## Kyrgyz Republic

**Sources:**
Atkinson and Micklewright 1992, Tables UE5, UE6, and UI3 from the Statistical Appendix
Alexeev and Gaddy 1993, Table 3, 4a and 4b
Milanovic 1998, Country tables in the Appendices 2 and 4
World Bank Poverty Monitoring Database 2002
Transmonee 2004
Deininger & Squire, World Bank 2004

The documentation relies heavily on Atkinson and Micklewright (1992).

**Surveys:**
**Family Budget Survey 1988, 1989, 1990**
The Family Budget Survey, used by Atkinson and Micklewright (1992), Alexeev and Gaddy (1993) and Milanovic (1998), was a survey of families of persons employed in the state sector and of families of collective farmers (covering the whole USSR). Families have been selected by sampling individuals at their place of work. Sampling appears to have operated principally on a quota basis, with quotas for economic sectors, industrial branches and, within these, republics and oblasts. Beneath this level enterprises were selected on the basis of average age level and within each enterprise individuals were chosen according to their skill level and wage. Once included in the sample, an individual (and his or her family) was asked to participate until they left the enterprise or retired; retirement did not lead to automatic exclusion from the sample but was usually associated with a family dropping out from the survey. Replacement occurred only when a household dropped out from the survey. Participating households were monitored by the survey throughout the year. There were interviews with the whole household twice every month with diary records being maintained continuously. At inception in its post-war form in 1951, the sample size was about 51 000 families, in 1969, 62 000 and in 1988, 90 000. A family was defined as relatives who share a common budget. Approx. one third of the oblasts were not represented in the survey, high wage heavy industrial branches were over-represented in the selection of enterprises and less-skilled workers and those outside the direct production process were less likely to be selected. State farm workers seem also to have been under-represented but the rural population as a whole over-represented. When the sample size was expanded in 1988 it was specifically to correct problems of regional and branch representation.

For the above mentioned reasons the FBF sample was unrepresentative: families of those employed in the co-operative or private sectors and those not employed were in general excluded, old-age pensioners were heavily under-represented since they were originally excluded, the probability of selection was proportional to the number of working members since the sampling unit was the worker and, the panel nature of the survey biased the sample towards families of elder persons with long service records.

No figures of non-response are available but apparently the response rates were very high due to material and moral incentives to participate. Where non-response did occur, the household concerned was substituted with another household with similar observable characteristics.

When reporting results, figures have been adjusted for the over-sampling of collective farm families.

Annual gross family income was collected, including all money income from employment and from social security benefits. Reported cash income from sales of agricultural produce was included as was the value at state prices of agricultural production for self-consumption. The value of benefits in-kind from the employers such as meals and transport was included. Apparently benefits in-kind from the state are not included. Respondents' information on earnings and pensions were checked with employer records.

In Atkinson and Micklewright (1992) the reference period was a year but the data has been divided by twelve in the tables. The authors had to interpolate in order to arrive at values for the mean, median, and the Gini coefficient. To do this the authors used the program INEQ written by F.A. Cowell. Alexeev and Gaddy (1993) used a simple nonparametric technique based on the Kolmogorov-Smirnov test to fit the data to a lognormal distribution. They report that the estimates for 1990 are more reliable than those for 1988 as incomes were grouped only into 5 categories in 1988 but 7 in 1990.

**Earnings Surveys 1981, 1986, 1989**

Two sources of data have been used for earnings by Atkinson and Micklewright (1992). The first is Goskomstat 100% census of enterprises, held periodically since 1956, and from 1976 every five years (this is called the March Census by the authors). Enterprises were obliged to provide information on earnings for all their employees in a number of discrete earnings bands. The second source relates to data for 1984 and 1989. This is a survey of households of state sector and collective farm employees (this is called the March Household Survey by the authors). The information from this survey should be comparable with the first one. The March census covered only persons working in state enterprises, whereas those about 10% working on collective farms or private agricultural plots were excluded. Thos employed by "social organisations", usually taken to mean the Communist Party and its close affiliates, were also excluded. The earnings data used from the household survey 1989 have been selected to include only those employed in state enterprises and farms (i.e. excluding collective farm workers). Employees not working a full month were excluded and only first jobs were considered. Part-time workers were included but are excluded from the tables provided by the authors.

The earnings concept is gross earnings for the month in question. The monthly bonus and the monthly value of any quarterly bonuses were included but annual bonuses or any other rewards based on a period of more than three months were excluded. No account was taken of the value of income in kind provided by enterprises. The reference period was gross earnings in March for both surveys. The authors had to interpolate in order to

arrive at values for the mean, median, and the Gini coefficient. To do this the authors used the program INEQ written by F.A. Cowell.

**Kyrgyz Multipurpose Poverty Survey 1993**

The survey is used by Deininger & Squire (2004) and Milanovic (1998). The survey was designed to be nationally representative. Stratification was made based on information from the Census in 1989. A stratified, multi-stage sampling procedure was used, with the number of stages dependent on whether households were being drawn from urban or rural areas. The sample size was approximately 2000 households. The survey was conducted in October and November 1993 in one visit to the households. The income concept was in principal very extensive including wage income, self-employment income, subsidies from employers and local authorities, child care allowances, gifts or charity and other sources like pensions, sickness pay, unemployment benefits, rents, interest and dividends and alimony. Underreporting of income appears however to be a large problem undermining the quality of the estimates.

The expenditures were asked for several recall periods. Daily expenses were asked for last 7 days; health, services, housing and utilities, and education for last 30 days; clothing and footwear for last 3 months; and household appliances, transportation, and housing and furnishing for last year. The purchase of some durables is included in the aggregate as well as in-kind items and home production. Imputed rents are not included in the aggregate. Even if the aggregate is quite comprehensive the resulting inequality estimates are quite different from those reported in the Poverty Monitoring Survey described below (apart from the first one). From Milanovic (1998), WIDER has calculated the decile shares from the reported decile mean incomes since the reported decile shares were not in line with the Gini coefficient.

**Poverty Monitoring Survey 1993, 1996, 1997, 1998, 1999**

The sampling procedures used for this survey was similar to the multipurpose survey as described above. A new sampling frame was however used based on the Kyrgyz Household Registration System. The first round included about 2000 households while that later ones include 2500-3000 households. The surveys were conducted in October-November.

The questionnaires were significantly different from those in the multipurpose survey. The collection method was such that a separate interview for the income and expenditures was made two weeks after the major interview. The expenditure questionnaire asked the amount and value of food items purchased for consumption in the house during the past 12 months, and the amount spent on each item of consumption since the last visit to the household (i.e. last two weeks). In the aggregate, the consumption during a typical month was used. Some frequently purchased non-food items were asked for past two weeks. Home production and most other items were asked for last year. The consumption aggregate includes in-kind items and the use value of durables but not imputed rent. It is unclear why the inequality estimates for 1996 differ so much from the other years. In principal, no major changes should have taken place in the

survey. Some of the problems might be related to the aggregation of Deininger & Squire (2004).

The income concept also looks quite extensive but there is no trend in the estimates. Income from employment (also food and other in kind items), subsidies, self-employment, total pensions, allowances (disability, unemployment) and imputed rents are considered. In this case the problems are not related to the aggregation of Deininger & Squire since pre-aggregated variables were used.

**Data from Transmonee**

Earnings: The survey excludes small enterprises and cooperatives. November is the reference month for the earnings.

Incomes: Unclear what survey this refers to. The income concept is clearly disposable incomes. No comments about in-kind incomes but they are probably included. The number of surveyed households seems to be 2000-3000.