UNITED NATIONS
ECONOMIC COMMISSION FOR EUROPE
CONFERENCE OF EUROPEAN STATISTICIANS

Seminar on poverty measurement
5-6 May 2015, Geneva, Switzerland
Agenda item 4: Monetary poverty

Poverty measurement in the Commonwealth of Independent States: Issues of data comparability

Prepared by the Interstate Statistical Committee
of the Commonwealth of Independent States[1]

Abstract

In the paper a short review of methodological and conceptual approaches to poverty measurement applied in the Commonwealth countries will be presented. The aim of this work is to reveal the main reasons of incomparability of data in estimation of absolute and relative poverty and socio-economic differentiation of population which exists between the CIS countries. The paper discusses the differences in the sources of information, in composition of indicators used to build the distribution series in terms of material well-being. Listed are various methods used to calculate the absolute poverty line in the Commonwealth countries which have national, climatic and other features. Much attention in the paper is given to the existing differences in the estimation of receipts in kind of food and non-food products, subsidies and benefits from the government, employers and other.

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[1] Valentina Brysseva, Deputy Head of Social and Demographic Statistics Department

The world statistical practice has no common approach to the definition of poverty. As a social and economic phenomenon poverty is closely linked with economic development of countries. At different stages of its development, each country may use different approaches to the definition of poverty depending on the purpose of a study.

The results of poverty measurements are used:
- to design poverty reduction programmes and projects, as well as to evaluate their performance;
- to measure the number of people who are in need of social support;
- to monitor social unrest;
- to provide targeted social assistance;
- to compare itself with other countries, etc.

The CIS countries have developed national poverty reduction strategies aimed to achieve one of the most important Millennium Development Goal to half, by 2015, poverty and hunger.

Most CIS countries use internationally accepted fundamental concepts of poverty measurement:
- *absolute poverty* based on the extent to which income or expenditures correspond to an established minimum subsistence level;
- *relative poverty* based on the extent to which income or expenditures correspond to median levels;
- *subjective poverty* based on subjective views of people regarding their well-being.

I.   Data sources

At present, the key data sources for measuring poverty and inequalities in the CIS countries are sample household surveys of income and expenditures (living standards). Such surveys are conducted on a regular basis and cover over 100,000 households across the CIS.

The surveys follow common principles; however, they still have considerable variations in sample designs, date collection and processing modalities and survey designs.

Most CIS countries use for reference population census records for designing household samples.

Some countries utilize also additional sources: Moldova uses lists of power consumers, Tajikistan uses lists of houses in cities and household data in rural areas, and Ukraine uses data from the Household Register. In Belarus, population census data are used during five years after such census was conducted and in the subsequent five years they use registers of electors to update samples.

When designing a sample, *all households living in a country, apart from collective households* (individuals staying for a long time in hospitals, care homes for elderly people, boarding schools and other institutions, monastery, religious communities and other collective dwelling quarters), *are to be covered*.

All CIS countries use the territorial principle for designing samples which is in line with the international standards.

The share of surveyed households in general population ranges from 0.1% in Russia and Ukraine, to 1% in Armenia.

A household survey design includes, as a rule, the collection of information on income, expenditures, food consumption, availability of consumer durables and other characteristics of households' lives.

In most CIS countries there are continuous improvements in household surveys and changes in sample design methodologies and survey programmes are considerably expanding.

II.   National estimates of absolute poverty

Absolute poverty concept is used for official estimates of poor population almost in all CIS countries[2]. This is because for most countries one of the key objectives of poverty measurements is to determine the population requiring social support.

Absolute poverty concept is based on setting a poverty line, i.e. such level of income (or consumption), below which a family is not able to buy food and other living essentials at a minimum level.

Measurements using national poverty lines are regularly conducted in Russia from 1992, in Belarus from 1995, from 1996 in Kazakhstan and Kyrgyzstan, in Moldova and Ukraine from 2000, in Azerbaijan from 2001 and in Armenia from 2004.

In Tajikistan, the national Statistics Agency, with the World Bank's support, conducted several rounds of living standards surveys in the country. Such surveys resulted in the estimates for 1999, 2003, 2007 and 2009. At present, the Statistics Agency in cooperation with the World Bank's experts is conducting activities to assess poverty line based on the results of a sample household budget survey.

The CIS countries have achieved, since 2001, considerable progress in poverty reduction. The progress in absolute poverty reduction in most CIS countries is well ahead of the Millennium Development targets.

Percentage of population whose income (expenditures) is below national poverty lines
(% of total population)

		2001		2005		2010		2012		2013
Azerbaijan		49.0		29.3		9.1		6.0		5.3
Armenia		…		53.5[1]		35.8		32.4		32.0
Belarus		28.9		12.7		5.2		6.3		5.5
Kazakhstan		46.7		31.6		6.5		3.8		2.9
Kyrgyzstan		56.4		43.1		33.7		38.0		37.0
Moldova		54.6		29.1		21.9		16.6		12.7
Russia		27.5		17.8		12.5		10.7		10.8
Tajikistan		81.0[2]		53.5[3]		46.7[4]		…		35.6[5]
Uzbekistan		27.5		26.2		…		16.0[6]		…
Ukraine		83.7		28.4		8.8		9.1		8.4

[1] 2004
[2] 1999
[3] 2007
[4] 2009
[5] Preliminary data.
[6] 2011

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[2] In Ukraine, according to the National Poverty Reduction Strategy approved in 2001, the official poverty line is set at the level of 75% of median equivalent income per capita per month. In addition to that, from 2000, there is a government social standard, minimum subsistence, which serves as an absolute poverty line.

It should be noted that the percentages of poor population vary considerably across the countries and it is explained not only by differences in living standards in these countries but also by different methodological approaches to estimations: use of different lines for estimating poor population as well as different indicators (income or expenditures) to characterize well-being levels.

Some countries (Belarus, Kazakhstan, Russia, and Ukraine) use *minimum subsistence levels* as national poverty lines.

Minimum subsistence standard represents the quantities and structure of consumption of basic goods and services at a minimum permissible level required to maintain active physical state of adults and social and physical development of children and youth.

Minimum subsistence values are set for the population at large, as well as for specific sociodemographic groups: working age population, retirees, and children of different age groups.

The structure of a *consumption basket* for defining a minimum subsistence level is prepared and approved by relevant government and legislative authorities of the CIS countries.

A food basket is based on consumption standards prepared by national Nutrition Institutions in Azerbaijan, Kazakhstan and Russia; by Health Ministry's departments in Belarus, Kyrgyzstan and Ukraine; and by the Institute of Economy, Finance and Statistics in Moldova. Food packages are defined for specific sociodemographic groups. In most countries the consumption standards are developed based on human physiological needs in energy and nutrients recommended by the UN Food and Agricultural Organization (FAO) and the World Health Organization (WHO).

Belarus, Kazakhstan and Russia include non-food goods and services into minimum subsistence threshold as a fixed percentage of the cost of minimum food basket. In Russia, the cost of food comprises 50% of the minimum subsistence value, the remaining 50% account for non-food goods and services; in Kazakhstan such distribution is 60% and 40%. In Belarus, the cost of non-food goods and services is set as a fixed percentage of 77% of the cost of minimum food basket.

Azerbaijan, Armenia, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan use poverty lines for estimating poverty levels. As a rule, they use lower values for estimating poverty levels than for calculating minimum subsistence values. For instance, in 2013, the poverty line in Kyrgyzstan was 50% of the minimum subsistence value, in Moldova – 74%.

Poverty line has several values:

- *extreme poverty line (food poverty line)* is based on the cost of a food basket that proves daily food intake per capita: 2,232 Kcal in Armenia, 2,100 Kcal in Kyrgyzstan, 2,282 Kcal in Moldova and 2,250 Kcal in Tajikistan;
- *general poverty line*, which represents minimum consumption including food and non-food goods and services.

Starting from 2009, Armenia is using three poverty thresholds:

- *food poverty line*;
- *lower general poverty line* (food component equals 70% of the cost of a consumer basket); and
- *upper general poverty line* (food component equals 56.5% of the cost of a consumer basket).

Absolute poverty estimates in the CIS countries, 2013

		National poverty line		Percent of population having income (consumer expenditures) below the national poverty line (%)
		Units of national currency, per capita, per month	% of an average salary	
Azerbaijan	Poverty line	125 manat	29	5.3
Armenia	Upper general poverty line	39,200 dram	27	32.0
	Lower general poverty line	32,300 dram	22	13.3
	Food poverty line	23,000 dram	16	2.7
Belarus	Minimum subsistence	1,023,500 Belarus rouble	20	5.5
Kazakhstan	Minimum subsistence	17,800 tenge	16	2.9
	Minimum food basket	10,700 tenge	10	0.1
Kyrgyzstan	General poverty line	2,314 som	20	37.0
	Extreme poverty line	1,354 som	12	2.8
Moldova	Absolute poverty line	1,196 leu	32	12.7
	Extreme poverty line	647 leu	17	0.3
Russia	Minimum subsistence	7,306 rouble	25	10.8
Ukraine	Minimum subsistence	1,114 hryvna	34	8.4

The composition of subsistence minimums (poverty line) is revised with different time intervals and at various times in the CIS countries. Generally, such revisions are aimed to increase consumption standards for maintaining health and life of people.

Last time the composition of the subsistence minimum was revised in 2013 in Russia, in 2014 in Belarus and in 2015 in Azerbaijan.

Statistical analysis of welfare indicators used to measure poverty is based on the results of household budget surveys, which allow analysing the distribution and social differentiation of the population by levels of wealth and gaining information on the living standards of different population groups.

Each country decides for itself what to take as a *main criterion of wealth*: income or expenditures.

When estimating poverty levels, most CIS countries use the indicators based on the *consumption* of goods and services by the population. This is explained by the fact that during surveys households are reluctant to provide data on their income.

Aggregated consumption indicators in the CIS countries include cash expenditures as well as imputed value of food and noon-food goods and services which households receive without pay (in-kind goods and services).

In-kind inflows play an important role in the assessment of living standards of the population in the CIS countries, especially in rural areas.

Percentage of in-kind inflows in household income

(% of total income)

	All households	including	
		urban	rural
Armenia	6.3	1.6	15.7
Belarus	3.7	2.5	7.1
Kazakhstan	5.3	1.9	10.8
Moldova	8.1	1.4	15.5
Russia	2.9	2.0	7.3
Tajikistan	11.6	1.0	15.2
Ukraine	6.0	3.6	12.5

In-kind inflows significantly vary across the CIS countries in terms of the composi-tion and valuation methods. These may include:

- food from subsidiary farming and home-made products, provided as remuneration of labour, gifts, etc. In most countries, these are evaluated based on average purchase prices based on survey data on the quantity and value of similar products. Some countries (e.g., Moldova) use self-valuation methods when households evaluate themselves the cost of their products;

- non-food goods the value of which is estimated by households;

- services provided by employer , paid for in full or in part;

- preferences and subsidies (full or partial exemption from payment for goods or services), received in-kind from government, non-governmental or charity organizations (e.g., free travel on public transport for pensioners);

- imputed value of services from the use of durables available to a household. Such evaluations are made in Armenia and in Kyrgyzstan. For instance, in Armenia this is done by dividing the cost of an item purchased within the last 12 months by a maximum service life, which varies from 5 years for personal computers to 20 years for cars.

III.   Relative poverty assessments

The indicators characterizing relative poverty are currently estimated in some CIS countries (Belarus, Moldova, Russia and Ukraine), however, the estimation methods considerably differ:

1. Use of different indicators for estimating wellbeing distribution series: disposable resources in Belarus, consumer expenditures in Moldova, income in Russia and total expenditures in Ukraine.

2. Use of different *equivalency scales*. For estimating relative poverty, Moldova and Ukraine use the same equivalence scale as for estimating absolute poverty: first adult household member is assigned 1.0, second and each subsequent adult household member is assigned 0.7, and children are assigned 0.5; Ukraine applies 0.7 for each second and subsequent household member.

For estimating relative poverty levels Belarus has elaborated its national equivalence scale with the following values:

-1.0 for one adult household member above 18 years;

-0.8 for any other adult household members above 18 years;

-0.9 for children aged 6-18;

-0.7 for children aged 3- 6; and

-0.5 for children under age 3.

The differences in the estimates of absolute and relative poverty can be seen by the examples of some CIS countries:

Country	Indicator	Value (%)
Belarus (2012)	*Absolute poverty*	
	Share of population whose disposable resources per capita are below the subsistence minimum threshold	6.3
	Relative poverty	
	Share of population whose disposable resources per capita are below 60% of median equivalent vale	14.2
Russia (2013)	*Absolute poverty*	
	Share of population whose cash income per capita is below the subsistence minimum threshold	10.8
	Relative poverty	
	Share of population whose cash income per capita is below 40% of median equivalent value	12.0
	50% median equivalent value	18.7
	60% median equivalent value	25.6
Ukraine (2012)	*Absolute poverty*	
	Share of population whose total income per capita (including in-kind income) is below the subsistence minimum threshold	8.4
	Relative poverty	
	Share of population whose equivalent total income is below	
	60% median equivalent value	11.2
	75% median equivalent value	25.5

Kazakhstan has piloted relative poverty estimation. This exercise demonstrated that the relative poverty line which is 60% of median income used for consumption was equal to the subsistence minimum value used as a threshold for estimating absolute poverty. In this context, Kazakhstan recognized that it is premature to switch from absolute to relative poverty concept. At the same time, for international comparability of data on poverty incidence Kazakhstan is ready and plans to estimate absolute poverty levels.

IV.   Deprivations

Absolute poverty lines used by the CIS countries for official poverty estimates fail to assess in full the scale of this phenomenon. Today in most countries such term as poverty is determined not only by levels of income and expenditures. It is also related to the quality of access to health, education, basic utility services such as clean water and adequate sanitation. Therefore the countries set as one of priority objectives in poverty studies the elaboration of comprehensive

indicators and criteria that would enable assessing the overall level of well-being of the population and living conditions.

At present, the CIS countries pay close attention to international practice of introducing new methods for measuring living standards based on subjective opinions about deprivations.

Due to the national specifics and differences in the living conditions the CIS countries cannot use in full the methods for measuring deprivations which are used, for instance, in the European measurements of living standards. At the same time, the use of national criteria results in the issue of data comparability, both across the CIS countries and at the international level.

Amongst the CIS countries, it is Belarus, Moldova and Ukraine which are introducing the deprivation based approach as one of the ways to improve poverty assessments.

For assessing material deprivations Moldova uses the same criteria that are used in the EU countries. Belarus and Ukraine determined the list of deprivations based on the international best practice but taking into consideration the national specifics as well.

Belarus selected material deprivations based on the results of sample household surveys conducted in 2012 and 2013.

As a result, three major groups of deprivations were identified:

- deprivations in housing conditions (living in hazardous dwelling, in extremely constrained conditions);

- economic strain (lack of money to buy meat and fish, to replace worn-out outwear and footwear, to buy durables; inability to face unexpected financial expenditures);

- deprivations of households with children (lack of money to buy regularly fruits for children, to replace worn-out clothing and footwear, to supply children with textbooks and school supplies).

In the future there are plans to use the material deprivation theory for assessing inequalities in access to major social benefits as well as for multidimensional poverty assessments.

In Ukraine, the issues of deprivation-based poverty are analysed based on the results of a separate module in a sample household survey of living conditions conducted every two years. Before this module was developed, a special study was conducted which reviewed the opinions of respondents on 46 signs of poverty. Out of them 18 signs were included into the basic list of deprivations which were recognized as poverty signs by almost all respondents and tested in a pilot study.

IV.   Subjective poverty assessments

Subjective poverty concept is based on the self-assessment of their wellbeing by people and such people are guided by their own standards which are not linked to any absolute standard or a national average.

Subjective estimates are built based on surveying respondents and poverty threshold is selected subjectively.

The efficiency of this concept depends on the purpose of an assessment. It is inefficient for determining the number of people in need, however, it can be useful for measuring social satisfaction levels among the population. The levels, profile and structure of subjective poverty have become important indicators for understanding the sources of social unrest and for designing government pro-poor policies.

It is problematic to use such measurements for comparisons across the CIS countries; this is due to considerable differences in the living standards and conditions among these countries as

well as the differences in the criteria used, which can be seen from the table below.

Distribution of households based on self-assessment of well-being

Belarus (2014)	%		Kazakhstan (2013)	%
All households including those who evaluated their material well-being as:	100		All households including belonging to social groups:	100
low	4.5		Poor	2.0
Somewhat below middle	22.4		Neither poor nor middle class	45.5
Middle	68.0		Middle class	50.7
Somewhat above middle and high	5.1		Upper middle class	1.8
			Rich	-

In Kazakhstan, self-attribution of households to different social groups was based on the opinion of a household head with respect to well-being based on the following criteria:

- *poor* – lack money to buy food, clothing and footwear;

- *neither poor nor middle class* – have sufficient money to buy food, clothing and footwear and to pay for utilities but face difficulties with buying durables;

- *middle class* – have no issues with buying food, essential non-food goods and services but lack money for purchasing additional housing, expensive car, etc.;

- *upper middle class* – buy quality goods, live in comfortable conditions, have jobs, income-generating own business and/or property but lack free time for rest and leisure;

- *rich* – have sufficient resources (knowledge, health, finance, property and time).

Russia and Ukraine use other criteria for self-assessment of well-being by households:

Russia (2013)	%		Ukraine a (2013)	%
All households including those who assessed their financial standing as follows:	100		All households including those who self-assessed their income level:	100
lack money even for..	1.2		couldn't afford even sufficient food	3.3
face difficulties with buying clothing and paying for utilities	18.9		regularly denied themselves all but food	35.8
cannot afford purchase of durables	45.3			
lack money for purchasing a car, apartment	30.7		had sufficient money but didn't make savings	50.5
have enough money to purchase all they need	3.2		had sufficient money and made savings	10.4
couldn't answer	0.8			

Poverty estimates made using subjective approaches may considerably differ from absolute estimates based on income or expenditures.

For instance, a survey in Armenia (2013) demonstrated that 18% of the population considered themselves poor, whereas according to official statistics 32% of people in Armenia are poor.

V.   Multidimensional poverty

Multidimensional poverty estimates are not yet common in the CIS countries.

Big work in this area has been done by the Ukrainian Statistics Office which developed the Integrated Poverty Measurement Guidelines.

The following criteria are set forth for monitoring:

- poverty line equalling 75% of median level of per capita equivalent total expenditures;

- extreme poverty line equalling 60% of median level of per capita equivalent total expenditures;

- absolute poverty line equalling legal subsistence minimum level;

- absolute poverty line for international comparisons set at US $5 per capita per day at purchasing power parity.

The CISSTAT regularly publicizes social and economic indicators of poverty in the CIS and other countries. This information is made available to the governance bodies of the CIS countries, mass media, academia, commercial organizations, international organizations and other users.

In its future activities, the CISSTAT plans to focus on new poverty measurement methods based on the international practice.

Such areas as evaluation of household living standards based on financial assets, gender aspects of poverty and child poverty are of high interest.

When preparing the paper the author used the materials available at the web sites of the CIS national statistics offices and international organizations (World Bank, UNECE, and UNDP).