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## **TRANSITION AND POVERTY IN CENTRAL ASIA**

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## TRANSITION AND POVERTY IN CENTRAL ASIA

At the time of the dissolution of the USSR the Central Asian republics were, together with Azerbaijan, the poorest Soviet republics and the ones with the largest percentage of the population living in poverty (Table 1). Since becoming independent, Kazakstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan have followed divergent national development strategies, attracting some interest in the debate over policies and performance in transition economies. A key issue is how to measure performance. The drawbacks of using standard national accounting aggregates during periods of rapid structural change are well-known. As measures of living standards these are further undermined by the inability of per capita national income to capture changes in living standards when inequality and poverty are increasing.

After reviewing the initial conditions and economic prospects of each of the five newly independent Central Asian states, the first section of the paper summarises their national development strategies and standard measures of their economic performance. The second section analyses alternative measures of living standards and available data. The third section reports preliminary results from research utilising household surveys from the Central Asian republics, focussing on evidence from the Kyrgyz Republic, for which the survey data are relatively rich. The final section draws some conclusions.

### 1. Development Strategies and Economic Performance

Until the dissolution of the USSR, the Central Asian republics' development strategies were determined in Moscow. The CARs were open economies, integrated into the Soviet Union's division of labour but isolated from the global economy. Their main role was as producers of primary products, especially cotton, but also energy and minerals, and grain in northern Kazakstan. Whether they benefited from being in the USSR is controversial because of their colonial status, but residents of the CARs enjoyed higher material living standards and better social services than their southern neighbours, and were supported by substantial intra-USSR transfers which ceased in 1991-3.

Given the pre-existing specialization in primary products, the national development strategies have been outward-oriented.<sup>1</sup> Although there have been measures to encourage greater food and energy self-sufficiency, to protect domestic industries and to tax exports, trade policies have generally been liberal with low formal trade barriers. Trade performance has, however, been disappointing, especially the ability to find new export markets. Only by 1996 did the share of trade going outside the former USSR exceed half (ECE, 1997, 179). Turkmenistan and Kazakstan, which had been expected to benefit substantially from the shift to world prices for their exports (Table 2, final column), found themselves tied to old Soviet pipelines for their oil and gas exports, and Turkmenistan had great difficulty in collecting payment for its gas exports to Ukraine and Georgia. Uzbekistan turned out to have more favourable initial conditions insofar as its cotton and gold exports could be transported and sold for hard currency.

In 1992 and 1993, policy debates were dominated by the currency issue. Continuing use of the ruble simplified trade relations and allowed continuation of indirect subsidies from Russia

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<sup>1</sup> The degree of openness is difficult to quantify. Havrylyshyn and Al-Atrash (1998) conclude that the Kyrgyz Republic and Uzbekistan are significantly more closed and Kazakstan more open than other economies at similar level of development, but this is based on trade/GDP ratios using purchasing power parity GDP. Using GDP at market prices Kazakstan is more closed than the other two.

through access to oil, grain and other primary products at prices which were still below world market prices. The situation was, however, unstable as the ruble zone was inherently inflationary (Pomfret, 1996, 118-29). The Kyrgyz Republic introduced a national currency in May 1993 in order to regain macroeconomic stability, and Turkmenistan, Kazakstan and Uzbekistan left the ruble zone in November 1993. Tajikistan was the last country left in the old ruble zone - even Russia was using new ruble banknotes, which were not supplied to Tajikistan.

The Kyrgyz Republic has been the most successful among the CARs in taming the hyperinflation of the early 1990s (Table 2). Inflation was brought down below 50% per year in the Kyrgyz Republic in 1995, in Kazakstan in 1996, and in Uzbekistan only in 1997. Tajikistan has had hyperinflation associated with the civil war, but is now reducing inflation. Turkmenistan, like Uzbekistan, relied on controls to limit the peaks of price increases in the early and mid-1990s, but unlike Uzbekistan has not yet addressed the underlying monetary causes.

Speed in addressing hyperinflation is closely correlated with the speed with which the transition to a more market-oriented economy has been pursued. In the Kyrgyz Republic, state orders were eliminated in 1993 and practically all prices liberalized by 1994. Enterprise reform has been less dramatic than in Central or Eastern Europe or the Russian Federation, but more extensive than in any other CAR. The financial sector has also been transformed, so that both the exchange rate and interest rates are market-determined, although thin markets have limited allocative efficiency.

Kazakstan has generally been considered the more committed reformer of the two large CARs. After independence, Kazakstan moved faster than Uzbekistan in price and enterprise reform. In the second half of the 1990s, however, concerns have increased over the government's failure to establish a suitable framework for a well-functioning market economy; agents of the government are frequently seen to be benefiting from their position rather than enforcing law and order or maintaining public services, and privatization largely benefited insiders without obvious efficiency gains.

Uzbekistan has followed an explicitly gradual approach to economic transition. Price and enterprise reform proceeded slowly, although practically all prices had been liberalized by 1996 and housing and small enterprises have been privatized. Trade policy is liberal as export taxes imposed in the early 1990s have been removed, but its impact is negated by stringent foreign exchange controls which were reintroduced in the second half of 1996. The government exerts more overt control than in Kazakstan, which creates a more stable environment but not one which has favoured the emergence of new private enterprises or entrepreneurial behaviour in general.

The various synthetic measure of the speed and extent of liberalization in transition economies typically divide the CARs into two groups (Pomfret and Anderson, 1997, Table 1). The Kyrgyz Republic and Kazakstan are somewhere in the middle, and Uzbekistan, Turkmenistan and Tajikistan at the bottom of the list. Tajikistan is sometimes put in a separate category of those countries affected by regional tensions, and is making a delayed attempt at reform since the mid-1990s.<sup>2</sup> Turkmenistan is committed to minimizing economic change.

Economic performance is related to initial conditions and other exogenous forces, as well as to policies. The Kyrgyz Republic and Tajikistan are favoured neither by geography nor resource endowment. The gas wealth of Turkmenistan and the minerals and oil of Kazakstan were initially

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<sup>2</sup> Attempts to accelerate reforms and establish macroeconomic stability after the introduction of the Tajik ruble in May 1995 were disrupted by renewed civil war in late 1996, and only revived after the June 1997 peace agreement.

seen as major pluses, but realization of their benefits has been slow and at least in the short-term Uzbekistan's resource endowment may have been more favourable.

External assistance has varied and is not independent of economic policies. In the early post-independence era, the main source of external funds was the Bretton Woods institutions, which had a strong predilection for rapid reform and especially for macroeconomic stabilization and open trade and exchange policies. The Kyrgyz Republic has benefited most from World Bank and IMF assistance, while Uzbekistan's relations with these institutions have been frosty. Cumulative World Bank loan commitments up until the end of the 1996 fiscal year amounted to \$70 per head for the Kyrgyz Republic, \$49 for Kazakstan, \$11 for Uzbekistan, \$6 for Turkmenistan and \$1 for Tajikistan.<sup>3</sup>

How did the CARs' economies perform in the first half-decade after independence? Table 2 presents a striking picture in terms of real output. Uzbekistan had the smallest decline in real GDP of any former Soviet republic, and by a substantial amount. This is in striking contrast to the maintained hypothesis, claimed to be an empirical regularity by the World Bank (1996) and independent analysts, that more rapidly reforming transition economies have had superior output performance records. The anomaly might be explained as a time-frame problem, following Blanchard's U-shaped output path, with the slow reformers still on the initial downward part of the U and the fast reformers beginning to climb up on the far side. There are also well-known measurement problems due to reporting biases, the growth of the informal economy and index number problems (Pomfret, 1995, 171-6; Falkingham et al., 1997, 21-41), although it is not clear why they should bias the ranking among the CARs.

Apart from the conceptual problems associated with the usual macroeconomic aggregates during times of rapid changes in the output mix and in relative prices and quality, further problems arise in assessing living standards. The USSR had a relatively egalitarian income distribution, which was also true of the CARs even though they had the highest poverty rates in the USSR. The move to a more market-oriented economy has everywhere increased inequality (Cornia, 1996; Milanovic, 1998). If poverty has increased in these already poor countries, this has serious implications for our view of living standards, so we want to know not only what happened to average living standards but also how the changes in living standards have varied both across and within countries.

## 2. Living Standards in Central Asia

The Kyrgyz, Tajik, Turkmen and Uzbek republics had, together with Azerbaijan, the lowest per capita incomes in the USSR. The last four of these also had the most unequal income distribution, although the Gini coefficients, while high by Soviet standards, were still low relative to most lower and middle income countries.<sup>4</sup> During the 1980s hidden unemployment and the proportion of

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<sup>3</sup> Calculated from data reported in *Transition*, 8, February 1997. The Kyrgyz Republic also received concessional financing from the IMF, and by 1996 had the second-highest debt/GDP ratio (43%) of any former Soviet republic; the debt/GDP ratio for Tajikistan was 84% (mainly war-related concessional loans from Russia), Turkmenistan 32%, Kazakstan 19% and Uzbekistan 17%, with the last three having acquired most of their debt on commercial terms (Kapur and van der Mensbrugge, 1997).

<sup>4</sup> The elite benefitted from important non-pecuniary privileges. On the other hand, public services reinforced the egalitarian outcome; Buckley and Gurenko (1997) show that imputed income from subsidized housing (including maintenance and utilities) played a major role in reducing economic inequality in the USSR. Atkinson and Micklewright (1992) compare income distributions in the USSR and eastern Europe. Milanovic (1998) reviews the distributional evidence from the 1990s.

families receiving less than the minimum consumption basket increased; the 1989 poverty rates for the Central Asian and Caucasus republics were substantially higher than in other Soviet republics (Table 1). These trends were exacerbated by the disintegration of the USSR in 1991 and major price reforms of January 1992.<sup>5</sup>

The major source on living standards in the Soviet Union was the annual household budget surveys (HBS). These samples were biased, since they concentrated on households with earners in state factories or on collective farms and, to a lesser extent, on pensioners. Both tails of the income distribution were underrepresented, as households whose main employee worked in the private sector or was not working were absent and certain occupations were excluded (eg. party officials, high level bureaucrats, KGB and military officers). Rural households were undersampled, which is especially important for the Central Asian republics, which were the most rural of the Soviet economies. Furthermore, the samples were not rotated; once the sample was established in the early 1950s, households were only removed by attrition. Falkingham et al. (1997, 48) characterize the HBS as "a survey with a long history and a terrible reputation". After independence the new national statistical authorities continued to follow the methodology of the HBS. The practices and standards diverged more than previously, but the HBS remains the sole source for intertemporal comparisons.<sup>6</sup>

Roberts (1997) has analysed the Kyrgyz HBS data, and estimates that private household consumption fell by 33% during 1990-3 and rose by 7% in 1995.<sup>7</sup> This is substantially smaller than the fall in consumption implied by GDP estimates (Table 2), or official estimates of a 44% decline in 1990-3 followed by a further 5% drop in 1995. The main reason for the discrepancy is the rapid growth of the private sector, especially in 1991, to the extent that by 1995 the shadow economy was supplying between a quarter and a half of household consumption. Although Roberts presents a less gloomy picture than official figures, his estimates still represent a large drop in consumption during the first half of the 1990s. Moreover, we would expect that the move to a more market-oriented economy would widen disparities in living standards, but the HBS is not a good guide to income distribution (and even less to poverty).

A potentially better data set for analyzing living standards are the surveys supported by the World Bank as part of the Living Standards Measurement Study (LSMS).<sup>8</sup> The first such survey in Central Asia was the Kyrgyzstan Multipurpose Poverty Survey (KMPS) conducted in October and November 1993 with a sample of about 2000 households, ie. twice the size of the HBS sample and

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<sup>5</sup> Hidden unemployment certainly increased and the phenomenon of unpaid work became commonplace as wage payments were delayed and erratic, but unemployment figures are inconsistent and difficult to interpret. In the Kyrgyz Republic reported unemployment was low in the 1993 KMPS, although by the spring 1996 survey it had risen to 17% in rural areas and 21% in urban areas. The depth of the decline in employment is better reflected in the number of registered employed, which fell in Kazakhstan from 6.5 million in 1990 to 4.3 million at the end of 1995, when registered unemployment was reported at 4% (Bauer et al., 1997, 3), and 2.6 million in February 1998 (*Kazakstan Economic Trends*, January-March 1998, 102).

<sup>6</sup> Before independence completed questionnaires were sent to Moscow for processing, so that local analytical capacity was not developed (Falkingham et al., 1997, 43), and deliberate attempts were made to falsify published results (Dmitrieva, 1996, 100). Atkinson and Micklewright (1992, 265-9) review the methodology of the HBS. Marnie and Micklewright (1994) assess the 1989 HBS results for the Uzbek republic.

<sup>7</sup> According to Roberts, a substantial change in methodology in 1994 invalidates comparisons between before and after 1994.

<sup>8</sup> Deaton (1997) and Grosh and Glewwe (1998) describe the LSMS surveys. The core questions of the Central Asian surveys are based on Russian surveys initiated in 1992, which facilitates eventual comparability with other Soviet successor states. Klugman and Braithwaite (1998) review the Russian surveys.

with much greater care taken to ensure a representative sample. The KMPS is distinguished from the LSMS by its extensive additional questions, especially on nutrition. A survey conducted in February and March 1996 in the Kyrgyz Republic used the same questionnaire to that used in 1993, as did a 1997 LSMS in Kazakhstan and a LSMS begun but not completed in Uzbekistan in 1997. A series of annual LSMS surveys in the Kyrgyz Republic began in October/November 1996 with a new sampling frame, which yielded 1951 completed household interviews, and a shorter questionnaire focussing on the changing environment brought about by transition to a market economy and omitting the nutrition questions of the KMPS. The LSMS surveys are clearly superior to the HBS in sampling methodology and coverage, but so far have been little analysed.

There have also been a number of household surveys focussing on specific issues which cast some light on living standards, as well as studies of limited geographic areas or rapid appraisal methods. As the most open of the Central Asian countries the Kyrgyz Republic has benefited most from external assistance, some of which has included finance for surveys, as well as being the most willing to permit independent studies. The next section will review this literature and present some preliminary findings from our own research using the KPMS.

### 3. Poverty in the Kyrgyz Republic

The Kyrgyz Republic clearly suffered a substantial drop in consumption levels during the first half of the 1990s. This was accompanied by widening inequality and increasing poverty. The Gini coefficient for income rose to 0.66 in 1993, and a still high 0.51 in 1996.<sup>9</sup> The expenditure-based headcount measure of poverty increased from 45% in 1993 to 69% of individuals in 1996.<sup>10</sup> The numbers must be treated with caution, but the direction of change is undeniable.

The aggregate picture is supported by anecdotal evidence. In June 1995 the World Bank surveyed 150 households in Bishkek to appraise capacity and willingness to pay for heating and hot water. The responses to the income and expenditure questions revealed that households spent on average 70% of their income on food and 10% on energy, but the lowest quartile spent 78% of income on food and 22% on energy (Finkel and Garcia, 1997, 194). Such figures paint a grim picture of a substantial part of the population of the capital city having inadequate incomes to cover basic needs and being vulnerable to even minor policy shifts with respect to provision of subsidized services such as district heating.<sup>11</sup>

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<sup>9</sup> For expenditure, the Gini also rose to 0.54 in 1993, before falling to 0.46 in spring 1996 (Research Triangle Institute, 1996, 2) and 0.41 in the winter 1996 LSMS survey.

<sup>10</sup> These figures calculated from the 1993 and spring 1996 surveys are comparable to the figure in the final column of Table 1. Using households rather than individuals as the unit, the headcount, poverty gap and FGT P2 measures of poverty (Foster, Greer and Thorbecke, 1984) increased from 40% to 49%, 20% to 24% and 13% to 15% respectively, indicating that the depth of poverty increased as well as the number of poor. The poverty line used in these World-Bank-sponsored exercises has been criticized by Peter Lanjouw (in Falkingham et al., 1997, 61-77) for being non-transparent and based on nutrition in a country where the poor are often obese. The World Bank *World Development Indicators 1997* estimate that 19% of the Kyrgyz Republic's population was below the international poverty line of US\$1 per day at 1985 prices, with a poverty gap of 5.0%, ie. lower figures than most but not all African, Latin American or South Asian countries (Tanzania and Mexico, for example, have fewer poor and a smaller poverty gap than the Kyrgyz Republic).

<sup>11</sup> District heating is a central system of providing heating to a community. About a quarter of households in the Kyrgyz Republic have access to the district heating network; 80% of these are in Bishkek.

Even more vivid pictures of people living on the brink emerge from the report on interviews of adults in 154 poor households in the southern oblasts of Osh and Djalalabad in September and October 1994 (Howell, 1996). Howell highlights the variety of coping strategies, but the overwhelming impression is of choices having to be made among satisfaction of basic needs, and often at the expense of future income. Should an animal be sold to buy supplies for schoolchildren or should the children be kept at home on the farm? Should a fruit tree be chopped down to save expenditure on coal? Non-essential items such as furniture or sheets or towels were being sold by urban dwellers who had no plot of land to fall back on for food.

The 1993 KMPS and more frequent LSMS surveys since 1996 should allow us to make more firmly based generalizations about the evolution of poverty during transition in the Kyrgyz Republic. Initial poverty assessments have been made by the World Bank (1995, extended by Ackland and Falkingham in Falkingham et al., 1997, 81-99), and by the Research Triangle Institute (1996). The following analysis draws on these sources, although the figures which we have obtained directly from the 1993 data set vary slightly from published figures.

In 1993 poverty was greater in rural areas. By the expenditure measure 56% of the rural population lived in households with an average expenditure below the poverty line, and 31% were very poor (ie. per capita household expenditure was less than half of the poverty line); the comparable figures for urban areas were 34% and 13% (Pomfret, 1998). The rural-urban comparison is sensitive to assumptions about consumption of non-marketed produce, which was large but likely to have been misreported even in the KMPS.<sup>12</sup>

Green and Vokes (1997, 265-6), referring to Asian Development Bank field studies, argue that rural-urban wage differentials in the Kyrgyz Republic widened markedly during the first half of the 1990s. Farmers suffered from the near collapse of input supplies (no fertiliser, pesticide or herbicide, inferior seeds, disrupted supply of fuel and spare parts), large adverse relative price changes and mushrooming rural debt. Ackland and Falkingham also claim that non-payment of farm wages and lack of rural credit widened the rural-urban gap after 1993, although net increases in livestock during 1993 suggest that people were not yet running down productive assets to maintain current consumption.<sup>13</sup>

Table 3 reports the results of a probit analysis to identify partial correlations with rural and urban poverty.<sup>14</sup> The regional dimension supports Howell's decision to focus on Djalalabad when studying coping strategies. Ackland and Falkingham argue that the regional differential may be exacerbated by the slowness of transfers from Bishkek, the capital in the north, to southern jurisdictions such as Djalalabad. More surprising are the negative coefficients for Chu oblast, which may reflect the successful response of farmers switching to previously illegal crops.<sup>15</sup> Households in

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<sup>12</sup> In the KMPS 43% of urban and 71% of rural households reported having had access to a private plot of land during the preceding twelve months.

<sup>13</sup> The two poor pastoral areas included in Howell's 1994 survey, however, recorded high rates of selling livestock (55% of households in one and 79% in the other) in order to buy food, coal, medicine, bus tickets and clothes, especially to enable children to continue attending school.

<sup>14</sup> For more details see Pomfret (1998). A similar exercise is reported by Ackland and Falkingham (in Falkingham et al., 1997, 81-99) with essentially similar results for signs and significance tests, but disturbingly different coefficients.

<sup>15</sup> In the mid-1990s the UN Drug Control Programme estimated that four fifths of the heroin consumed in Europe came from Central Asia (Kaser and Mehrotra, 1996, 248). The best growing areas are in the Kyrgyz Republic, especially in the Chu oblast. Before 1917 what is now the Kyrgyz Republic accounted for a fifth of world opium output.

Bishkek are least likely to be poor, and urban poverty appears to be most likely in the omitted category, Osh, the second largest city, located in the south.

Simple cross-tabulations from the KMPS show Turkic-headed households to be more likely than Slav-headed households to be below the poverty line, but this ethnic relationship is not supported in Table 3. In rural areas, all ethnic groups are less likely to be poor than Kyrgyz-headed households, but the negative coefficient is only significant for the heterogeneous “other Turkic” and “non-Russian Slav” categories, not for Uzbek or Russian-headed households.<sup>16</sup> In urban areas, none of the ethnicity coefficients differ significantly from zero. Although the crosstabs reflect widespread perceptions of the ethnic dimension of poverty in Central Asia, the probit results are consistent with the conclusions of Lubin (1984), who found that Slavs in Uzbekistan had higher-wage jobs because they were better educated; Central Asians often chose not to pursue educational opportunities and gravitated to occupations offering opportunities for unofficial income.

A surprising result in Table 3 is that, although urban female-headed households are more likely to be poor than urban male-headed households, the same is not true for rural households. The lack of evidence of gender effects in rural areas may be due to inability to identify intra-household allocations of effort and consumption.

The evidence on family size is also inconclusive. The relationship between large families and poverty is complex. Having more children over six is positively associated with being poor, but having more children under six is not. For urban households, having more adults in the household is associated with a lower probability of being very poor.

The negative relationship between the household head's education level and the probability of being poor is as expected. Other labour market status variables exhibit no clear pattern. Pensioners were generously treated in the old system, although that began to change during the mid-1990s. Unemployment was still very low in 1993, when many workers were not being paid but few were officially unemployed. A late 1994 labour force survey for Kazakstan (reported by Klugman and Scott in Falkingham et al., 1997, 118-40) found the newly poor included unemployed, unpaid workers and those suffering from steep falls in real wages. Similar forces were at work in the Kyrgyz Republic, where unemployment was only 6% of the labour force in late 1993, but it had increased to 20% by the time of the 1996 LSMS (37.5% for 16-25 year-old males).

The evidence from household surveys in the Kyrgyz Republic confirms that GDP measures exaggerate the extent of the fall in average welfare during the first half of the 1990s but hide the increase in inequality. Given that incomes were low by Soviet standards in 1991 and fell substantially during the next half decade, the widening inequalities amidst a falling aggregate consumption have inevitably increased the incidence of poverty in the Kyrgyz Republic. Analysis of household survey data can help to identify the correlates of poverty and thus provide some guidance to poverty alleviation strategies. Poverty is highest in rural areas, especially those far from the capital. Female-headed households are more likely to be poor than male-headed households, but this relationship is only significant in urban locations and appears to apply particularly to Russian households. Households with a large number of children are more likely to be poor, although this applies particularly to Kyrgyz and Uzbek households. Variations in the education level of the household head are generally not significant below the tertiary level, but having a household head with higher education is negatively related to the probability of being poor. The marginal effects of

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<sup>16</sup> The other non-Kyrgyz category contains Korean and Farsi-speaking groups, but primarily consists of other Turkic groups. Pomfret (1998), with other specifications of the probit analysis, identifies some ethnic patterns. In Kyrgyz and Uzbek households large numbers of children are associated with poverty, but having a female head is not. In Russian households family size is not a problem, but not having a working age male is.

the explanatory variables in Table 3 are small, apart from location in Bishkek and higher education; at mean values the marginal effect of residence in Bishkek is -0.25 (ie. reduces by 25% the probability of a household being poor) and of higher education is -0.14, while no other marginal effect has an absolute value above 0.1.

#### 4. Concluding Remarks

This paper started from the relationship between transition strategy and economic performance in Central Asia. The Kyrgyz Republic has been the most ambitious of the CARs in the speed and extent of its transition to a market-oriented economy. This strategy has been associated with a serious decline in living standards and widening of income inequalities. Those most at risk are the rural poor in the south of the country and the least-educated. Uzbekistan has adopted a more gradual transition strategy than the Kyrgyz Republic, or Kazakhstan, and appears to have experienced a smaller decline in living standards. The experience of Turkmenistan and Tajikistan is more difficult to interpret in a comparative setting because for most of the post-independence era the former has attempted to maintain the economic status quo while the latter has been disrupted by armed conflict.

The future prospects are less clear. Supporters of rapid transition point to the benefits of creating the right environment for a market-based economy as quickly and as fully as possible, in order to set the scene for future growth. On the other hand, the decline in living standards in the Kyrgyz Republic may be undermining future growth prospects by inducing responses which reduce the capital stock. The necessity to sell or slaughter livestock or to cut down fruit trees to cover the current consumption needs of poor families has already been mentioned.

There is evidence that the distribution of human capital is becoming less egalitarian with changes in the delivery of education and healthcare. Particularly worrying for long-term growth is the drop in kindergarten enrolments; in the Kyrgyz Republic about a third of the age group attended kindergartens in 1991, but by 1994 enrolment rates had fallen below 10% of children in the target age group as state enterprises and collective farms came under pressure to impose charges or reduce quality or divest themselves of kindergartens (Klugman, Marnie, Micklewright and O'Keefe in Falkingham et al., 1997, 183-201). Such asset inequality reinforces the likelihood that underprivileged children will grow up to be poor and reduces the prospects for long-term growth.

Kazakhstan is less vulnerable to vicious circles of poverty in view of its higher initial living standards. It does, however, seem to be a less satisfactory test of the benefits of rapid reform as the government is widely believed to have failed to provide the framework of good governance necessary for a successful market economy (Kalyuzhnova, 1998; Olcott, 1998). Moreover, widening inequality and severe reductions in public spending on education and health undermine future growth prospects.

Uzbekistan has pursued a more gradual transition strategy, which can be directly linked to the smaller fall in GDP and perhaps with less severe inequality than in the Kyrgyz Republic (Falkingham et al., 1997, 114). In part, the relative success in protecting those most threatened by transition may be due to policy innovations such as decentralization of social assistance through the mahallah system (Pomfret and Anderson, 1997) or to private transfers (Coudouel et al., in Falkingham et al., 1997, 202-20), but we do not know of any firmly based quantitative assessments of these relationships. What is more readily documentable is that Uzbekistan has been the most successful CAR in protecting the level of government spending and minimizing cuts in health and education spending, which could augur well for the future. In Uzbekistan, however, the government still keeps a heavy hand on the allocative mechanism which discourages entrepreneurship and,

especially, the creation of new private enterprises.

Any overall assessment of the relationship between policies and performance in Central Asia is thus highly conditional. The Kyrgyz Republic has pushed farthest with the reforms advocated by many outside advisers, but its performance in the first half decade after independence was significantly poorer than that of Uzbekistan. Turkmenistan with its strategy of minimizing economic change under a highly personalized government has performed poorly with inflation still not controlled and no immediate prospect of economic growth. Whether future growth prospects are rosier in the reformed Kyrgyz economy or with the unrestrained crony-capitalism of Kazakhstan or the more regulated paternalism of Uzbekistan is the key issue for the rest of this decade.

**Table 1: Income per head, income distribution and poverty Republics of the USSR 1989/90**

	Population (million) mid-1990	Per cap GNP <sup>a</sup> (1990)	Gini coeff (1989)	Poverty (% of pop) <sup>b</sup> (1989)
USSR	289.3	2870	0.289	11.1
Kazak	16.8	2600	0.289	15.5
Kyrgyz	4.4	1570	0.287	32.9
Tajik	5.3	1130	0.308	51.2
Turkmen	3.7	1690	0.307	35.0
Uzbek	20.5	1340	0.304	43.6
Armenia	3.3	2380	0.259	14.3
Azerbaijan	7.2	1640	0.328	33.6
Georgia	5.5	2120	0.292	14.3
Belarus	10.3	3110	0.238	3.3
Moldova	4.4	2390	0.258	11.8
Russia	148.3	3430	0.278	5.0
Ukraine	51.9	2500	0.235	6.0
Estonia	1.6	4170	0.299	1.9
Latvia	2.7	3590	0.274	2.4
Lithuania	3.7	3110	0.278	2.3

Note: (a) GNP per capita in US dollars computed by the World Bank's synthetic *Atlas* method.  
(b) poverty = individuals in households with gross per capita income less than 75 rubles.

Sources: columns 1-2, World Bank (1992, 3-4); columns 3-4, Atkinson and Micklewright (1992, Table U13) - based on Goskomstat data (HBS).

**Table 2: Performance and Initial Conditions Indicators  
Successor States to the USSR 1989/96**

	<b>Real GDP (1996 as % of 1989)</b>	<b>Inflation<sup>a</sup> (1996)</b>	<b>Terms of trade<sup>b</sup></b>
Kazakstan	45	29	+19
Kyrgyz Rep.	52	23	+1
Tajikistan	37	100	-7
Turkmenistan	57	130	+50
Uzbekistan	84	100	-3
Armenia	39	9	-24
Azerbaijan	38	12	-7
Georgia	31	9	-21
Belarus	63	102	-20
Moldova	35	11	-38
Russia	51	17	+79
Ukraine	42	30	-18
Estonia	69	12	-32
Latvia	52	10	-24
Lithuania	42	13	-31

Note: (a) annual increase in consumer price index (end of year)

(b) impact on terms of trade of moving to world prices, calculated at 105-sector level of aggregation using 1990 weights.

Sources: columns 1-2, EBRD (1997, 7&9); column 3, Tarr (1994).

**Table 3: Probit Analysis of Household Poverty, Kyrgyz Republic 1993**

	RURAL		URBAN	
	Poor	Very Poor	Poor	Very Poor
Constant	-0.028	-0.713**	-0.367+	-0.836**
<u>Region (oblast)</u>				
Narun	0.182	0.268	0.249	0.339
Talas	-0.121	0.030	-0.090	-0.678+
Djalalabad	0.479**	0.574**	-0.269	-0.479*
Issuk-Kul	0.082	0.207	-0.296	0.448
Chu	-0.377**	-0.255*	0.011	-0.664**
Bishkek			-0.523**	-0.740**
<u>Ethnicity of household head</u>				
Russian	-0.171	-0.223	0.112	0.021
Other Slav	-0.619**	-0.577**	0.187	-0.148
Uzbek	-0.182	-0.409	-0.108	0.108
Other non-Kyrgyz	-0.388**	-0.657**	-0.024	-0.307
<u>Demographic characteristics</u>				
Female head	-0.024	0.081	0.329**	0.378*
Number of adults	0.035	0.023	-0.026	-0.118*
Number of children under 6	0.071+	0.060	0.102	0.203*
Number of children over 6	0.079**	0.074*	0.164**	0.206**
<u>Education of household head</u>				
Not beyond primary school	0.095	0.117	-0.118	-0.024
Incomplete secondary school	0.038	-0.010	-0.108	0.065
Higher education	-0.247*	-0.270*	-0.353**	-0.385*
<u>Labour market status of head</u>				
Entrepreneur	-0.283	-0.463+	-0.451*	-0.238
Unemployed	0.025	0.067	0.151	0.394*
Retired	0.377*	0.215	-0.035	0.362+
Student	0.441	0.777+	0.308	0.037
Disabled	0.063	0.122	0.411	0.696*

Notes: Survey included 1101 rural and 828 urban households; poor households' expenditure was below a nutrition-based poverty line and very poor households spent less than half of this amount; \*\*, \* and + indicate coefficients significantly different from zero at the 1%, 5% and 10% levels respectively.

Source: Pomfret (1998).

## References

- Atkinson, Anthony, and John Micklewright (1992): *Economic Transformation in Eastern Europe and the Distribution of Income*. Cambridge University Press, Cambridge UK.
- Bauer, Armin, Ni<sup>o</sup>a Boschmann and David Green (1997): *Women and Gender Relations in Kazakstan: The social cost*. Asian Development Bank, Manila.
- Blanchard, Olivier (1997): *The Economics of Post-Communist Transition*. Clarendon Press, Oxford UK.
- Buckley, Robert, and Eugene Gurenko (1997): Housing and Income Distribution in Russia: Zhivago's legacy, *World Bank Research Observer*, **12**, 19-32.
- Cornia, Giovanni Andrea (1996): Transition and Income Distribution: Theory, evidence and initial interpretation, *Research in Progress I*, United Nations University World Institute for Development Economics Research, Helsinki.
- Deaton, Angus (1997): *The Analysis of Household Surveys: A microeconomic approach to development policy*. Johns Hopkins University Press, for the World Bank, Baltimore MD.
- Dmitrieva, Oksana (1996): *Regional Development: The USSR and after*. St. Martin's Press, New York.
- EBRD (1997): *Transition Report Update, April 1997*, European Bank for Reconstruction and Development, London.
- ECE (1997): The Central Asian Economies 1991-1996, *Economic Survey of Europe in 1996-1997*. United Nations Economic Commission for Europe, Geneva, 179-211.
- Falkingham, Jane, Jeni Klugman, Sheila Marnie and John Micklewright eds. (1997): *Household Welfare in Central Asia*. Macmillan, Basingstoke UK.
- Finkel, Eugen, and Helen Garcia (1997): Rehabilitating the Kyrgyz Republic's Power and District Heating Services, in Michael Cernea and Ayse Kudat (eds) *Social Assessments for Better Development: Case studies in Russia ad Central Asia*. World Bank, Washington DC, 187-97.
- Foster, James, J. Greer and Eric Thorbecke (1984): A Class of Decomposable Poverty Measures, *Econometrica*, **52**, 761-5.
- Green, David, and Richard Vokes (1997): Agriculture and the Transition to the Market in Asia, *Journal of Comparative Economics*, **25**, 250-80.
- Grosh, Margaret, and Paul Glewwe (1998): Data Watch: The World Bank's Living Standards Measurement Study Household Surveys, *Journal of Economic Perspectives*, **12**, 187-96.
- Havrylyshyn, Oleh, and Hassan Al-Atrash (1998): Opening Up and Geographic Diversification of Trade in Transition Economies, *IMF Working Paper WP/98/22*, International Monetary Fund, Washington DC.

Howell, Jude (1996): Poverty and Transition in Kyrgyzstan: How some households cope. *Central Asian Survey*, 15(1), March, 59-73.

Kalyuzhnova, Yelena (1998): *The Kazakstani Economy: Independence and transition*. Macmillan, Basingstoke UK.

Kapur, Ishan, and Emmanuel van der Mensbrugge (1997): External Borrowing by the Baltics, Russia and Other Countries of the Former Soviet Union: Developments and Policy Issues, *IMF Working Paper WP/97/72*, International Monetary Fund, Washington DC.

Kaser, Michael, and Santosh Mehrotra (1996): The Central Asian Economies after Independence, in Roy Allison (ed.) *Challenges for the Former Soviet South*, Brookings Institution, Washington DC (for the Royal Institute of International Affairs, London UK), 217-305.

Klugman, Jeni, and Jeanine Braithwaite (1998): Poverty in Russia during the Transition: An overview, *World Bank Research Observer*, **13**, 37-58.

Lubin, Nancy (1984): *Labour and Nationality in Soviet Central Asia: An uneasy compromise*, Princeton University Press, Princeton NJ.

Marnie, Sheila, and John Micklewright (1997): Poverty in pre-reform Uzbekistan: What do official data really reveal? *Review of Income and Wealth*, 40(4), December, 395-414.

Milanovic, Branko (1998): *Income, Inequality, and Poverty during the Transition from Planned to Market Economy*, World Bank, Washington DC.

Olcott, Martha Brill (1998): *Kazakhstan: A faint-hearted Democracy*. Carnegie Endowment for International Peace, Washington DC.

Pomfret, Richard (1995): *The Economies of Central Asia*. Princeton University Press, Princeton NJ.

Pomfret, Richard (1996): *Asian Economies in Transition*. Edward Elgar, Cheltenham UK.

Pomfret, Richard (1998): Poverty in the Kyrgyz Republic, *University of Adelaide School of Economics Working Paper*, June.

Pomfret, Richard, and Kathryn Anderson (1997): *Uzbekistan: Welfare Impact of Slow Transition*, United Nations University World Institute for Development Economics Research (UNU/WIDER WP135), Helsinki.

Research Triangle Institute (1996): *Kyrgyzstan Analysis Report, Spring 1996, Living Standard and Measurement Survey*. Center for International Development, P.O. Box 12194, Research Triangle Park, NC 27709-2194, USA (10 December).

Roberts, Bryan (1997): New Evidence on Household Consumption, the Shadow Economy, and Relative Prices during Transition to a Market Economy, unpublished paper (University of Miami, Coral Gables FL).

Tarr, David (1994): How moving to World Prices affects the Terms of Trade of 15 Countries of the Former Soviet Union, *Journal of Comparative Economics*, **18**, 1-24.

World Bank (1992): *Measuring the Incomes of Economies of the Former Soviet Union*, *Policy Research Working Papers WPS 1057*, Washington DC.

World Bank (1995): *The Kyrgyz Republic: Poverty assessment and strategy* (Report No.14380-KG), World Bank, Washington DC.

World Bank (1996): *World Development Report 1996: From plan to market*. Oxford University Press, for the World Bank, New York.