals addresses an aspect of poverty which is important in its own right, and which interacts and mutually reinforces the other aspects of poverty (Box 1). Section 4 therefore reviews trends in selected capability-based indicators, reflecting changes in the health and education of the population and the extent to which the CIS-7 are on track to achieve the economic and social MDGs. Finally in Section 5 we focus on the structural, policy and institutional factors associated with poverty and the policy measures necessary to promote poverty-reducing growth.

[4] The size of the informal sector in the CIS-7 countries in 2001 as a percentage of GDP is estimated by Djankov and Murrell (2002) as 45.3% Armenia, 60.1% Azerbaijan, 66.1% Georgia, 39.4% Kyrgyzstan, 44.1% Moldova and 33.4% Uzbekistan.

Box 1: The Millenium Development Goals

GOALS (targets)	INDICATORS
Economic well-being	
Reduce extreme poverty and hunger Reduce the proportion of the population living on less than $1 a day by one half between 1990 and 2015 Reduce the proportion of the population suffering from hunger by one half between 1990 and 2015.	1. Incidence of Extreme Poverty: Population Below $1 Per Day 2. Poverty Gap Ratio: Incidence times Depth of Poverty 3. Inequality: Poorest Fifth's Share of National Consumption 4. Child Malnutrition: Prevalence of Underweight Children (Under 5) 5. General Malnutrition: Prevalence of undernourishment measured by dietary energy supply in the general population
Social development	
Achieve universal primary education There should be universal primary education in all countries by 2015.	6. Net Enrolment in Primary Education 7. Proportion of cohort reaching grade 5 8. Literacy Rate of 15 to 24 Year-Olds
Promote gender equality Ensure that boys and girls have equal access to primary and secondary education by 2005, if possible, and at all levels by 2015.	9. Ratio of Girls to Boys in Primary & Secondary Education 10. Ratio of Literate Females to Males (15 to 24 Year-Olds) 11. Ratio of female to male employment in nonagricultural occupations 12. Proportion of women in national parliaments
Reduce infant & child mortality The death rates for infants and children under the age of five years should be reduced by two-thirds the 1990 level by 2015.	13. Infant Mortality Rate 14. Under 5 Mortality Rate 15. Immunization rate for measles among under-1 year olds
Improve maternal health Reduce maternal mortality ratios by three-quarters between 1990 and 2015.	16. Contraceptive Prevalence Rate 17. Maternal mortality ratio 18. Proportion of births attended by skilled health personnel
Combat HIV/AIDS, malaria, and other major diseases Halt and begin to reverse the spread of HIV/AIDS by 2015. Halt and begin to reverse the scourge of malaria and other major diseases that affect humanity by 2015.	19. Prevalence of HIV/AIDS among 15-24 year olds (It was agreed to leave the precise wording of the target and suggestions for additional indicators until the HIV/AIDS conference, currently underway, makes its recommendations. Further consultation is also needed on indicators for the other targets.)
Environmental sustainability and regeneration	
Ensure environmental sustainability Stop the unsustainable use of natural resources and reduce by half the proportion of the population without access to an improved water source between 1990 and 2015. Achieve a significant improvement in the lives of at least 100 million slum dwellers by 2020	20. Proportion of population with access to an improved water source 21. Proportion of population with access to an improved sanitation facility 22. Forest area as proportion of national surface area 23. Biodiversity: protected land area 24. GDP per unit of energy use 25. Carbon dioxide emissions

2. TRENDS IN INEQUALITY AND POVERTY SINCE INDEPENDENCE

2.1 THE POSITION AT INDEPENDENCE

High levels of social expenditure[5] and low wage differentials[6] meant that the distribution of income within the Soviet Union was significantly more egalitarian than in most market economies (Atkinson and Micklewright, 1992). Table 2 shows the position within the different Republics prior to independence. Levels of income inequality were generally low, with only Azerbaijan, Tajikistan, Turkmenistan and Uzbekistan experiencing Gini coefficients of over 0.3. Average per capita income within the CIS-7 was also considerably *lower* than in Russia - varying from under half in Tajikistan to 84 percent in Georgia. This difference is explained in part by the higher fertility and larger average household size of the republics in Central Asia, which reduces average household income when measured on a per capita basis. However, there is no doubt that the Central Asian Republics were amongst the least well-off republics in the Union.

Table 2 Summary statistics on the distribution of per capita income and poverty within the Soviet Union by Republic, 1989

	Gini coeff [1]	Mean per capita income [2] (Roubles)	Mean relative to Russia	Percent of population with per capita income below 75 Rbs, 1989
Russia	0.278	178.65	100	5.0
Lithuania	0.278	201.93	113	2.3
Latvia	0.274	198.72	111	2.4
Estonia	0.299	219.18	123	1.9
Ukraine	0.235	153.35	86	6.0
Belarus	0.238	170.29	95	3.3
Moldova	**0.258**	**141.33**	**79**	**11.8**
Georgia	**0.292**	**150.15**	**84**	**13.0**
Armenia	**0.259**	**134.85**	**75**	**14.3**
Azerbaijan	**0.328**	**110.33**	**62**	**33.6**
Kazakhstan	0.289	142.92	80	15.5
Kyrgyzstan	**0.287**	**104.06**	**58**	**32.9**
Tajikistan	**0.308**	**82.94**	**46**	**51.2**
Turkmenistan	0.307	102.26	57	35.0
Uzbekistan	**0.304**	**91.29**	**51**	**43.6**
ALL USSR	0.289	158.83	89	11.0

Notes: [1] The Gini coefficient is a summary measure of inequality. 0.00 implies perfect equality where every observation has the same income; 1.00 perfect inequality where the last observation has all the income.
[2] Monthly per capita gross household income for workers and collective farm workers.
Source: Tables 8.4 and UI3, Atkinson and Micklewright, 1992.

[5] Social transfers made up 14 percent of total gross income in the 1988 USSR Family Budget Survey.
[6] It is generally agreed that rates of return to education in the Soviet Union were less than in market economies and consequently the difference between non-manual and manual workers was lower than in the West (Rutkowski, 1995).

Poverty did not officially exist under the Soviet system, although there were 'maloobespechenny' (or 'under-provisioned') families (Braithwaite, 1995). The concept of a subsistence minimum to determine who was under-provisioned was not used. Instead a 'minimum consumption basket' that reflected the *socially acceptable* minimum for a community was applied[7]. In 1989 the national 'social minimum' calculated by Goskomstat was around 81 rubles per month. Using data from the 1988 USSR Family Budget Survey and taking 75 rubles as a proxy for the national 'poverty threshold', Atkinson and Micklewright (1992) estimated that around 31 million people, or 11 percent of the total population of the Soviet Union, were poor by this standard. The proportion living in poverty however varied considerably across the Republics, with over half of those living in Tajikistan having a per capita income of less than 75 rubles, compared to just 2 percent in Estonia. Prior to independence, the CIS-7 could be divided into two groups: Moldova, Georgia and Armenia – where inequality and poverty were relatively low (12-14%); and the Central Asian Republics of Kyrgyzstan, Tajikistan and Uzbekistan plus Azerbaijan where inequality was higher than the Union average and where between a third and a half of the population were 'poor'.

2.2 SINCE INDEPENDENCE

2.2.1 Rising Income Inequality

The decline in measured output shown in Figure 1 has been accompanied by increases in measured inequality right across the region (Table 3). By the end of the 1990s most of the CIS-7 countries displayed values that were well above even the top of the OECD range (the most unequal OECD country in the 1980s was USA with a Gini coefficient of 0.37)). The increase has been particularly marked in Armenia where in 1998/9 the income gini coefficient reached 0.57, a level akin to those found amongst the more unequal Latin American countries such as Brazil (0.61) and Chile (0.57). Moreover, these changes have taken place at an unprecedented speed, which has resulted in an acute sense of relative deprivation for those at the bottom of the distribution. When asked to place themselves on a nine step ladder, bearing in mind that poorest were on the first step and the richest on the ninth step, the majority in Tajikistan ranked themselves as being on the bottom third of the ladder, with 11 percent extremely poor (rung 1), 23 percent on rung 2 and 31 percent on rung 3 (Falkingham, 2000). Opinion poll data from 1999 for several Transition countries showed that the majority of people think that income differences are now too high in their country (Redmond, Schnepf and Suhrcke, 2001).

[7] This basket allowed for a generous level of consumption of both food and non-food items and contained relatively high proportions of high cost foods such as animal fat and meat .

Table 3: Gini coefficient of per capita income, CIS-7 1989-2000

	1989	1996	1997	1998	1999	2000
Armenia	0.251	0.42			0.57	
Azerbaijan	0.308					0.30
Georgia	0.28			0.50		
Kyrgyzstan	0.27			0.41	0.40	0.41
Moldova	0.251		0.46			0.44
Tajikistan	0.281				0.47	
Uzbekistan	0.28					

Notes: Data refer to the distribution of individuals according to household per capita income.
Sources: 1989: Atkinson and Micklewright (1992); other years Transmonee database, except for Armenia 1999 (World Bank, 2002a)

Some commentators have questioned whether comparisons of inequality indices before and after the transition are meaningful (World Bank, 2000a). Certainly, as Atkinson and Micklewright (1992) acknowledge, their 1989 estimates may *underestimate* income disparities in 1989 as the old Family Budget Survey (FBS) on which they are based was known to exclude individuals at both ends of the distribution. However, the FBS also failed to capture imputed income from the extensive benefits in kind provided by state enterprises and local authorities[8]. It is unclear what effect the inclusion of these would have had, although work in OECD countries has found that final income is more equally distributed than original or gross income (Gardiner et al, 1995). Thus, even if the exact magnitude is hard to measure, there can be no doubt that there has been a significant shift in the distribution of resources within society over the last ten years and a widening of the gap between those at the top and the bottom of the distribution.

2.2.2 Falling real wages and rising wage differentials

A number of factors have contributed to the widening of the income distribution during transition, including a shift in the composition of income. In the Soviet Union in the late 1980s, only 14 percent of total gross income was from private sources (including 7 percent from self-employment), whilst social transfers comprised 13 percent, labour incomes 72 percent and income from property was non-existent (Milanovic, 1998). By 2001 income from wage employment comprised just 44 percent of monthly per capita income in Azerbaijan (World Bank, 2002b) and 38 percent in Kyrgyzstan. As we noted earlier, informal sector activity has grown rapidly during transition. Much of this has been small scale 'survival' activities such as working on private plots, petty street trade and unofficial taxis, undertaken in the absence of formal work opportunities, sufficient wages or a function social security system subsistence (Bernabe, 2002).

[8] There were substantial in-kind benefits by way of subsidised housing, food and utility prices, health, education and 'holidays' at sanatoria. Although some of these, such as housing, were distributed as a function of status and thus regressive, many were universal and could be expected to be progressive.

Table 4: Gini coefficient of earnings, CIS-7 1989-2000

Country	1989	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Armenia	0.258	0.296	0.355	0.366	0.321	0.381					0.486
Azerbaijan	0.275		0.361		0.428	0.459	0.458	0.462	0.462		0.506
Georgia	0.301		0.369	0.4				0.498			
Kyrgyzstan	0.26		0.3	0.445	0.443	0.395	0.428	0.431	0.429	0.466	0.47
Moldova	0.25		0.411	0.437	0.379	0.39	0.414		0.426	0.441	0.392
Tajikistan	0.276										
Uzbekistan	0.257										

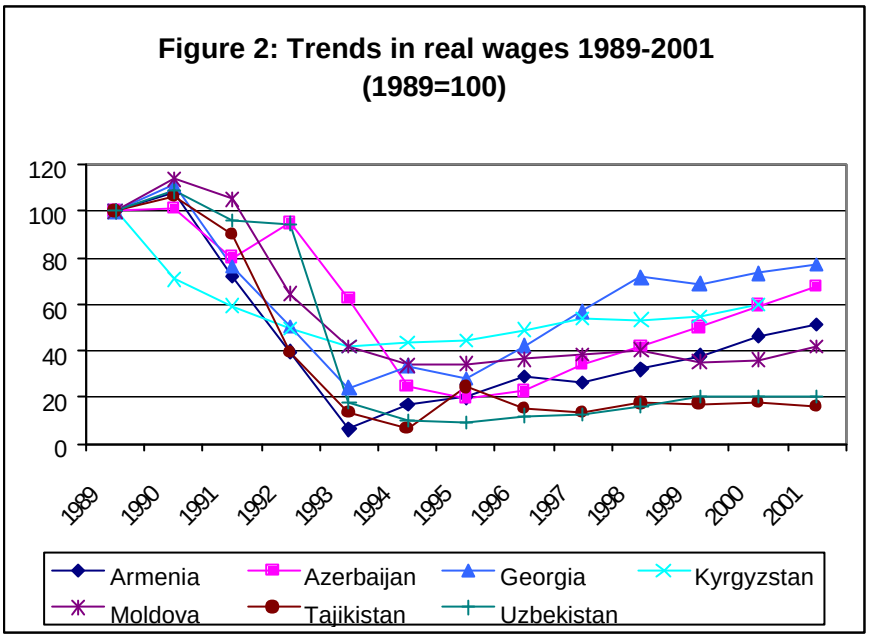
Notes:. In this table the Gini coefficient is based on the distribution of earning interpolated from group data for monthly earnings, with bonuses, for full-time employees as reported by employers. For Moldova, 1993-2000: excludes Transdniestr

Sources: 1989: Atkinson and Micklewright (1992); 1991-2000 Transmonne 2002.

Accompanying the growth in income from private sources has been a rise in levels of earnings inequality. Table 4 shows that between 1989 and 2000, the Gini coefficient for the distribution of monthly earnings increased by over two-thirds in Kyrgyzstan and Armenia and nearly doubled in Azerbaijan. Although nationally representative data allowing calculation of inequality measures are not available for Uzbekistan (World Bank, 2002b), Klugman (1998) using data from a survey sponsored by the EU found that the decile ratio[9] for all earnings had increased from 3.0 in 1986 to 6.50 in 1995, and that decile the ratio for earnings in the state sector was 6.0 as compared to a staggering 8.3 in the private sector.

As well as the growth of the importance of private sector and informal earnings, wage inequality has also been fuelled by the failure to respect employment contracts leading to the widespread practice of wages being paid in arrears, especially for the less well-paid. The fall in output and growth of arrears within the state sector has been reflected in a fall in average real wages (Figure 2). (N.B. It is notable that the decline in real wages in Georgia shown in Figure 2 is significantly less than the decline in measured output in Figure 1 – reflecting the importance of informal self-employment. Bernabe (2002) estimates that between 30% and 45% of the employed may be working in the informal sector, either full-time or as secondary activity).

[9] The decile ratio is the ratio of the 90th percentile versus the 10th percentile. Thus a decile ratio of 3.5 indicates that the earning of individuals in the 90th percentile of the earnings distribution are three and a half times those of individuals in the 10th percentile.



2.2.3 Material poverty

Given the falls in output and real wages and rising inequality it is not surprising that poverty levels have increased. In addition to exacerbating the disadvantage of the 'old poor' - pensioners, families with large numbers of children and single parent families - the economic dislocation of transition has also given rise to new groups of poor, including the families of workers 'on leave without pay', the long-term unemployed, agricultural workers, young people in search of their first job, and a growing number of refugees, both economic refugees and persons displaced as a result of civil conflict.

It is difficult to construct a set of poverty statistics that allow comparisons a) across time within a country and b) across countries at any one time, as definitions, survey methodologies and coverage all vary. Table 5 shows the proportion poor as measured against two alternative 'international' poverty lines measures in 'purchasing power parity' (PPP) dollars[10] whilst Table 6 presents estimates of the proportion of the population living in poverty within each country during the 1990s according to nationally set poverty lines.

[10] A commonly used international definition of absolute poverty is surviving on less than one US dollar per person a day. This standard was developed by the World Bank in the 1980s and was based on the average of the poverty lines of 10 low income countries, all of which were located wholly, or in part, within the tropics. In its 2000 report on poverty in Central and Eastern Europe and the CIS, the World Bank argues that a higher poverty line is needed in the region, given that its cooler climate necessitates additional expenditures on heat, winter clothing and food. A line of US$2.15 a day was therefore taken as a low threshold . A higher threshold of US$4.30 was also used, recognising that what may be considered as 'subsistence needs' inevitably varies with the level of a country's development. Even the poorest households in the region will incur expenses on some basic services such as the post, childcare and health care and will need to cover the running costs of a minimum of some basic consumer durables, such as a (black and white) television or a refrigerator.

Table 5 Poverty in the CIS-7 using international poverty standards

	Survey date	Extreme poverty (2.15$ PPP/day)	Total poverty (4.30$ PPP/day)	Total population extremely poor	Total population poor
Armenia	1999	43.5	86.2	1,652,000	3,274,000
Azerbaijan	1999	23.5	64.2	1,868,000	5,103,000
Georgia	1999	18.9	54.2	1,021,000	2,928,000
Kyrgyzstan	1998	49.1	84.1	2,360,000	4,042,000
Moldova	1999	55.4	84.6	2,022,000	3,088,000
Tajikistan	1999	68.3	95.8	4,099,000	5,749,000
Uzbekistan				2,233,000	6,700,000
All CIS-7				15,255,000	30,884,000

Note: The figure for Uzbekistan on total population living in poverty and extreme poverty is derived using poverty rates as quoted in the World Bank poverty report. The actual numbers living below $2 and $4 a day ARE likely to be much higher.
Source: World Bank (2000a)

At the end of a decade of transition, an estimated 31 million people living in the CIS-7 countries were living in poverty, of whom 15 million were living in extreme poverty.

It is clear from Table 5 that the problem of low living standards is widespread, with the majority of the population in each country living below $4.30PPP a day. In 1999, over two-thirds of the population of Tajikistan were surviving on less than $2.15PP a day, along with over half the population of Moldova and just under half the population of Armenia and Kyrgyzstan. Poverty rates as measured according to national poverty lines (Table 6) point to similarly high levels of impoverishment and the ranking of countries remains more or less the same (with the exception of Georgia).

For those countries where time series data are available, the proportion of the population living in poverty appears to have peaked in 1999 following the aftershock of the Russian financial crisis and in the last three years improvements have been seen in all countries, with the exception of Georgia where poverty incidence has stabilised but has not yet started to recover. The data over time appears to be consistent with the figures on growth in GDP presented in Table 1. In particular, Armenia and Azerbaijan both experienced strong economic growth during the last three years and both have recorded significant reductions in headcount poverty (although one must be cautious about absolute changes as the data from different surveys are not strictly comparable over time).

Table 6 Estimates of Proportion of the Population Living in Poverty in the CIS-7 countries during the 1990s

	Poverty rate (% poor)	Poverty gap (P1)	Severity of poverty (P2)
Armenia			
1996	54.7	0.215	0.11
1998/9	53.7	0.155	0.061
2001	47.4		
Azerbaijan			
1995	68.1 [1]	0.276	0.144
2001	49.6	0.155	0.067
Georgia (WB estimates)			
1997	13.7	0.041	0.019
1998	19.8	0.066	0.033
1999	23.2	0.074	0.035
2000	23.1	0.075	0.036
Georgia (Govt estimates)			
1997	43.6 [2]	0.159	0.095
1998	50.2	0.195	0.112
1999	51.4	0.203	0.108
2000	51.4	0.207	0.111
Kyrgyzstan			
1993	45.4	0.227	0.149
Fall 1996	51.9	0.200	
1997	51.0	0.180	
1998	63.6	0.247	
1999	64.1	0.250	
2000	62.5	0.211	0.093
2001	56.4	0.172	0.070
Moldova			
1997	47.7	0.167	0.081
1998	61.6	0.251	0.133
1999	71.1	0.296	0.157
2000	70.5	0.289	0.151
2001	62.3	0.241	0.121
Tajikistan			
1999	95.7	0.574	0.379
Uzbekistan			
2000/01	27.5 [1]		

Notes: Due to changes in welfare indicators, poverty lines and survey methodologies estimates are not directly comparable over time. Unless otherwise shown the welfare indicator is per capita consumption and the poverty line is the national subsistence minimum (prozhitochnyi minimum).

[1] Uses consumption aggregate based on food only. [2] Poverty line is taken as the 'living wage'.

Sources: Armenia 1996, 1998/9 World Bank (2002a) Armenia 2001 'Poverty measurement in Armenia: evidence and new issues' unpublished presentation in Yerevan, Sept 27th 2002; Azerbaijan 1995 (World Bank, 1997), Azerbaijan 2001 (World Bank (2002b); Georgia Government of Georgia (2000) and World Bank (2002c); Kyrgyzstan 1993, World Bank (1995), Kyrgyzstan 1996-1999 Table 3 and 54, World Bank (2001), Kyrgyzstan 2000-2001 World Bank (2002d); Moldova 1997-2001 Signoret (2002); Tajikistan World Bank (2000b) and Falkingham (2000a); Uzbekistan World Bank (2000e).

2.2.4 Poverty and the 1998 Russian Fiscal Crisis

The Russian fiscal crisis of August 1998 affected some countries in the CIS-7 more than others. For example, Azerbaijan appears to have been largely immune for any fallout, with growth rates in 1999 being only slightly lower than the previous year and quickly returning to double figures (Table 1). Azerbaijan was protected by the large share of oil revenues in GDP. In contrast, Moldova was especially hard hit, with negative growth recorded in both 1998 and 1999 (Table 1). Russia represents a major market for Moldovan exports and these were particularly affected; for example during the first quarter of 1999, wine supply (a major food processing activity) was reduced to half the volume of the previous year (Moldova Economic Trends, 2001). It is notable from Table 6 that as some macro-stability was achieved and trading conditions in Moldova started to improve in 2000, poverty also started to fall. By 2001, headcount poverty rates appear to have returned to their 1998 level, but they remain significantly above their 'pre-crisis' 1997 level.

Subjective assessments of living conditions by Moldovan households corroborate the trend of deteriorating living standards from 1997 to 1999 and their stabilisation and subsequent improvement during the years 2000 and 2001. When households were asked about their living condition, 51 percent of households in 1997 assessed their conditions to be below 'average', i.e. either bad' or 'very bad'. This percentage increased to 54 percent in 1998 and 58 percent in 1999. After 1999, however, Moldovan households perceived some improvement in their living conditions as the percentage assessing their living conditions to be 'bad' or 'very bad' drops to 55 percent and by 2001 it is back at its 1997 level (Signoret, 2002).

Kyrgyzstan also experienced a slowdown in real economic growth in 1998, with growth rates falling to just 2 percent in 1998, from nearly 10 percent in 1997. However, since then the country has benefited from strong economic recovery, with growth exceeding 5 percent per annum since 2000. Per capita consumption in rural areas was further aided by egalitarian land reform and the liberalisation of agricultural markets. As a result poverty in Kyrgyzstan fell by 23 percent between 1998 and 2001 (World Bank, 2002c). However, despite poverty rates declining, poverty incidence continues to be high.

Georgia's exports were also hit by the Russia crisis (as were remittances) and recovery has been slow (Table 1). Moreover, the positive growth in GDP that has occurred has not been translated into improvements in living conditions. This is because growth has largely been confined to a narrow set of sectors, i.e. communications and financial intermediation, whose aggregate share in total employment is less than 5 percent. Regardless of which definition of poverty is used, poverty in Georgia increased unambiguously and significantly during the period 1997-2000, with most of the increase occurring in 1998 and 1999 (Table 6) and rates stagnating in 2000.

There is some evidence that the economic 'shock' following the Russian financial crisis affected different groups differently. Between 1997 and 1998 in Kyrgyzstan, mean consumption fell by 33 percent (and median consumption by 26 percent) (Falkingham,

Namazie and Siyam, 2002). The greatest proportionate falls were experienced by those households at the *top* end of the distribution, with the top quintile suffering a loss of almost two-fifths on the previous year[11]. The same picture was observed in Moldova, with those households that were relatively well off being relatively more affected by the economic shock than the less well off (Signoret and Murrugarra, 2002). Such households included those who had benefited disproportionately from the period of growth prior to the crisis – the self-employed and private sector workers; the impact of the crisis was to wipe out their previous welfare gains. In Armenia, the effect of the shock was relatively short lived, and disproportionately affected those living in urban area (World Bank, 2002a).

In Georgia, however, a slightly different picture emerges. Table 6 shows, at least for the World Bank estimates, that the sharpest increase is in the measure of poverty severity (P2), that is the measure capturing the inequality among the poor – indicating that the poorest of the poor are becoming even poorer (World Bank 2002c).

[11] Falkingham et al (2002) found that the bulk of the shock of the fiscal crisis in 1998 in Kyrgyzstan was borne by households living in and around the capital of Bishkek and Chui, where proportionate increases in vulnerability between 1997 and 1998 were significantly above the national average.

3. WHO ARE THE POOR? WHICH GROUPS ARE MOST AT RISK OF POVERTY?

A critical question if poverty is to be reduced is which groups in society are most at risk of being or becoming poor. In the past, 'under-provisioned' families were typically portrayed as pensioners living alone, single parent families or families with large numbers of children (Braithwaite, 1995). Atkinson and Micklewright (1992) also found that poverty was higher amongst collective farm households, although this may be the result of understatement of income from private plots. The growing availability of household survey data mean that it is possible to establish a detailed socio-economic profile of the poor in each of the CIS-7 countries. A number of common characteristics associated with an elevated risk of poverty emerge.

3.1 LOCATION

Urban-rural differentials in poverty are marked, with the size and direction of the differential being related to the degree of urbanisation within the country. In the most urbanised of the CIS-7 countries, Azerbaijan[12] Armenia and Georgia, households living in urban areas experience a higher risk of being poor than those in rural areas. For example, 59 percent of the urban population in Armenia was poor compared to 48 percent in rural areas in 1998/9 (World Bank, 2002a). In contrast, in countries where over half the population live in rural areas, it appears that urban households experience a lower risk of poverty than those in rural areas.

Table 7 Rural – urban differentials in poverty

	Survey date	Headcount poverty rates		Share of population living in rural areas
		Urban	Rural	
Armenia	1998/9	55.0	40.6	32.8
	2001*	48.0	46.4	
Georgia	1999	59.3	41.1	43.7
Kyrgyzstan	2001	45.4	62.4	65.6
Moldova	1997	17.2 [1]	21.1	58.4
Tajikistan	1999	79.4	99.5	72.4
Uzbekistan	2001	22.5	30.5	63.3

* preliminary and unpublished findings

[1] excludes capital of Chisinau, where poverty incidence was estimated as 6.7 percent.

Sources: Headcount poverty rates: GOG (2000), World Bank (1999b) (2000b) (2001) (2002a) (2002d) (2002e); Share of population living in rural areas: UNDP (2002).

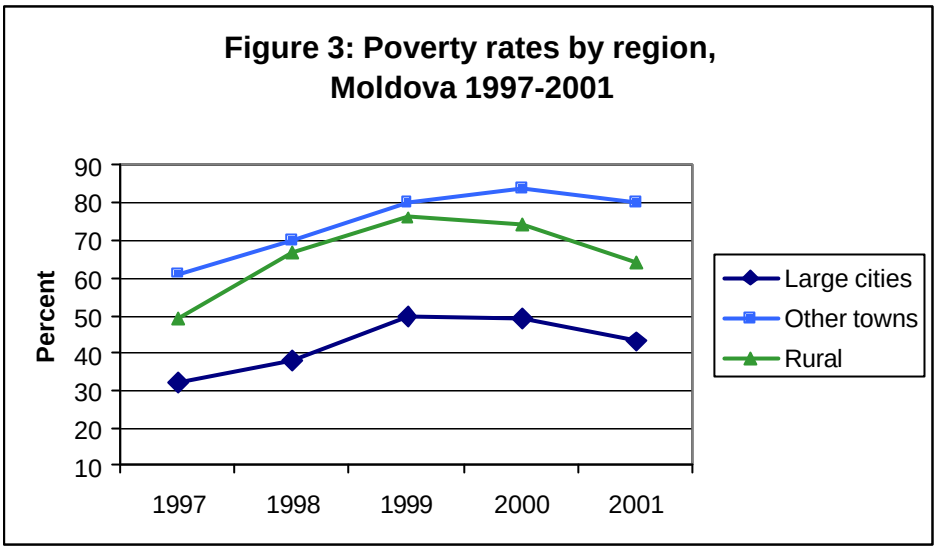
A number of factors have been put forward to explain the pattern of poverty in Armenia, some of which may also be relevant elsewhere. First Armenia experienced early and relatively egalitarian land reform. Collective and state owned land was redistributed to

[12] According to the 2002 poverty assessment, headcount poverty in Baku City was 50 percent compared with around 60 percent in other urban areas and just over 40 percent in rural areas.

the rural population in 1995, and access to land has provided a self-protection mechanism for rural households, allowing them to grow at least some food for their own consumption. In contrast urban households did not have such a coping mechanism. Secondly, as discussed above, urban households were more affected by the financial crisis in Russia. This was especially the case in Armenia as many urban households have relied on migration as an income diversification strategy; remittances account for, on average, 17 percent of total household income in urban areas compared to just 4 percent in rural areas (World Bank, 2002a). Remittances received a double setback in 1998 as migrant workers in Russia were directly affected by the crisis and their reduced remittances then lost further value because of the Russian rouble devaluation. However, according to preliminary results from the 2001 Armenia household survey (shown in Table 7), the rural-urban gap appears to have narrowed over the last three years – at the expense of the rural population. The incidence of poverty in rural areas has increased whilst urban poverty has declined.

In countries where the majority of the population live in rural areas, reliance on income agriculture offers no guarantee against poverty. In Kyrgyzstan, rural poverty continues to be significantly *higher* than urban poverty, with headcount poverty rate being 1.4 times higher in rural than urban areas in 2001 (62% v 45%) (World Bank, 2002d). This is despite the recent high growth rate in agriculture that accompanied land reform in the late 1990s.

Inhabitants of small towns, without the employment opportunities of larger cities and reduced possibilities to engage in subsistence agriculture for food consumption, have also been found to face an increased risk of poverty. In Moldova, in 2001, 80 percent of the population in small towns were found to be living in poverty compared with 64 percent in rural areas and 44 percent in large cities (Figure 3, from Signoret, 2002). Residents of *one-company towns* - where the entire labour force was dependent on one or a few enterprises during Soviet times - face particular difficulties. As a result of the restructuring or closure of these enterprises local unemployment rates may be extremely high, those still working are often subject to short hours or administrative leave and the prospects for alternative work are bleak.



From this discussion, it is clear that both urban and rural poverty continue to represent a substantial challenge in all countries. In urban areas, poverty is often associated with falling employment opportunities and earnings in the formal economy, reflecting the ongoing restructuring of the industrial complex inherited from the Soviet era. So far, outside of the capital cities, it appears that the emerging private sector in the urban areas has been too small to compensate for the collapsed industrial base. Sustainable poverty reduction will depend upon enhanced employment creation within a vibrant private sector.

Rural poverty is of a different nature. Agriculture remains the major source of income amongst rural households, and subsistence agriculture is increasingly important in sustaining living standards. However access to land appears to be no guarantee of avoiding poverty, especially in the highly agrarian countries of Kyrgyzstan and Tajikistan, and it is clear that rural poverty reduction strategies need to focus on improving the incomes from agriculture of the rural poor. This will involve removing physical, logistical and administrative barriers regarding access to produce markets - including reducing the unofficial tariffs 'imposed' by local government inspectors and other officials[13] - as well as improvements in the technology of agricultural production. Moreover, rural households often face inadequate access to basic services and infrastructure (particularly water and sewerage), and investments are urgently needed to address these deficiencies.

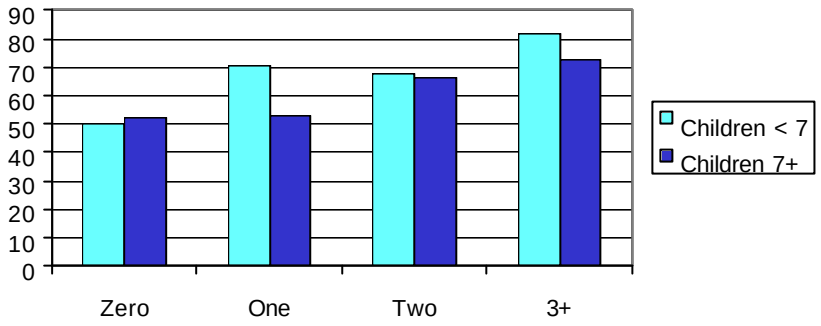
3.2 HOUSEHOLD SIZE & DEMOGRAPHIC COMPOSITION

A common finding across the region (and elsewhere) is that the risk of poverty increases with household size. Poor households are generally larger than non-poor households. However, the relationship between poverty and household size is not straightforward. It

[13] See the paper by Dethier (2002) for a full discussion of the problems posed to poverty reduction within the CIS-7 by poor governance.

would be expected that an increase in the number of adults would tend to reduce the risk of household poverty since the number of adults should affect the earnings potential of the household. This is indeed found to be the case in Kyrgyzstan with individuals from households with 3-4 adults having lower relative poverty rates than individuals with only two adults, no matter how many children are also present in the household (Ackland and Falkingham, 1997). Therefore, it is households with *a large number of children, particularly pre-school children*, (rather than people) that are often most at risk of poverty.

Figure 4: Headcount poverty rate and number of children, Kyrgyzstan 2001



Several factors explain why poverty increases with the number of children in the family. First, the presence of children reduces the probability of employment among women. Second, large family size is associated with other characteristics, such as low education, which in turn result in low earnings. And, third, households with more children simply have more mouths to feed. Thus, as household size increases, total income adjusted for needs declines (World Bank, 2000a).

Interestingly, recent analysis of household survey data in Azerbaijan found the number of children per household to be a weak discriminator of the risk of being poor (World Bank 2002b). It has been suggested that this reflects the fact that Azerai children tend to live in extended households, where grandparents take care of the children. The 1999 Georgian Poverty Assessment also highlighted the shift during the 1990s from the modern nuclear family to a more traditional multi-generational family as the main living arrangement for Georgian households (World Bank, 1999a). Indeed, analysis of the 1996/7 Survey of Georgian Households found that children were among those demographic groups with a relatively *low* risk of poverty, being protected by complex private safety net arrangements. However since then, although the extended family remains the dominant form of Georgian household, private arrangements protecting children appear to have been put under strain (see Figure 9 and Table on child nutritional status below).

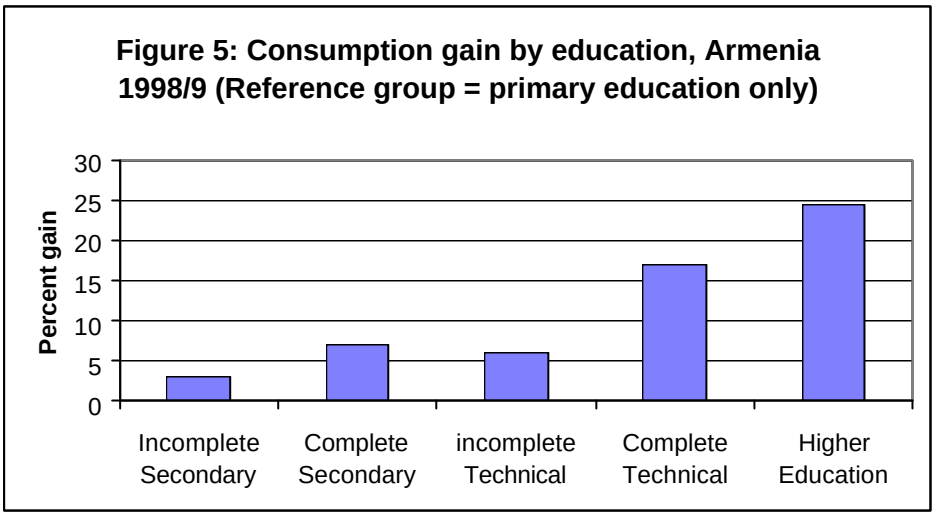
Surprisingly, pensioners in general were not found to face a significantly higher risk of poverty. In fact, in Kyrgyzstan in 2001 the presence of pensioners in a household was

associated with a lower risk of poverty, particularly in rural areas (World Bank, 2002d). On the face of it therefore it appears that pensions may be acting as a protective factor helping to keep older people out of poverty. However, we should be careful about drawing conclusions from this, as pensioners are not a homogeneous group. Pensioners who live alone and those who have no other source of income other than their pension have been found to face a much greater risk of poverty than others (Ackland and Falkingham, 1997; Falkingham 2000a).

3.3. EDUCATION

In theory one would expect an association between a household's ability to avoid poverty and its asset holdings - including it's human capital. In studies elsewhere in the World, it is common to find a strong correlation between level of education and poverty. However many of the early poverty assessments in the CIS found there to be little or only a weak association (Ackland and Falkingham, 1997). This reflected both the magnitude of the economic dislocation associated with transition to a market economy, with all groups being hit regardless of education, and the perverse incentives within the labour market towards human capital acquisition during the Soviet period. Under the Soviet system many of the best educated (such as teachers and professional workers) experienced lower pay and those with less education (e.g. factory workers, miners), and pay scales in general were compressed.

The relative advantage conferred by primary and secondary education within the CIS-7 remains low in comparison to OECD and Central and Eastern European countries (World Bank, 2000a). However there are signs that things are changing. For example, in Armenia, education of the household head was found to be associated with increased consumption, and gains were higher for those with technical secondary and higher education (Figure 5) (World Bank, 2002a). In Uzbekistan families where the head has higher education were half as likely to be poor as those where the head had nine or fewer years of education (World Bank, 2002e). Living in a household headed by a person with higher education reduced the risk of being poor from 50 percent to just 42 percent in Azerbaijan in 2001 (World Bank, 2002b).



Education was also found to be a protective factor in reducing the negative impact of the economic shock associated with the Russian crisis in both Georgia and Kyrgyzstan, with households with a head with vocational and technical education suffering less than others (World Bank, 2002c; Falkingham et al 2002). It is likely that as the labour market becomes more efficient, the link between education and earnings will strengthen. Given this, it is vitally important that children from poor households are guaranteed the opportunity to benefit from education, an opportunity that appears to be under threat (see Section 4.2 below).

3.4 EMPLOYMENT

Early poverty assessments also found that employment was not a guarantee against poverty, although having a job appeared to better than being unemployed or not in the labour force at all (Ackland and Falkingham, 1997). Low differentials in poverty rates between workers and the unemployed, reflected substantial wage arrears and large numbers on workers on unpaid leave or short time[14] and in all countries a substantial group of new poor emerged – the 'working poor'.

Labour hoarding throughout the region has been significant. Many enterprises have adjusted wages and hours rather than employment. Thus although official unemployment rates remain low, there is a substantial mass of concealed unemployment. Wage arrears reached epidemic proportions in many of the CIS-7 by the end of the 1990s. Arrears in the public sector alone were equivalent to 1 percent of GDP in Georgia, 1.6 percent in Moldova and 2.7 percent in Armenia at the end of 1999 (World Bank, 2000a). In Tajikistan in 1999 it is estimated that more than 35 percent of the workforce suffered from some wage arrears (World Bank, 2000b). The earnings of the poor are more subject to delays than others. Yemtsov (1999) in analysis of the Survey of Georgian Households

[14] They may also be due in part to the under-reporting of wage income and the growing role of informal sector activities in protecting living standards.

found that 22 percent of poor wage earners were owed back pay by their employers compared with 8 percent of the non-poor.

Despite late payment many workers have been slow to leave their jobs. In part this is because there are few opportunities elsewhere. Employees also stay as they have access to other job-related benefits, particularly housing. People also continue to work to preserve routine and to maintain their sense of self-respect. And there is always the hope that the enterprise will revive and become viable again.

3.5 REFUGEES AND INTERNALLY DISPLACED PERSONS

Unfortunately armed conflict has affected all of the CIS-7 countries at some stage since 1989. Up to a million people have had to flee their homes and, even though many of them have returned, there are still hundreds of thousands of people registered as internally displaced within their countries or living as refugees in foreign countries (Table 8). In 2001 there were over a quarter of a million refugees registered in Armenia, over half a million Internally Displaced Persons (IDPs) in Azerbaijan and a further quarter of a million in Georgia (UNHCR, 2002). The region has also been affected by the recent conflict in Afghanistan, with refugees seeking safety in Uzbekistan, Tajikistan and Kyrgyzstan. Georgia also has a growing number of refugees from neighbouring Chechnya. An estimated 8,000 Chechen refugees are currently living in the Pankisi valley, the vast majority of whom are women, children and elderly.

Refugees and internally displaced persons are particularly vulnerable to poverty, often having experienced loss of property and harsh living conditions in collective centres. They may also experience discrimination in the job market. Children are particularly hard hit by armed conflict. The consequences for them include disruption of schooling, stress and exposure to war trauma, loss of family and poverty (UNICEF, 2001).

Table 8 Refugees & Internally displaced Persons in the CIS-7, 2001

	Refugees	Internally Displaced Persons
Armenia	264,300	
Azerbaijan	6,900 [1]	580,400
Georgia	7,900	264,200
Kyrgyzstan	9,700	
Tajikistan	18,000 [2]	
Uzbekistan	41,000	

Notes: [1] Includes 6,500 asylum seekers; [2] Of whom 2,300 are returned refugees. Source: UNHCR (2002)

Box 2: Armed conflicts in the CIS-7

- *Armenia and Azerbaijan 1988-94.* As a result of the war over the territory of Nagorno-Karabakh about one million people have been uprooted from their homes.
- *Central Asia: the Ferghana Valley, 1989-91*. There has been on-going tension in the Ferghana Valley, which straddles the borders of Kyrgyzstan, Tajikistan and Uzbekistan. Events escalated in 1989 when violent outbreaks led to hundreds of deaths and extensive damage to property.
- *Georgia, 1990-94.* Fighting in South Ossetia in late 1990 resulted in the displacement of 50,000-90,000 people. This was followed by conflict in Abkhazia when hundreds of thousands were uprooted. The situation began to stabilise in 1994, although permanent political settlement remains elusive.
- *Moldova 1992*. Following a short and intense conflict, the country split with the area of Transdniestr declaring independence. Transdniestr contains much of the industrial base of the country.
- *Tajikistan 1992-97*. The civil war in 1992-3 was followed by continuous unrest until the signing of the peace accord in 1997. It is estimated that during this period 50,000 lost their lives and up to 700,000 people were displaced. Intermittent unrest continues and refugees continue to return from other countries of the CIS.

Despite the numerical importance of IDPs within the region, relatively little is known about their poverty status. In May 2000 a special survey of IDPS was conducted in Georgia under the auspices of the International Federation of Red Cross and Red Crescent Societies (IRCRC). Not surprisingly, it found that IDPs experienced a substantial disadvantage with respect to ownership of productive assets (especially land) and employment opportunities. However this disadvantage was compensated by relatively higher receipt of various assistance programs run by the State and NGOs, with the result that there were no significant differences in terms of measured consumption levels between IDPs and the local population (World Bank, 2002c). However, the survey failed to measure in-kind consumption, which depends crucially upon access to land. Once this is taken into account, it is estimated that IDPs in Georgia face an excess risk of poverty a third higher than for other groups. A joint WFP/UNHCR survey on food security in Armenia showed that severe malnutrition among children was significantly higher within the refugee population than in the local population.

An estimated 280,500 ethnic Armenian who fled Azerbaijan between 1988 and 1992 are still registered as refugees, including 44,000 children. The ethnic Armenian refuges enjoy virtually the same legal and social rights as the local population, including free access to education, work, social assistance and the courts. From April 2000 they have been allowed to participate in local government elections and legislation in December 2000 extended the right to purchase apartments and other property without losing entitlement to temporary shelter. However although refuges enjoy the same rights as the local population, they also experience the same socio-economic difficulties.

Azerbaijan is home to the largest group of displaced persons in the region, with 580,000 registered IDPs. Most of the displaced are settled in areas close to the cease-fire line, while about a third have moved further to the capital. Pending a resolution to the conflict many remain in a precarious condition, still living in the temporary refugee camps where they were placed after fleeing the war in Nagorno Karabakh. The government has been

reluctant to resettle refugees and only in 2001 was clearance finally given for 150 refugee families to be permanently resettled on land in the southeast of the country. Refugees have already been resettled in villages won back from the Armenians in the last months of the war, but this marked a breakthrough because it is was the first time anyone had been settled permanently outside the war zone (UNHCR, 2001). In general living conditions within the camps have been poor, with inadequate water and sanitation facilities and IDPs are typically dependent on subsidies and pensions from the Government and assistance from humanitarian organisations. In 1999 the World Food Program (WFP) provided support to 300,000 beneficiaries. However foreign aid agencies, which have supplied food and materials for refugee camps for years are downscaling their activities In 2002 the WFP expects to give assistance to just 70,000 beneficiaries (World Bank, 2002b).

In 1997, the World Bank Poverty Assessment in Azerbaijan (World Bank, 1997) found that IDPs were 28 percent more likely to be poor than the population in general and, strikingly, were 90 percent more likely to be very poor. However according to the results of special survey conducted in 2002 designed specifically to collect information on the living conditions of IDPs within Azerbaijan, IDPs do *not* appear to have significantly lower incomes than other groups in Azeri society. Infact IDPs outside Baku actually enjoy total consumption levels that are 18 percent higher than the residents surrounding them, and have a much lower chance of being poor (35 percent versus 64 percent) or of being extremely poor (14 percent versus 34 percent). IDPs in Baku had lower average consumption but faced virtually the same risk of poverty as other residents of Baku. When the IDP data was broken down by type of shelter, only IDPs living in collective centre in Baku and IDPs living in public buildings/school elsewhere were found to have higher risks of extreme poverty (World Bank, 2002b).

There are several explanations for these unexpected results. This was the first survey to include the estimated cash value of electricity exemptions as part of the income of IDPs. The survey was also conducted during the summer when IDP incomes may be at their highest as IDPs are dependent on seasonal labour which peaks in the summer months, with the result that annual incomes are overestimated. Finally the findings may actually reflect a real improvement in the situation. The value of Government assistance (or 'bread money') has increased five-fold in current terms, from AZM 5,000 a month in 1997 to AZM 25,000 in 2002. Given Azerbaijan actually experienced deflation in 1998 and 1999, this represents an even greater increase in real terms.

IDPs remain more vulnerable to poverty being twice as likely to be unemployed as others, with less access to productive land and other assets. Seventy-nine percent of IDPs reported that they had had livestock before displacement, but only 12 percent were able to bring their livestock with them to the current territory of Azerbaijan. The lack of fixed property means that IDPs have little or no collateral to start or expand businesses and no major asset to sell in case of emergencies.

4. TRENDS IN CAPABILITY POVERTY

It has sometimes been argued that estimates of output in transition economies are unreliable and that the declines in income and rises in poverty are exaggerated (Griffin, 1998). It is useful, from this point alone, to look at other types of evidence concerning other dimensions of poverty to get a fuller picture of the changes in welfare during transition. Capability poverty focuses on an individual's capacity to live a healthy life, free of avoidable morbidity, having adequately nourishment, being informed and knowledgeable, being capable of reproduction, enjoying personal security, and being able to freely and actively participate in society (Sen, 1999). Material resources at some level are generally necessary for some of these activities but they alone are not sufficient. Therefore capability poverty may be thought of as going beyond income poverty in terms of measuring actual well-being.

Capability poverty can be measured directly in terms of capabilities themselves: e.g. the percentage of children who are underweight or the percentage of adults who are illiterate; or indirectly in terms of access to opportunities, or the means of capabilities, such as access to trained health personal at birth, and access to education and other public services. A combination of such direct and indirect measures have been put forward as the key indicators of progress towards the MDGs (see Box 1 above). Trends in these Millenium Development Indicators (MDIs) and other measures of capacity poverty are reviewed below. Before turning to these, however, it is useful to remind ourselves of the fiscal context within which social services such as health and education are being delivered.

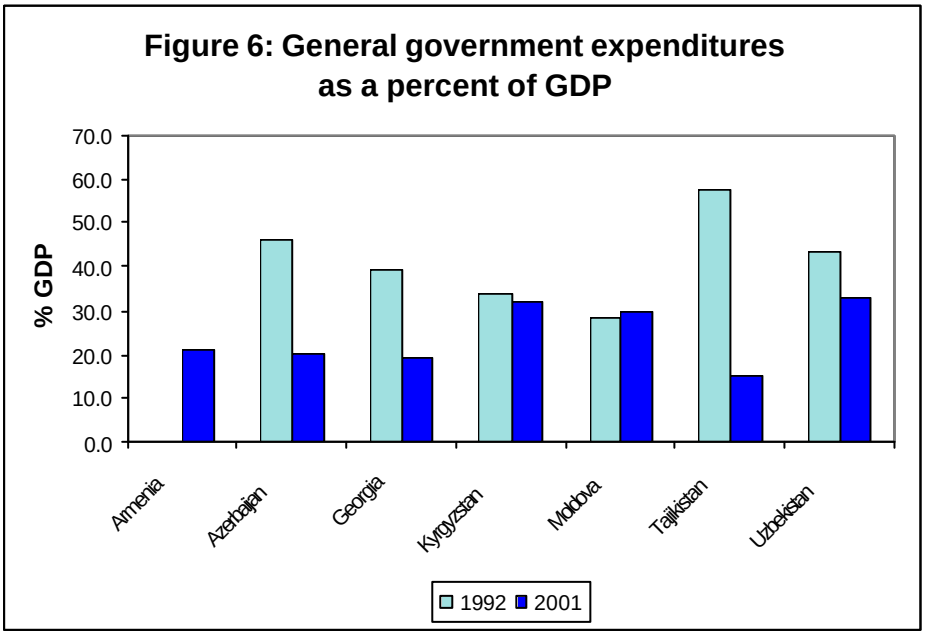


Figure 6 shows the change in the level of general government spending as a percentage of GDP over the last decade. Since one of the 'purposes' of transition is to reduce the once all-encompassing role of the state, a decrease in government spending is to be expected. However in a number of countries the share of government spending is now so low that the functioning of vital state services may be impaired. Furthermore it is important to remember that social spending comprises a shrinking share of a significantly reduced real GDP (Figure 1 above). Public expenditure on health and education are now at critically low levels in Armenia, Georgia and Tajikistan. Most OECD governments spend around 5-7 percent of GDP on health care. With the fall in government expenditure, private spending has necessarily increased. However the introduction of charges for health care, textbooks, school lunches and the increasing cost of public transport all mean that access to basic social services has been severely eroded in all CIS7 countries, and it is likely that this will be reflected in a deterioration of the indicators of capability poverty over time.

Table 9 Public expenditure on health and education as a percentage of GDP, CIS-7, 1990-2000

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Public expenditure on health care as % GDP											
Armenia	2.4	3.2	4.4	3.2	2.1	1.7	1.6	1.6	1.6		
Azerbaijan	2.3	3	2.2	5.1	2.3	1.2	2.3	1.9	2.2	1.9	
Georgia	3.1	3.5	2.2	0.2	0.2	0.5	0.8	1.1	1.1	0.6	0.4
Kyrgyzstan			3.4		3.3	3.8	3.1	3.2	2.6	2.1	
Moldova		3.9	3.1	4.5	6.2	5.8	6.9	6	4.3	2.9	3
Tajikistan				3.4	2.5	1	0.8	0.6	0.4	0.4	0.6
Uzbekistan		5.9		4.8	4.6	3.4	3.1	3	3.3	2.9	3
Public expenditure on education as % GDP											
Armenia		7.5	8.9	5.2	2.5	3.3	2	1.7	1.8	1.9	
Azerbaijan		6.9	6.7	7.6	4.9	3.5	3.7	3.6	3.6	4.2	
Georgia	6.1	6.4	4	0.6	0.5	0.9	1.2	1.3	2.2	1.9	
Kyrgyzstan		6	5	4.2	6.1	6.6	5.2	4.9	4.9	4.1	3.5
Moldova			7.8	6	7.4	7.7	9.4	8.9	6.3	5.4	
Tajikistan						2.4	2.2	1.9	2.2	2.1	2.3
Uzbekistan											

Notes: Public expenditures represent current and capital expenditures on health and education by local, regional and national governments, including municipalities. Household contributions are normally excluded.
Source: UNICEF Transmonee Database 2002.

4.1 HEALTH

4.1.1 Mortality

Health poverty can be defined in several ways. The most fundamental measure of the well-being of a population is how long its members can expect to live on average. Table 10 shows life expectancy at birth for both men and women in the CIS-7 across the last decade. Life expectancy at birth is a hypothetical measure, giving the number of years a

man or woman could expect to live, on average, if they were exposed to the risk of dying at the prevailing age-specific mortality rates throughout their entire life. The measure is hypothetical as no one individual lives their entire life in one calendar year, and it is sensitive to short term changes in mortality rates. From the table, it is clear that the health of the population deteriorated in most of the CIS-7 during the period 1990-1995, with declines in life expectancy for women in four of the seven countries and declines for men in five countries. Since the mid 1990s however mortality appears to have begun to improve.

Table 10 Life expectancy at birth (years), CIS-7, 1989-2000.

	Women			Men		
	1989	**1995**	**2000**	**1989**	**1995**	**2000**
Armenia	74.7	75.9	74.5	69.0	68.9	70.5
Azerbaijan	74.2	72.9	75.1	66.6	65.2	68.6
Georgia	75.7	80.6	78.1	68.1	72.6	73.0
Kyrgyzstan	72.4	70.4	72.4	64.3	61.4	64.9
Moldova	72.3	69.7	71.2	65.5	61.8	63.9
Tajikistan	71.8	69.1	70.8 [1]	66.7	63.6	66.1 [1]
Uzbekistan	72.1	72.6	73.0 [2]	66.0	67.8	68.2 [2]

Notes: [1] 1999; [2] 1998
Source: UNICEF Transmonee Database 2002.

Life expectancy rates are heavily influenced by trends in infant and child mortality. The MDGs include reducing child mortality, as measured by both infant and under-five deaths, by two-thirds between 1990 and 2015 (MDI #13,14, Box 1). Figure 7 shows recent trends in infant mortality across the seven countries using official vital registration data. Taken at face value the graph presents good news. Although infant mortality rates in some countries are high by international standards (especially the central Asian Republics of Tajikistan, Kyrgyzstan and Uzbekistan), from the mid 1990s onwards the trend has been downwards. However recent research shows that in some countries official infant mortality rates appear to be much lower than those estimates from surveys that ask women about their reproductive histories (Bos et al, 2002).

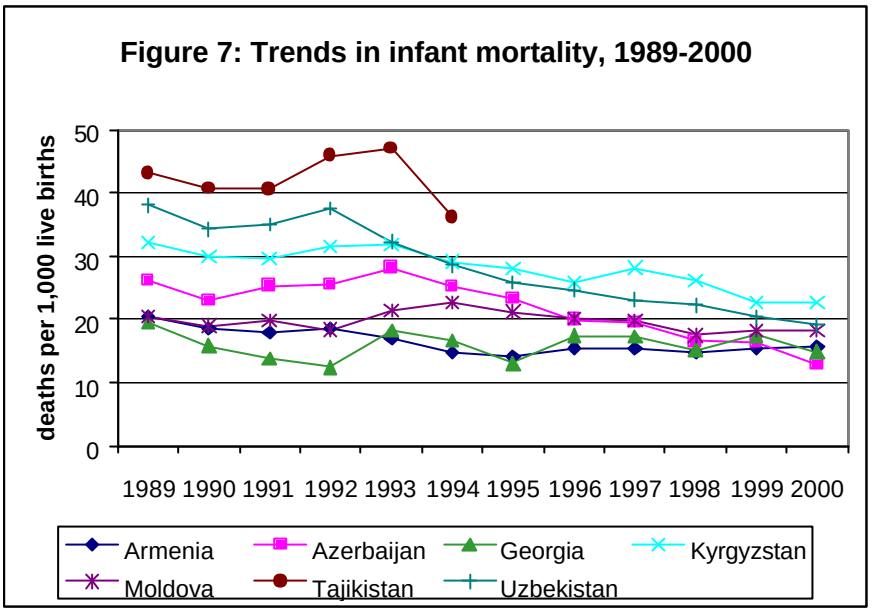


Table 11 therefore presents a comparison of infant and child mortality rates calculated from vital registration data and survey data for selected countries. This confirms that rates calculated from survey data are consistently higher than those from official data; in Azerbaijan and Tajikistan they are over three times as high, reaching levels that are akin to those found in India, where infant mortality was 69 per 1,000 live birth in 2000 (UNDP, 2002) or parts of Africa (Botswana 74/1,000; Zimbabwe 73/1,000 Senegal, 80/1,000).

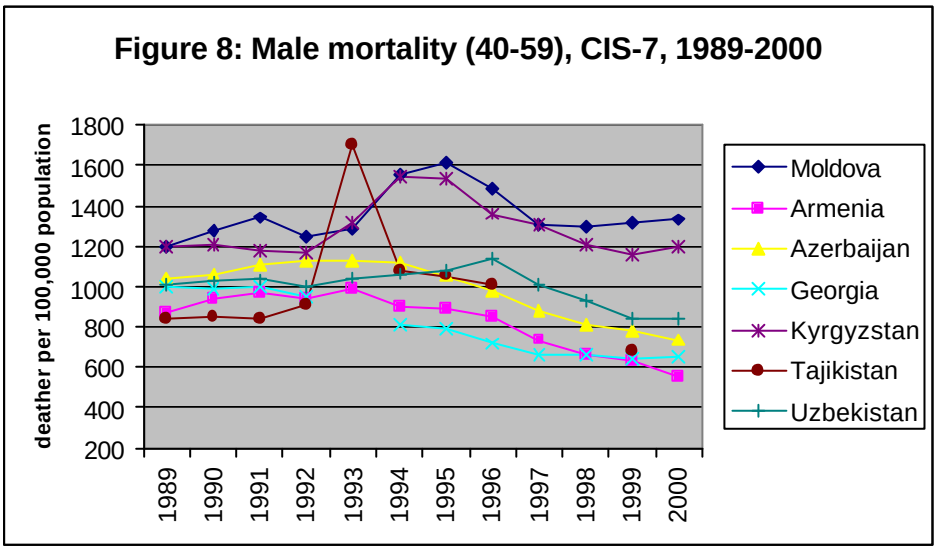
Table 11 Comparison of Survey and Vital Registration-based Infant Mortality Rates

	Year of Survey	Ref. Year	IMR		Survey as % of VR	U5MR		Survey as % of VR
			Survey	Vital reg		Survey	Vital reg	
Armenia	2000 (DHS)	1993	51	17	300%	55	22	250%
		1998	36	15	240%	39	18	217%
Azerbaijan	2000 (MICS)	1996	76	20	380%	106	31	342%
Kyrgyzstan	1997 (DHS)	1990	71	30	237%	79	41	193%
		1995	61	28	218%	72	41	176%
Tajikistan	2000 (MICS)	1993	89	47	189%	126	84	150%
	1999 (TLSS)	1998	82	23	357%			
Uzbekistan	1996 (DHS)	1993	49	32	153%	59	48	123%
	2000 (MICS)	1999	52	20	260%	69	33	209%

Note: For DHS, reference years are for mid-point of five year reference category
Source: Vital registration data from Transmonee database, except for Tajikistan 1997, which is from NHDR.

Several factors have been put forward to explain the discrepancies, including differences in the definition of a 'live birth' that is sometimes applied[15] and the decline in the proportion of all births registered as a result of increased fees. The fees for the registration of a birth are now equivalent around three percent of average monthly wages in Azerbaijan and Kyrgyzstan, ten percent in Georgia and a staggering 53 percent in Tajikistan (UNICEF, 2002). Given this, it is not surprising that a recent survey found that only 75 percent of children under 5 in Tajikistan had been included in the civil registers, implying that about 190,000 children are missing from the registration system (UNICEF, 2002). If a birth is not registered then it is likely that the death will not be registered either. Although these factors go someway to explaining the discrepancies, more analysis is required to determine the true picture. However, as the data on child nutritional status presented below demonstrates, it is likely that infant and child mortality and morbidity is significantly worse that suggested by official data.

Data on adult mortality is more reliable. The 'mortality crisis' amongst Russian men has attracted considerable attention (Chen et al, 1996; Cornia and Pannccia, 1995), with much being written about its causes and the relationship to poverty, unemployment depression and, especially, alcohol (McKee, 1999; Shkolnikov et al, 2001; Walberg et al, 1998). However the fact that male mortality also increased elsewhere in the FSU has received less comment.



Adult male mortality rose significantly in the mid 1990s in Moldova and Kyrgyzstan and at the end of the decade remained above the pre-transition level. The impact of the civil war in Tajikistan is also clearly visible in the data. Indicators of women's health in the CIS-7 are, on average, significantly worse than in developed countries, although they

[15] In the Soviet Union premature and low-birth weight infants who survived for seven days or less were not included in infant mortality statistics. This Soviet definition is still used to compile official statistics in some countries in the region. It has been estimated that other things being equal this will produce an estimate of IMR 20% lower than that using the WHO definition of a live birth (McKee and Chenet 2002).

have followed diverse paths from each other during economic transition. Maternal mortality rates (MMR) are particularly high in Tajikistan, at 74.0 per 100,000 live births (1993), Georgia, 56.9 (2000) and Armenia 52.5 (2000). This compares to an average MMR of under 10 in most countries of the European Union. Prior to independence, rates in Kyrgyzstan were of a similar magnitude to her neighbours, 55.6/100,000 in 1991, but since then rates have improved to 33.6 in 1998. This is almost certainly a direct result of a new reproductive health programme. Maternal mortality has also fallen significantly in Uzbekistan (from 30.1 in 1992 to 14.7 in 1999), again largely the result of increased contraceptive use and better reproductive health.

4.1.2 Nutritional status

There is a very real concern that the level and depth of income poverty faced by households within the region may be affecting children's nutritional status, with subsequent long-term developmental consequences. The UNICEF Multiple Indicator Cluster Surveys (MICs) and the USAID funded Demographic and Health Surveys (DHS) contain valuable information on the nutritional status of young children (aged under 59 months) for the Republics in which the surveys have been conducted. Table 12 and Figures 9a-d below show information for the three standard indices of physical growth: height-for-age (percent stunted reflects chronic undernutrition), weight-for-height (percent wasted reflects acute or recent malnutrition), and weight-for-age (percent under-weight is a good overall indicator of the child population's nutritional health; MDI #4, Box 1). In a healthy, well-nourished population of children, it is expected at 2.3 percent of children will fall below two standard deviations of the reference population and will be classified as stunted, wasted or underweight. The figures also present data on the proportion of children under 5 with moderate or severe anaemia.

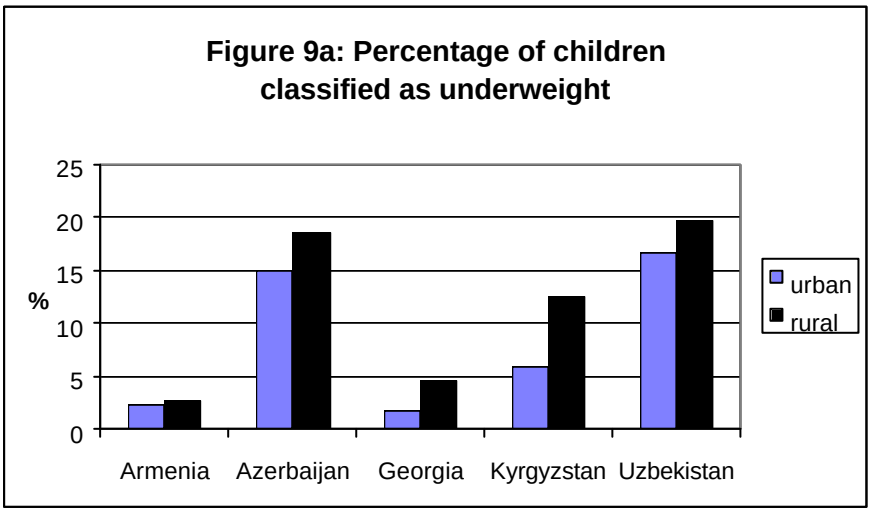


Figure 9b: Percentage of children classified as stunted

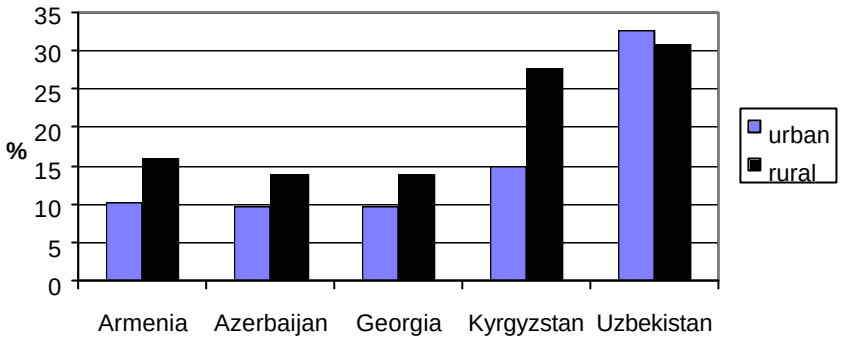


Figure 9c: Percentage of children classified as wasted

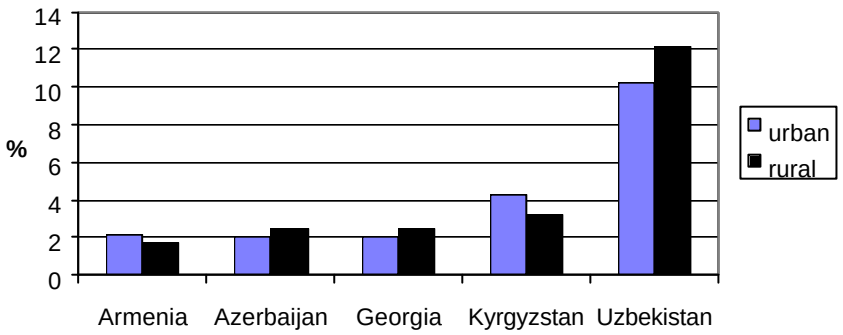


Figure 9d: Percentage of children classified as anaemic

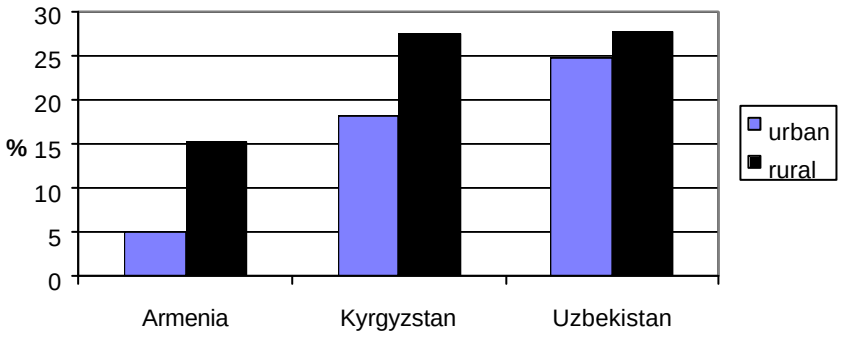


Table 12 Percentage of children under five severely or moderately undernourished

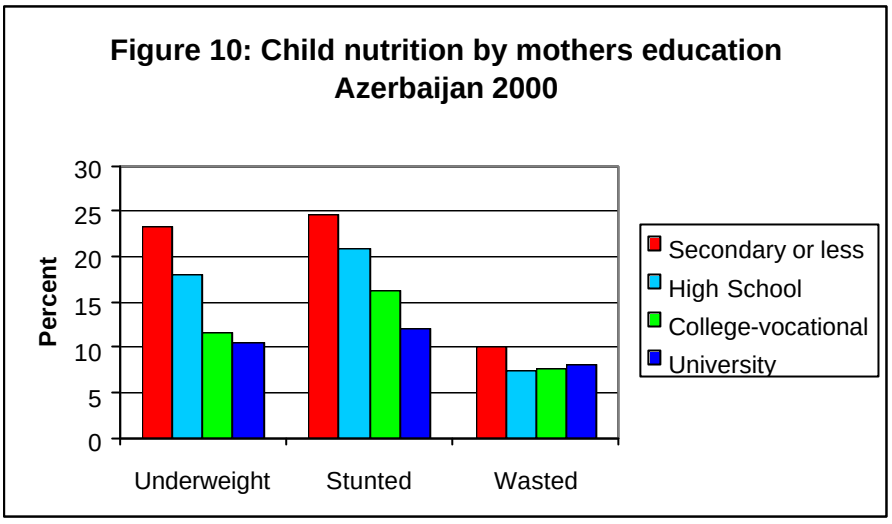
	Survey year & type	Underweight (weight for age)	Stunted (height for age)	Wasted (weight for height)
Armenia	2000 (DHS)	2.6	13.0	2.0
Azerbaijan	2000 (MICS)	16.8	19.6	7.9
Georgia	1999 (MICS)	3.1	11.7	2.3
Kyrgyzstan [a]	1997 (DHS)	11.0	24.8	3.4
Tajikistan [b]	2002 (NNS)		30.9	4.9
Uzbekistan [a]	1996 (DHS)		31.3	11.6

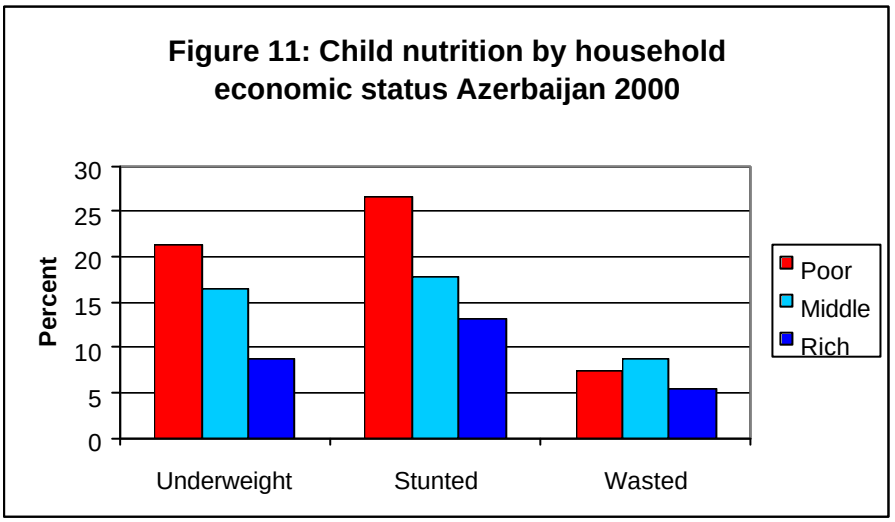
Note: [a] rates are for children 0 to 35 months; [b] rates are for children 6 to 59 months.
DHS – Demographic and Health Survey, MICS – UNICEF Multiple Indicator Cluster Survey, NNS – National Nutritional Survey.

It is clear Table 12 that the nutritional status of children in several of the CIS-7 is a major cause for concern. The percentage of children classified as stunted is significantly greater than the WHO standard of 2.3 percent in all instances. The rate of stunting in Tajikistan is particularly worrying, despite the 2002 figure being an improvement on rates found in previous nutritional surveys[16]. Furthermore, contrary to expectations that access to food would be higher in rural areas and malnutrition concomitantly lower, Figure 9 demonstrates the reverse, with stunting and wasting actually being worse in rural areas. Over a quarter of children under 5 living in rural Kyrgyzstan and nearly a third children in rural Uzbekistan exhibit signs of chronic under-nutrition. And around a fifth of rural Azeri children have poor nutritional health.

Interestingly, leaving aside the high rates of malnutrition in Uzbekistan[17], a country's rank in Table 12 generally follows its rank in material poverty in Table 5. Countries with high levels of material poverty such as Tajikistan and Kyrgyzstan also have more malnourished children. As well as being positively correlated with other indicators of well-being at a national level, child nutritional status is also strongly associated with indicators of socio-economic status at the household level. Children whose mothers have post school education are less likely to suffer from malnutrition than children whose mother have only secondary education or less (Figure 10). There is also a clear gradient in nutritional status by household economic status as measured by ownership of selected assets, characteristics of the dwelling and access to amenities. Children from the poorest 20 percent of households were twice as likely to experience chronic malnutrition i.e. stunting than children from the richest 20 percent (27% vs 13%) (UNICEF, 2000).

[16] In 2001 the prevalence of chronic malnutrition (stunting) in Tajikistan was estimated at 38%. However direct comparison between the two surveys is complicated by the fact that the 2002 survey was conducted in May/June whilst the previous survey was conducted in early autumn; a time of year commonly associated with high levels of diarrhoeal disease as a result of the changes in water source.
[17] Ismail and Micklewiright (1997) using an alternative dataset report significantly lower levels of malnutrition for Uzbekistan which are more in line with other economic indicators for the country.





A key Millennium Development Goal is to reduce child malnutrition by half by 2015. It is clear from the above discussion that it will be necessary to improve both material living standards and other dimensions of poverty in order to achieve this.

4.1.3 Access to health care

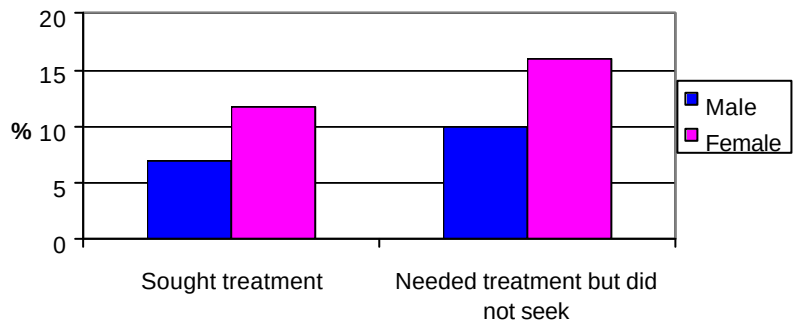
An important determinant of good health is access to good quality health care. During the Soviet era, the health care system was characterised by widespread access and high levels of service use. Health care provision was extensive and free at the point of delivery. However, since independence health services have deteriorated rapidly in the face of severe financial constraints, exacerbated in some areas by extensive damage to infrastructure during the armed conflicts that have wracked the region.

Trends in the use of health care services over time are difficult to interpret, being affected by both demand and supply side factors. It is clear that the widening gap between the

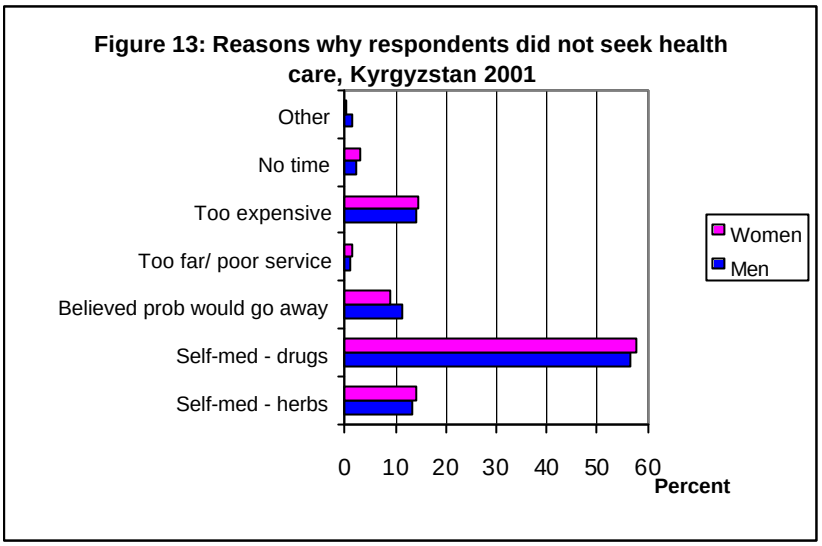
health care budget and the actual costs of care has resulted in both a fall in the quality of services *and* an increased burden on the household both in terms of official charges and, more commonly, under-the-counter or informal payments[18]. Evidence suggests that informal payments for health care are extensive in the CIS-7 (Falkingham, 2002; Lewis, 2002; chapter by Bonilla-Chacin et al, this volume). Although in principle medical supplies and drugs required as part of inpatient treatment remain free, the scarcity of such items in medical facilities has led to an increasing number of patients having to purchase them. Furthermore, local budgetary constraints and petrol shortages have eroded the capacity of the ambulance service, and often patients have to provide their own transportation to medical facilities. Most importantly, informal user charges for consultations are frequently being imposed to help subsidise salaries, despite the fact that such consultations officially remain free of charge.

There is a small, but growing, body of evidence that the growth of out-of-pocket payments is affecting access to health care. In a household survey specially design to collect information on the use of, and payment for, health care services in Kyrgzystan conducted in 2001, seven percent of men and 12 percent of women reported that they had sought medical assistance in the last 30 days (Falkingham, 2001). A further 10 percent of men and 16 percent of women reported that they had needed medical assistance but had not sought treatment (Figure 12). The main reason given for not seeking health care was that the person self-medicated using either pharmaceuticals (57-58%) or herbs (13-14%). 11 percent of men and 9 percent of women thought that the problem would go away. However 14 percent of men and 15 percent of women reported that they did not seek medical assistance as it was 'too expensive' (Figure 13). Amongst those who consulted, total payments for the consultation constituted an average of 8 percent of usual household monthly expenditures. However, health care payments represent a greater burden for the poor than the rich with health care expenses on average accounting for 10 percent of total household expenditures for the poorest households compared to 5 percent amongst the richest (Falkingham, 2001).

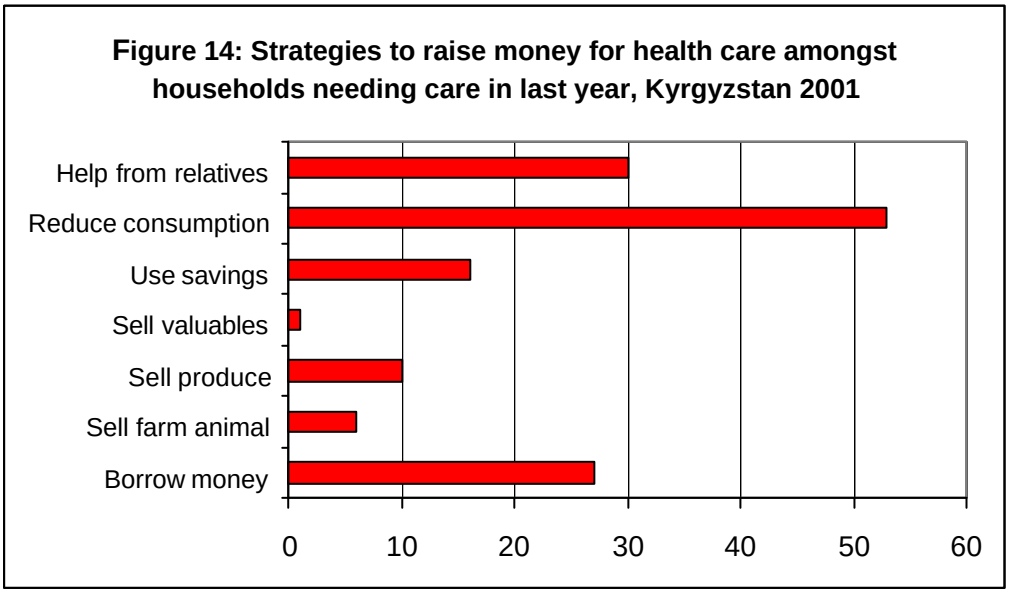
Figure 12: Percent seeking health care in last 30 days, Kyrgyzstan 2001



[18] Informal payments have been defined by Lewis (2002) as 'payments to individual and institutional providers in-kind or cash that are outside the official payment channels, or are purchases that are meant to be covered by the health care system'.



Despite evidence of an informal system of exemptions being practiced by health professionals, out-of-pocket payments for health care are exacting a high toll on household welfare. Out of all households reporting that they needed health care in the last year in Kyrgyzstan, 18 percent said it had been very difficult to pay for such care and a further 42 percent reported it had been difficult. Over half of households reported reducing current consumption in order to meet the costs of health care, a third received help from relatives and a further 27 percent borrowed money and thus went into (or extended existing) debt (Figure 14).



A similar picture is found elsewhere in the CIS-7. In Armenia patterns of health care utilisation indicate that the poor face access and/or cost constraints when seeking health care. Only 26 percent of those reporting that they suffered from ill health in the poorest

quintile received some type of health care compared to more than 51 percent among those in the richest quintile (World Bank, 2002a). In Tajikistan health seeking behaviour was found to be inversely related to poverty, with only 4 percent of individuals in the bottom quintile reporting that they sought medical assistance in the last two weeks compared with 9 percent in the top (Falkingham, 2000a). A study in the Ferghana valley in Uzbekistan by Cashin (2001) confirmed that the burden of expenditures falls disproportionately on the poor; expenditures on health care comprised 22% of food consumption amongst the poorest quintile compared to just 15% amongst the richest quintile. Table 13, taken from Cashin (2001) provides quantitative evidence on the significance of borrowing and delayed care due to financial barriers and shows that this was a significant barrier not only for the poorest but also other segments of the population in Ferghana.

Table 13: Financial Barriers to Health Care in Ferghana

Indicator of **Financial Barrier**	% of Those Seeking Health Care in the Past 30 Days (#)				
	Income Quartile				
	First (lowest)	Second	Third	Fourth (highest)	Total Sample
Did not seek health care because not enough money	31.5 (63)	26.1 (57)	15.6 (34)	13.5 (30)	21.2 (184)
Finding the money to pay for health care was difficult	77.0 (57)	79.2 (76)	63.8 (74)	57.5 (69)	68.0 (276)
Needed to borrow money to pay for health care	25.0 (22)	22.9 (22)	15.4 (19)	9.8 (12)	17.5 (75)

Source: Cashin (2001). Sample sizes in parentheses.

The present mixture of unregulated prescription charges and payments for consultations that has emerged across the CIS-7 is both inefficient and inequitable. The costs falling on the users of the health services vary widely and arbitrarily. Ability to pay for health care is now a major problem amongst the poor and there is growing evidence that, despite informal systems of targeting, access to health care is being affected. The challenge facing policy makers is how to take them into account *and* to ensure that equity in access to health care is achieved. This is important from a human development perspective and a human rights standpoint. The long-term development prospects of the country rest on its human, intellectual and social capital. What is clear is that a growing proportion of the poor can no longer afford 'free' health care.

4.1.4 Access to safe drinking water and other services

Good health is not only a function of material resources and access to health services, but is also affected by other environmental factors, particularly access to safe drinking water. Again it appears that those households who suffer material poverty are also likely to be disadvantaged with respect to access to other utilities. Figure 15, using data from the recent household budget survey in Uzbekistan demonstrates differences in access to services by household economic status. Poorer households live in homes with less access

to running water and public sewerage. Similar patterns are found elsewhere in the region (see Figure 16 for Kyrgyzstan).

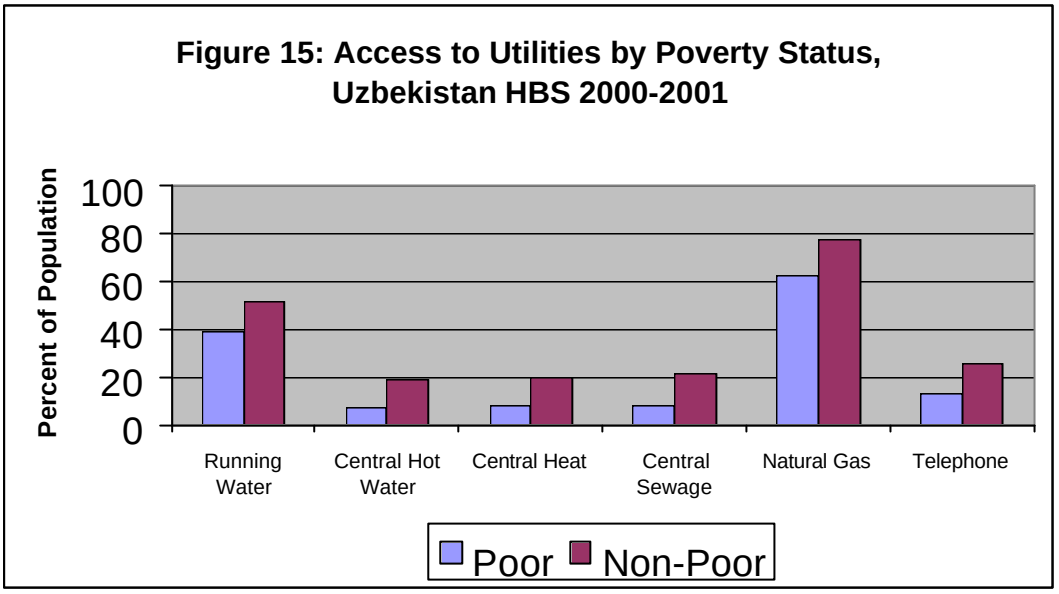
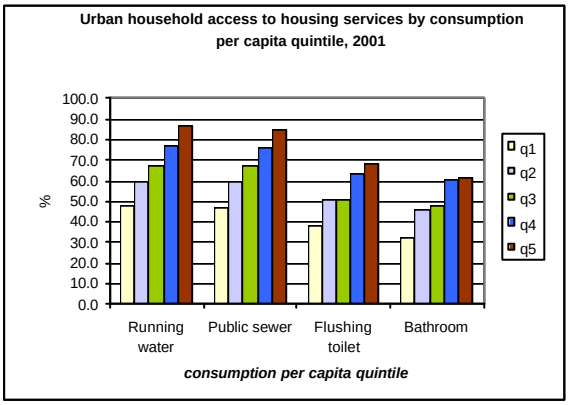
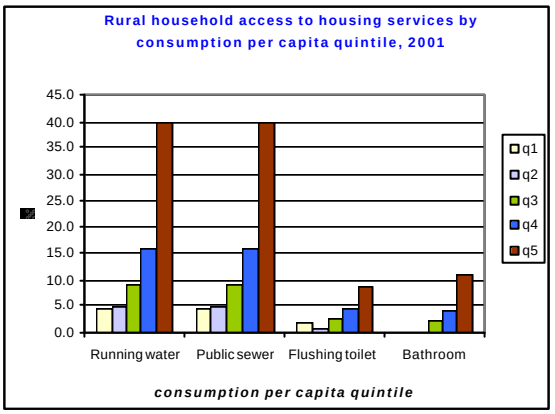


Figure 16 Environmental/Health Conditions of Kyrgyz Housing in 2001, (% of houses with access to services)





Source: Figure 2.3 (World Bank, 2000d).

As Figure 16 illustrates, there are significant differences in terms of environmental and health conditions between urban and rural areas, with the average access of the *richest* quintile in rural areas in Kyrgyzstan for each of the four health/sanitary indicators being *worse* than that of the poorest quintile in urban areas. Moreover, the poorest two quintiles in rural areas lives in houses without a flushing toilet or bathroom/shower.

Statistics on access alone can be misleading, over-stating the proportion of the population enjoying safe water and utilities. While virtually all K yrgyz households are connected to the electricity grid, interruptions in the electric supply are very common. Only four out

of every ten households have electric interruptions less frequently than once a week. In other words, six out of every ten households report electricity interruptions once or more per week, on average (World Bank, 2002d). A survey in Azerbaijan found that although 95 percent of the households in Baku reported being connection to the water system, water was actually available for 22 days of each month, on average, and for only four hours each day. Moreover, 87 percent of households believed that the piped water they received was unsafe. The poor in Baku were even less likely to have water every day of the month or throughout the day, and were more likely to report illness attributable to water, than non-poor households (World Bank 1995). Similarly, while most households in Armenia have water pipes in their homes, service is unreliable, typically available for a few hours each day. About 12 percent of households report being without water for three months or more (World Bank 2002a). From this it is clear that significant investments in infrastructure, particularly in rural areas, will be needed if the MDG on environmental sustainability of reducing by half the proportion of the population without access to an improved water source is to be achieved by 2015.

Box 3: Housing quality and access to water and other utilities in Tajikistan

- 7% of Tajik households reported that their home was damaged during the war, of which a quarter experienced significant damage and a third almost completely destroyed
- Less than half of all households have access to piped water. Nearly a quarter are reliant on water from river/lake /ponds and a further eighth on spring water (probably actually the best source!)
- Of those who have piped water, a quarter reported that water was only available for five hours a day or less; and only 36% reported 24 hour availability.
- Only a half of households reported that their water quality was good/excellent and a half reported fair/poor
- 75% of households reported no source of *hot* water
- Only 14% of households have a flush toilet. 85% rely on an outside latrine
- The most common source of fuel used by households for cooking was wood (43%), followed by manure (17.5%) and cotton stem (12.3%). Similarly the most common usual source of heat was wood stove (45%) followed by manure/peat (23.6%). Burning solid fuels indoors has important implications for health as indoor air pollution is associated with numerous respiratory complaints.
- A third of households had only heated their home for 3 months or less in the last year; two-thirds heated it for 4 months or less.
- 14% of households have a phone inside the dwelling, 17% rely on neighbours. 54% stated that they had NO access to a phone.

Source: Falkingham 2000a using 1999 TLSS.

4.2 EDUCATION

Two of the Millennium Development Goals concern education. One is to achieve universal primary education by 2015; the other to eliminate gender disparities in education at all levels. The countries of the CIS-7 began the transition with an enviable record on education, with near-universal literacy. Attendance at school was compulsory from ages 7 to 15, and there was also an extensive system of kindergartens for pre-school age children and technical and vocational schools for post-compulsory education. However, over the last decade there have been serious reversals in several countries and it is likely that the high literacy rates of the past will not be sustained in future generations.

The impact of economic decline on education outcomes may be thought of as being three-fold (see Falkingham, 2000b). Firstly decreased access (and increased costs) may reduce enrolment. Parents who are unable to afford the cost of textbook, uniforms, or even shoes, may simply withdraw their children altogether. Secondly, even if enrolled, children may not actually attend school regularly: either for the reasons given above or because the children are needed as family labour (working in the home looking after younger children, or working on family land or in the hired labour market to supplement household income). Finally, children may be enrolled and be attending school, but may not actually be benefiting from the education. The teacher may be absent on a second job, or there may be no textbooks, it may be too cold to concentrate due to lack of heat, or the child may anaemic and/or malnourished and too lethargic to learn. There is very little evidence concerning learning outcomes and this section of the paper therefore focuses on trends in kindergarten, primary and secondary school enrolment (MDI #6) and school attendance. Finally, emerging gender disparities (MDI # 9) are discussed.

4.2.1 Enrolment

One of the most worrying trends is the decline in the proportion of children aged 3-6 enrolled in pre-primary school education (Table 14). Prior to independence attendance at kindergarten was widespread. Over 60 percent children in the target age group were enrolled at kindergartens in Moldova, around a half in Armenia and Georgia, third in Uzbekistan and Kyrgyzstan. Since independence, rates have fallen dramatically in all countries. %). This is in part due to the closure of enterprise based (employer-provided) kindergartens. However enrolments have fallen by more than the drop in capacity suggesting a fall in demand for kindergarten places as well as their supply (Klugman et al, 1997). A survey in Tajikistan indicated that mothers increasing preferred to take care of their children at home. Reasons for not using child-care facilities included lack of heating and personnel and concerns over food safety. Just over a tenth stated that children were not attending to rising costs (Falkingham, 2000c). Such trends are of concern given the role that kindergartens can play in raising household welfare, both in terms of freeing the parent to participate in other activities, specifically paid employment, and the developmental role of pre-school education and nutritional and health interventions (Klugman et al, 1997).

Primary education continues to be compulsory, and enrolment rates in basic education have generally remained high. However, there have been worrying falls in enrolment in

basic education in Armenia and Georgia; data from the UNICEF MONEE project indicates that only four out of five children aged 7-15 are now enrolled in school in Armenia. Furthermore, as is discussed in Section 4.2.2 below, enrolment rates tell only part of the story, and there is a growing problem of declining school attendance.

Post-compulsory education enrolments have fallen dramatically. The proportion of 15-18 year olds attending general secondary schools has declined by over 40 percent in Tajikistan, a third in Azerbaijan, Kyrgyzstan and Georgia.

Table 14 Changes in school enrolment rates (% of the relevant age group), CIS-7, 1989-2000

	Pre-primary enrolment rate			**Basic education**		
	1989	2000	% change 1989-2000	1989	2000	% change 1989-2000
Armenia	48.5	23.9	-51%	95.5	79.5	-17%
Azerbaijan	21.6	15.8	-27%	87.9	89.6	+2%
Georgia	43.6	27.4	-37%	95.2	86.1	-10%
Kyrgyzstan	31.3	8.7	-72%	92.2	95.9	+4%
Moldova	61.2	36.8	-40%	94.1	93.5	-1%
Tajikistan	16.0	5.5	-66%	94.1	88.4	-6%
Uzbekistan	36.8	18.2	-51%	92.0	97.0	+5%

	General secondary (15-18 yrs)			**Tertiary (19-24yrs)**		
	1989	2000	% change 1989-2000	1989	2000	% change 1989-2000
Armenia	35.9	32.1	-11%	19.3	15.5	-20%
Azerbaijan	34.0	23.2	-32%	11.9	14.3	+20%
Georgia	41.3	28.2	-32%	19.1	30.7	+61%
Kyrgyzstan	36.7	23.5	-36%	13.2	34.6	+162%
Moldova	27.4	22.7	+1%	16.2	21.1	+30%
Tajikistan	40.4	22.8	-44%	11.5	11.4	-1%
Uzbekistan	36.3	30.9 [1]	-15%	15.0	6.6 [1]	-56%

Note: [1] 1989
Source: UNICEF Transmonee database 2002.

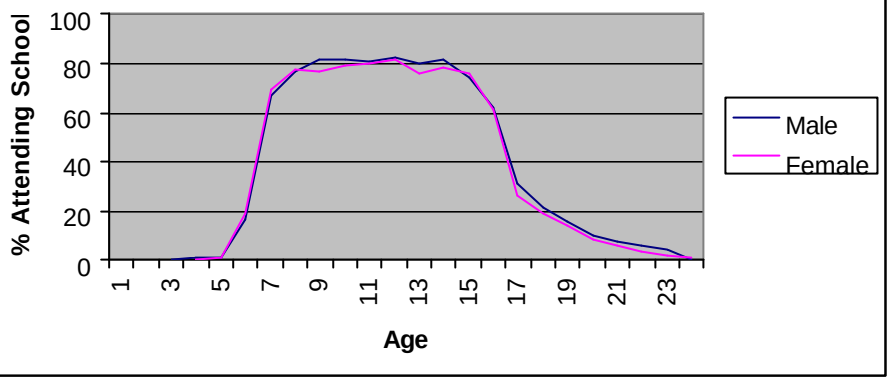
In contrast there has been significant growth in higher education in four of the countries, particularly in Kyrgyzstan, Moldova and Azerbaijan. Virtually all of the growth in tertiary education has been in the private sector with a proliferation of private colleges in fields that were under-represented in the past - most notably business studies, economics and law.

4.2.2 School Attendance

Given tight education budgets and capitation funding formulas, in many countries there is an incentive to over-register enrolments in order to maintain existing teaching posts and schools. Thus enrolment rates may overestimate the actual number of children attending school. Furthermore, significant non-attendance by children that are enrolled means that data on official enrolments may be a poor indicator of the number of children actually receiving educational services. Evidence from the Uzbekistan 2000/2001 Household Budget Survey indicates that genuine levels of school attendance were well below

enrolment levels reported in registration-based data (World Bank, 2002e). The highest rate of current school attendance (for the school year) reported by respondents was 82 percent, and average attendance rates amongst boys and girls aged 7-15 (when education is theoretically compulsory) were 79 percent and 77 percent respectively (Figure 17). This is significantly lower than the 97% reported for Uzbekistan in official data in Table 13, and indicates a serious erosion of the country's human capital.

Figure 17: School Attendance by Age & Gender, 2000/2001



Non-attendance at school may occur due to a variety of circumstances including both demand and supply side factors. Features of the system itself, particularly the availability and quality of education institutions and programs can play a significant role in determining attendance. For example, in Georgia over half of children who were absent from school cited the absence of a teacher, lack of heating or excessive distance as the primary reason (World Bank, 2002c). Other supply side factors such as lack of textbooks and other materials were also cited in the poverty assessments for most countries.

However there is evidence that absenteeism is more prevalent among the poor and that economic factors are an important determinant for many families. Traditionally children, particularly those from rural areas have been absent at the beginning and end of the school year due to the need for children to help the autumn harvest and the planting in the spring. However there is evidence that withdrawing children from school to supplement household income is now becoming more widespread. In Armenia, only 52 percent of poor rural households reported that their children attended school very regularly compared with 68 percent of non-poor households.

Box 4: Falling school attendance in Tajikistan – Voices of the children

Student attendance in Tajikistan has fallen dramatically due to the need to provide for families, the lack of clothing, poor health, physical insecurity and the inability to afford books and stationery, and in many areas due to a total lack of school facilities.

"Poverty is when I strongly desire to study but my family cannot provide me with books, notebooks or even clothes to go to school."

" There are three children in our home. We go to school in turn because there are no clothes and shoes for each us."

" My parents do not ask me about homework now, but how much money I have earned today."

In the areas of Bokhtar, Khojamaston and Qabodiyon, most girls have missed school.
Fazolat explains "Me and my girlfriends frequently miss class. Sometimes we work in the field, sometimes we sell milk and vegetables, and sometimes we look after our smaller brothers sisters."

Source: De Soto, Gordon and Saidov (2001)

Evidence from the Uzbekistan 2000/2001 Family Budget Survey illustrates that there is a consistent and direct relationship between family income and school attendance at all levels of education (Tables 15 and 16). Families with higher incomes tend to consume more education in terms of both frequency of school attendance for their children and their expenditures on education, than families with lower incomes. Similar findings are evident in all other countries of the CIS-7.

Table 15 Uzbekistan: Percentage of Children 7-15 Years Currently Attending School By Household Consumption Quintiles

Quintile*	Percent attending school		
	Male	Female	Total
Poorest	68.7	68.0	68.3
2nd	76.6	77.8	77.2
3rd	79.9	78.1	79.0
4th	81.4	79.3	80.4
Richest	85.5	83.3	84.4
All	78.2	76.9	77.5

Note: *Based on per-capita food consumption evaluated at purchase price
Source: Family Budget Survey, April 2000 – March 2001, weighted results

Table 16 Uzbekistan: Percentage of Children Currently Pursuing Post-Compulsory Education, by type of Program and Household Consumption Quintiles (in %)

	General Secondary	PTU/SPTU	Technikum	University
All	33.3	5.3	7.6	3.3
Urban	31.9	8.5	13.0	6.1
Rural	34.1	3.6	4.9	1.8
Quintile				
Poorest	27.2	3.5	2.9	1.2
2nd	34.1	5.5	6.3	2.0
3rd	33.1	5.7	6.8	2.2
4th	36.4	4.9	8.5	3.6
Richest	35.5	6.7	13.3	7.2

Note: Age groups for the four columns are 15-17, 16-17, 16-19, and 18-23, respectively.
Source: Uzbekistan Family Budget Survey 2001.

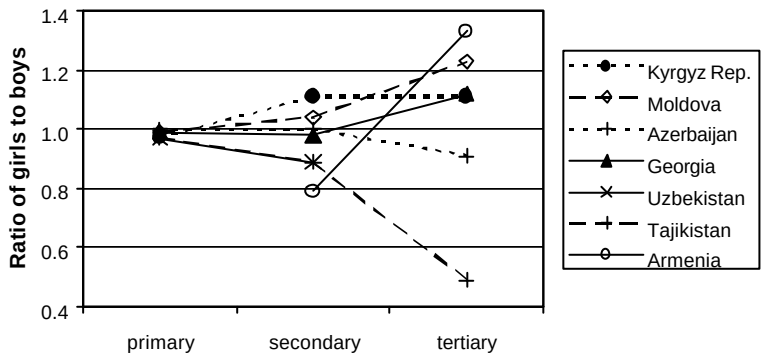
With rising costs at both school and college it is difficult to resist the conclusion put forward in a recent UNDP report that the education systems in the CIS-7 are coming to reflect the increasing socio-economic stratification these societies. In Azerbaijan, half of all university students come from the richest two quintile groups (World Bank, 2002b).

Evidence from qualitative social assessments highlight that students and their families are increasingly expected to pay bribes to ensure admission to elite school, to receive good marks and to secure entry into University, with the result that students from poor families are excluded (Dethier, 2002). In Georgia the richest 20 percent of households spent an average of *22 times* more on educating children than the poorest 20 percent (World Bank, 2002c). Access to quality education is now confined substantially to those who can afford private fees, private tuition. It is imperative that action is taken to ensure that the growing poverty and stratification outlined in Section 2 above does not result in the re-emergence of illiteracy within the region and the cycle of deprivation and social exclusion that accompany it.

4.2.3 Gender and Education

Gender equality in education was a key achievement of the Soviet era. As Table 15 shows, there is little difference in school attendance rates between boys and girls within income group. This is confirmed in Figure 18, which shows the sex ratios of gross enrolment at different levels of education, adapted from Paci (2002). In primary school, the ratio of boys to girls is almost exactly one – that is, there is the same number of boys as girls. In secondary school, some dispersion emerges. In most of these countries, the ratio increases, indicating more girls than boys are enrolled. Beyond compulsory education, a gap between boys and girls opens up. In most countries the ratio increases, indicating that more girls than boys are enrolled. The main exceptions to this are in Armenia and Tajikistan where the ratio falls[19]. Girls' advantage continues into tertiary education, except in Tajikistan and Azerbaijan.

Figure 18: Sex composition of enrollment



Looking at the situation in Tajikistan in a little more detail, Table 17 shows that enrolment in post-compulsory education has fallen for both boys and girls, from over 50 percent in 1990 to 36 percent in 1998. There have been significantly gender disparities within this decline. In the past, there were almost as many girls as boys participating in continuing education. In 1990 there were 111 thousand boys compared with 107

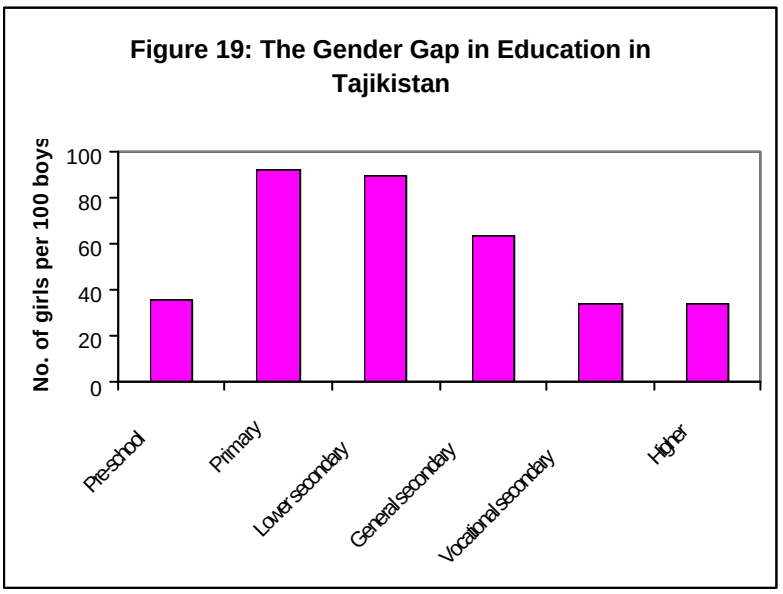
[19] Note that data from the FBS in Armenia indicates that boys are more likely than girls to drop out of post compulsory schooling. Thus the data point for Armenia should be treated with some caution.

thousand girls. Most girls attended general secondary schools, whilst a larger minority of boys went on the professional and vocational institutions. However, over the period 1990-1998, the number of boys enrolled in post-compulsory education fell by 28% from 111 thousand to 80 thousand, whilst the number of girls fell by 53%, from 107 thousand to 50 thousand. Thus a significant gender gap has opened up. There are now just 63 girls per 100 boys in general secondary schools, whereas in 1990 there were 104 girls per 100 boys. The gender gap in higher education has also widened, from 58 girls per 100 boys in 1990 to just 34 in 1998.

Table 17 Selected statistics for enrolment in post-compulsory education, Tajikistan 1990-1998

	1990	1992	1995	1996	1997	1998
Secondary education						
Enrolment rate General secondary education (15-18)*	41.5	29.7	38.6	41.7	34.1	30.9
Enrolment rate techn/vocational education (15-18)*	9.8	8.6	8.8	6.6	6.2	5.4
Ratio of enrolled girls per 100 boys:						
General Secondary	104		71	68	63	63
Professional technical colleges	69		89	99	95	94
Vocational secondary	58		37	35	35	34
Tertiary education						
Enrolment rate tertiary education (18-22)*	9.4	9.3	n/a	9.4	8.9	n/a
Ratio of enrolled girls per 100 boys:						
Higher education	58		37	35	35	34

Source; Falkingham (2000c)



It is clear that if the current trend of falling enrolments and increasing gender differentials remains unchecked Tajikistan is at risk of losing one of the main social achievements of the Soviet period. In response to this, a new country-wide Cash Compensation Program (CCP) or targeted social assistance to poor families designed to stimulate attendance of

school children has recently been introduced (beginning of 2002). The program aims to reach 20 percent of school children aged 6-15 of poor families. This is a start.

5. POLICY RESPONSES TO POVERTY

The preceding sections have painted a bleak picture of falling real incomes, growing poverty, declining life expectancy, rising child malnutrition and deteriorating educational status. However it is not all bad news. Over the last three years economic growth has been positive in all seven countries. Significant progress has made on land reform in several countries, and this has been reflected in fall in poverty rates.

5.1 PROMOTING PRO-POOR ECONOMIC GROWTH, REDUCING INCOME INEQUALITIES

Achieving pro-poor growth must remain at the heart of effort to alleviate poverty. However it will be important to address the economic, institutional and political causes of poverty simultaneously. Economic growth alone will not be sufficient. From the discussion above it is clear that one of the driving factors behind the growth or poverty over the last decade has been falling real wages and rising income equality. As well as inequality being undesirable in its own right from a point of view of social justice and social welfare maximisation, there is mounting evidence that inequality is bad for growth Aghion et al, 1999), undermines confidence in the government, fosters social exclusion and impairs the functioning of democracy (World Bank, 2000a).

In countries where disparities in incomes are large it will be difficult to substantially increase the incomes of poor families in the short- to medium-term without some reduction in those income differences. However rather than reducing inequality, the actions of the administrations to date have, as discussed above, often had the reverse effect. A key route to reducing income inequality is the establishment of transparent and efficient product markets. But progress here has been hampered both by the slow pace of progress in restructuring (or closing) many of the large nonviable state enterprises, and by the capture of these and other state institutions by vested interests, who have been able to obtain high economic rents in the absence of competition (Table 18). It is notable that no country in the CIS-7 has achieved a score of more than 2.0 on the EBRD index of enterprise reform, and indeed Uzbekistan suffered a reversal between 1996 and 2000.

Table 18 Progress in Enterprise restructuring and competition policy

	Index of enterprise reform			**Index of competition policy**		
	1992	1996	2000	1992	1996	2000
Armenia	1.0	2.0	2.0	1.0	1.0	1.0
Azerbaijan	1.0	1.7	2.0	1.0	2.0	2.0
Georgia	1.0	2.0	2.0	1.0	2.0	2.0
Kyrgyzstan	1.0	2.0	2.0	1.0	2.0	2.0
Moldova	1.0	2.0	2.0	1.7	2.0	2.0
Tajikistan	1.0	1.0	1.7	1.0	1.7	1.7
Uzbekistan	1.0	2.0	1.7	1.0	2.0	2.0

Note: Classification of enterprise restructure: 1 Soft budget constraints; few other reforms to promote corporate governance; 2 moderately tight credit and subsidy policy but weak enforcement of bankruptcy legislation and little action to strengthen competition and corporate governance; 3 significant and sustained actions to harden budget constraints and promote corporate governance

effectively; 4 substantial improvement in corporate governance; 4+ standards and performance typical of advanced industrial economies. Classification of competition policy: 1. No competition legislation and institutions; 2. competition policy legislation set up, some reduction of entry restrictions or enforcement action on dominant firms; 3 some enforcement to reduce abuse of market power, substantial reduction of entry restrictions; 4 significant enforcement actions; 4+ standards and performance typical of advanced industrial economies, unrestricted entry to most markets.
Source: EBRD (2001)

There has also been little progress since the mid 1990s with introducing, and enforcing, effective competition. In general, better progress has been made in the privatisation of housing, small and medium enterprises and banks, but large enterprise privatisation remains largely unfinished, particularly in Azerbaijan and Tajikistan (Table 19). However, poor levels of governance mean that small-scale entrepreneurs face significant barriers in establishing or maintaining any new business (Dethier 2002).

Table 19 Progress in Privatisation

	Small-scale privatisation			**Large-scale privatisation**		
	1992	1996	2000	1992	1996	2000
Armenia	2.0	3.0	3.3	1.0	3.0	3.0
Azerbaijan	1.0	2.0	3.3	1.0	1.0	1.7
Georgia	1.0	4.0	4.0	1.0	3.0	3.3
Kyrgyzstan	2.0	4.0	4.0	2.0	3.0	3.0
Moldova	1.0	2.0	2.0	1.7	2.0	2.0
Tajikistan	1.0	1.0	1.7	1.0	1.7	1.7
Uzbekistan	1.0	3.0	3.0	1.0	2.7	2.7

Note: EBRD Index of privatisation based upon privatisation revenues, private sector share in GDP and private sector share in employment, including employment in private registered companies as well as in private entities engaged in informal activity. Classification of small-scale privatisation: 1 little progress; 2 substantial share privatised; 3 nearly comprehensive programme implemented; 4 complete privatisation of small companies with tradable ownership rights; 4+ standards and performance typical of advanced industrial economies, no state ownership of small enterprises, effective tradability of land. Classification of large-scale privatisation: 1 little private ownership; 2 comprehensive scheme almost ready for implementation, some completed; 3 more than 25% of large-scale enterprise assets in private hands; 4 more that 50% of state-owned enterprises and farm assets in private ownership and significant progress on corporate governance of these enterprises; 4+ standards and performance typical of advanced industrial economies, more than 75% enterprise assets in private ownership with effective governance.
Source: EBRD (2001)

Vandycke (2002) identifies the weak business environment as being one of key reasons for the absence of a more dynamic private sector in the CIS-7. According to the results from the latest round of the Business Environment and Enterprise Performance Survey (BEEPS), the most prominent type of business obstacle across the CIS-7 is taxation. However corruption is also seen as an important obstacle in Armenia, Azerbaijan, Georgia, Moldova and Tajikistan.

Reform in the financial markets also remains slow. Only Azerbaijan improved its EBRD reform index last year. However the recent news that the HSBC banking group has withdrawn its operations from the country will provide a setback (EBRD, 2002). In general credit markets remain shallow with the outcome that small firms face difficulties in obtaining finance for even working capital – again hindering development. There have however been numerous success stories at a local level of small businesses being aided by micro-credit facilities, usually funded by the donor community and run by NGOs. One such scheme funded by UNHCR in Pankisi valley in Georgia has helped establish a small bakery and café providing livelihoods for several local families. In Tajikistan micro-credit has helped rural women establish a small agro-food processing business for

preserving and bottling fruits and vegetables that would otherwise have rotted before going to market.

In order to promote pro-poor growth the countries of the CIS-7 need to foster a business environment that is conducive to private sector development by

- Improving governance and reducing 'bribe tax'
- Streamlining administration, reducing 'time tax'
- Strengthening credit markets
- Simplifying taxation, reducing incentives to engage in tax avoidance and evasion
- Strengthening the legal framework

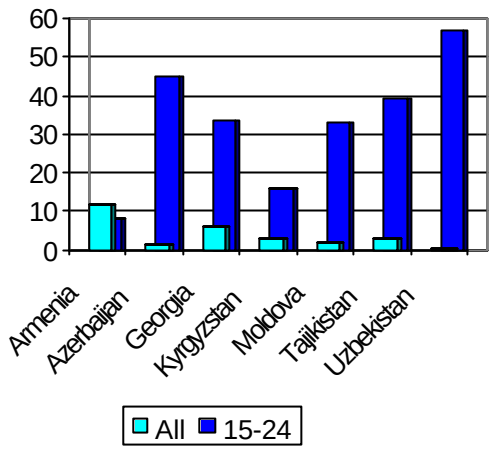
5.2. PROTECTING AND BUILDING HUMAN CAPABILITIES

As well as additional effort to promote economic growth and reduce inequality, public action is also necessary to protect and build capabilities so that the poor are able to take advantage of new income generating opportunities. As we have seen clear differentials in both health and education are emerging.

There is an urgent need to invest in schools and primary health care facilities to minimise absenteeism and non-use due to supply side factors. However, unless governance issues are tackled, higher social spending in the social sectors may do little to enhance the human capital of the poor. Many countries need to strengthen public expenditure management systems to ensure that public funds are used for their intended purposes, and reduce the rent-seeking behaviour of health and education professionals. In particular it is essential to break the vicious cycle of the system of bribes and corruption within the social sectors. The demand for high informal payments for health care are, in part, a product of the informal payments demanded in universities and in particular in medical schools where future health professionals become indebted and are subsequently required to make payments to obtain jobs. This, in turn, leads to pressure to generate additional incomes in the form of informal payments extracted from patients.

There is evidence that need to pay bribes to enter good quality post compulsory education institutions is undermining the future human capital of the countries. Registered unemployment rates are significantly higher amongst those aged 15-24 than in the rest of the population, reaching over 50 percent in Uzbekistan. Given that there is a mis-match between the skills required in a new market economy and those obtained under the old soviet system a priority must be to retain young people within education in order to provide the country with the skills required.

Figure 20: Unemployment rates, CIS-7 2000



Critical in improving staying-on rates within education will be ensuring free and fair access. In order to do this, it is vital that the basic pay of educationalists is guaranteed at a level that affords a living wage. This could be achieved by reducing the number of teachers and increasing their pay. Attention also needs to be given to ensuring sufficient resources are directed towards materials as well as labour.

Public expenditure within the health sector could be usefully reallocated towards basic primary services, away from specialised tertiary care. Governments also need to acknowledge that health care as it currently stands is *not* free. As such scarce resources need to be focussed on the provision of a basic health care package that is guaranteed for all regardless of ability to pay.

For those who are unable to work, either through health, disability or old age, or because sufficient jobs are not available, a social safety net which provides an *adequate* level of income will be critical. It is clear that it is not possible to maintain universal welfare benefits at levels that can have a significant effect on poverty alleviation. It is essential, therefore, to rationalise the existing system of benefits and to establish an efficient and administratively feasible strategy to identify and target the poor.

So far much of the debate has centred around the means-testing what were formerly universal cash benefits although there has some interesting experiments within the region on other forms of targeting. In Armenia proxy means testing has been used as an alternative to the straight income test. In Uzbekistan an innovative approach to targeting social assistance has been introduced which is organised by the 'Mahallah' (local level committees of dignitaries). Another option which deserves greater attention in the Central Asian context is the promotion of targeting through self-targeting mechanisms such as public works, for the able bodied, or soup kitchens. So far such options have not received much attention from Government as they are perceived as being politically unpopular. However food-for-work programmes have been successfully implemented in many regions by the World

Food Programme. School feeding programs are also worthy of wider consideration, filling two objectives in one go by encouraging school attendance and improving child nutrition. Again however it is important to note that without improved governance, there is no guarantee that such services will be delivered.

The main barrier facing future poverty reduction efforts within the region is the political will to tackle head on the vested interests that are holding back restructuring, stifling small-scale private enterprise and frustrating efforts to improve public expenditure management. Poor governance remains an issue at all levels of society, affecting the small business, the farmer trying to take their goods to market, the elderly person needing health care, and the bright young student wanting to go to university but too poor to pay. It is unlikely that real improvements in material and capability poverty will be achieved unless and until governance is improved. This will require strengthening systems of public administration and financial management, increasing transparency and political accountability, greater community involvement in decision-making processes as well as the creation of a competitive and buoyant private sector. This is the challenge facing policy makers within the CIS-7 for the first decade of the new millennium.

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