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Poverty Measurement in Kazakhstan: Current Situation and Perspectives

Prepared by the Agency on Statistics of the Republic of Kazakhstan *

Abstract

The criterion for assessment the standard of living and definition of poverty line is defined by law in Kazakhstan. Since 2000, the criterion for assessment the poverty level is the living wage, which causes the use in Kazakhstan the concept of absolute poverty. The living wage is calculated by the Agency on Statistics of the Republic of Kazakhstan (hereinafter – the Agency). The Agency bases on the cost of the minimum food basket increased to a fixed proportion of the costs to the minimum necessary non-food goods and services.

The basis for assessment the standard of living in Kazakhstan is the sampling of the 12,000 households, which is conducted on a quarterly basis since 2001. The sample set of households is formed by the two-stage random sample and comprises 0.3% of the general totality. The current sample provides the getting of representative data at a country level and 16 regions.

The criterion for assessment the poverty level is the income used for consumption, the calculation of which is made by the assessing the household expenses, as well as by the cost of production consumption of own manufacture and natural transfers. In this case, for the purpose of accounting the saving effect from the cohabitation of several members of the household, for calculation the key poverty indicators, the Agency uses equivalence scale, weighting factor of which is 0.8 for each second and next household's member regardless of his age.

Therewith, in addition to the officially established poverty assessment, since 2001 the Agency is studying a subjective opinion of the households regarding the level of households' own financial well-being (once a year).

In addition, Kazakhstan within the framework of monitoring the achievement of the MDGs, including MDG1 "Eradicate extreme poverty and hunger", implements the formation and publication of indicators regarding with agreed list of quantitative indicators.

Since 2012, for monitoring of the food security at the household level, the Agency forms and publishes the indicators of food security (proportion of population, the calorie diet of which is below the minimum level; energy value and composition of food products).

Additionally, for purpose of getting the alternative assessment of the relative poverty level, the Agency calculates the median value of the income used for consumption.

Since 2012, the Agency jointly with the International Bank for Reconstruction and Development started implementation of a large-scale project "KAZSTAT: Project for Strengthening the National Statistical System", completion of implementation of which is 2017 (hereinafter - the project KAZSTAT). During the implementation of the planned activities within the framework of the project KAZSTAT, since 2015 the Agency plans move to a computerized system of individual household survey (CAPI), on assessment the standard of living within the framework of the sample survey of households.

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The threshold for measuring living standards and defining a poverty line has been set by the legislation. Thus, starting from 2000 such threshold for poverty measurement is a subsistence minimum level (SML), which is driven by the fact that Kazakhstan follows the absolute poverty concept. SML is estimated by the Statistics Agency of the Republic of Kazakhstan (the Agency) based on the cost of a minimum food basket supplemented by a fixed percentage of expenditures for basic non-foods and services. The SML estimation methodology shall be approved by a joint order of the Ministry of Labour and Social Protection and the Agency. Since 2000, such methodology was revised only in 2005. The changes related to expanded food basket (from 20 to 43 foods) and a revised ratio of food to non-food basket (from 70/30 to 60/40). In 2012, average mid-year SML was KZT 16,815 or USD 112.8 converted at the exchange rate of the National Bank of Kazakhstan.

Assessments of living standards in Kazakhstan are based on a sample survey of 12,000 households; such surveys are conducted on a quarterly basis from 2001 onwards. The basis for household sampling is the Housing Register. In 2001-2010 Kazakhstan used the Housing Register prepared on the basis of the 1999 National Census, from 2011 onwards it is the Housing Register updated on the basis of the 2009 census. The population excluded those living in: multifamily units, dormitories, residential homes for the old and disabled, orphanages, prisons, hotels, religious communities and other similar institutional populations.

A sample of households is selected through two-stage probability sampling using stratification procedures and random selection at each stage of sampling; such sample is 0.3% of the population. The sample size was determined based on the economic requirements (survey budget), the need to achieve optimal cost benefit ratio, to collect data quickly and to achieve required accuracy of results. The 2011 sample using household weighting was selected with the support of Juan Munos, an international expert from Chile, with the assistance of the World Bank provided in 2010.

To prevent respondent fatigue effect the household sample is annually rotated (the process of systematic sample rotation is not related to the replacement of households who refused to participate in a survey). Such rotation is done at the beginning of a year which helps monitoring the impacts of seasonal fluctuations and other phenomena on the same households during a reference period. Thus, every year one third of households (4,000 households) are replaced by new households. Thus, at the end of the third year the sample is 100% renewed.

The existing sample allows collecting nationally and regionally (16 regions: 14 provinces, Astana and Almaty cities) representative data, including by urban/rural residence (Attachment 1).

The data are recorded by self-administered questionnaires and by interviewing. Such interviewing is conducted by trained interviewers (400 interviewers in total; thus the burden per interviewer is 30 households). An interviewer follows a schedule of household visits prepared by a supervisor. Interviewers are supervised by 80 officials of regional statistics agencies.

The reference period of a household survey is one quarter.

The key components of a survey are:

1) initial interview during which the first contact is established with a household, a list of all household members is prepared and basic data about the household in general and specific characteristics of each household member is collected; in addition, a follow-up interview is scheduled;

2) four quarterly interviews which take place in April, July and October of the ongoing year and January of the following years. Quarterly interviews cover the previous three months and contain data on money income and major expenditures of households. At the beginning of each quarter a household receives a diary to record expenses incurred during the quarter. This diary is used during quarterly interviews;

3) four two-week diaries which a household receives each quarter and where it should daily record, during 14 days, their expenditures for food and regular non-foods as well as foods consumed by a household which were received from household farming or were gifted.

The criterion for poverty measurement is income used for consumption, which consists of money income used for consumption expenditures (without investments into production and savings), cost of

home-made products and in-kind transfers. Income used for consumption is calculated by estimating household expenditures as well as the cost of home-made products and in-kind transfers.

The decision to choose, for measuring well-being of people living in Kazakhstan, a criterion based on consumption expenditures, is based on the international practice (UN Development Group, World Bank, International Labour Organization), as well as the following strong arguments supporting such decision:

- 1) households tend to flatten their consumption, therefore expenditures for consumption are less subject to seasonal or cyclical impacts than income;
- 2) respondents underreport their real income; according to international experts this is especially the case for low-income households;
- 3) fairly frequent non-response (especially among self-employed household members);
- 4) international comparability of data through purchasing power parity;
- 5) more accurate estimation of household expenditures rather than of income;
- 6) household consumption expenditures better demonstrate the level of household well-being because sometimes income is used to repay debts or saved for future consumption and as such is not always indicative of the current level of well-being.

In household surveys goods and services are classified in accordance with the Classification of Individual Consumption by Purpose (COICOP) which allows using the survey results for various statistical purposes: for measuring gross domestic product and its distribution, in the system of national accounts where household sector indicators are high on the list; for calculating consumer price indices as weights which is facilitated by the availability of detailed consumer expenditures of the population, etc.

To take into account the economy of scale from living together the Agency uses equivalence scales for calculating major poverty indicators whereby each second and subsequent household member accounts for 0.8, irrespective of age. In 2012, the Agency produced experimental estimates of poverty and inequality indicators in 2010-2011 using the OECD-modified equivalence scale. However, the Agency concluded based on the results of the study that the above scale can be applied in the future for poverty and inequality estimates in Kazakhstan only if the procedures for calculating SML are revised. This is due to the low level of poverty calculated in accordance with the existing methodology and the value of SML (USD 112.8).

The slide demonstrates the time series of some basic indicators of living standards in Kazakhstan over the last 11 years (Slide 1). The list of major indicators of living standards statistics derived from the sample household survey can be found in Annex 2.

In addition, along with official poverty measurement, the Agency has been studying subjective opinions of households regarding their levels of well-being since 2001 (annually). According to the survey design, a head of a household specifies to which of five proposed social groups his/her household belongs (Slide 2).

The survey design allows assessing the relationship between material well-being and social deprivation. In addition, the survey design is annually modified taking into account the needs of statistics users (Slides 3-...).

In addition, Kazakhstan signed, together with another 191 nations, the Millennium Declaration which articulates major 2015 Millennium Development Goals, and thus committed to achieve such goals. For monitoring progress in achieving MDGs, including MDG 1, Eradicate extreme poverty and hunger, Kazakhstan produces and publishes indicators in accordance with the agreed list of indicators (Annex 3).

Thus, in 2012 based on the sample household survey the Agency estimated poverty rates among total and employed population against the criteria of \$2.5 and \$5 (PPP) (using 2005 reference price). The criteria of \$2.5 and \$5 were determined taking into account the recommendations of UNECE experts, their applicability in the national context as well as environmental conditions (cold climate requires higher expenditures for food, clothes and heating). In addition, from 2007 there is no poverty in Kazakhstan characterized by population living on less than \$1 PPP (Slide ...).

In addition, under the National Food Security Programme in 2012 the Agency together with FAO experts (S.Ramasavmi and L.Castaldi) evaluated food security in Kazakhstan on the basis of the 2005 and 2011 sample household survey. The results were also useful for monitoring progress in achieving MDG1. Thus, according to the study there is no issue of hunger in Kazakhstan, however, there is an issue of income-based polarization in consumption. Regional differences in energy intake are also still in place.

Food security indicators in Kazakhstan	2005	2011	Changes (%, times)
Population (thous.)	15,074.8	16,442.0	108.6
Proportion of the population below the minimum level of dietary energy consumption (%)	17.0	3.0	5.7 times
Population below the minimum level of dietary energy consumption (thous.)	2,562.7	493.3	5.2 times
<i>Dietary energy requirements (per capita)</i>			
Minimum dietary energy requirement, MDER (kCal/day)	1,854	1,844	99.5
Average dietary energy requirement, ADER (kCal/day)	2,377	2,353	99.0
<i>Food consumption (per capita)</i>			
Dietary energy consumption, DEC (kCal/day)	2,420	3,140	129.7

For monitoring food security at the level of households, starting from 2012 the Agency produces and publishes food security indicators (proportion of population below the minimum level of dietary energy consumption, food energy and nutrient composition). The table below presents the 2012 data.

	Population below the minimum level of dietary energy consumption, thous.	Proportion of population below the minimum level of dietary energy consumption, %
Republic of Kazakhstan	307.7	1.8
Urban	258.7	2.8
Rural	72.6	0.9

At the same time, according to the FAO methodology minimum dietary energy requirements are used as a threshold for estimating a proportion of undernourished population. The calculation of minimum dietary energy requirements requires anthropometric data and the population makeup according to sex and age, fertility and child mortality rates.

As at the time of assessment the required anthropometric data was not collected by the Agency, the Agency used data from James and Scholdfield tables (Human Energy Requirements., James W.P.T. and Schofield C., FAO/OUP, 1990) for calculating minimum dietary energy requirements.

Therefore to ensure the completeness of data on food security such indicator as ‘respondent growth’ was included into the sample household survey on living conditions. This indicator will be used for calculating minimum and average dietary energy requirements for different social groups. The Agency started collecting the data for it in 2012. In addition, for alternative measurement of relative poverty the Agency estimates median disposable income. Thus, in 2012 such median disposable income per capita was KZT 27,970, or US\$187.6 at the exchange rate of the National Bank of the Republic of Kazakhstan. If median disposable income is used for measuring relative poverty in Kazakhstan based on the international practice when a threshold is 50-75% of median income, then the threshold of 60% of median income will be equal to SML (US\$112.6) used as the threshold for measuring absolute poverty (Slide ...).

In the current situation the transition from absolute to relative poverty measurement may be premature for Kazakhstan. Many national experts representing independent research institutions in fact share this view. Furthermore, the situation may be aggravated by considerable regional differences in poverty rates driven by such threshold (median income) whereas regional differences under the existing SML methodology are marginal and are mainly due to prices for food items included into the food component of SML.

At the same time, for international comparability of data on poverty incidence Kazakhstan is ready and plans to measure relative poverty.

In addition, in 2012 the Agency and the International Bank of Reconstruction and Development started the implementation of a large project called “KAZSTAT: Strengthening the National Statistical System”; the KAZSTAT project will be completed in 2017.

The KAZSTAT Project has 7 components:

1. Improvement of the institutional framework and operations of the statistical system;
2. Improvement of information and communication systems and physical infrastructure;
3. Improvement of human resources;
4. Improvement of statistical infrastructure, standards and methodology;
5. Improvement of user-provider relations;
6. Improvement of individual subject matter programmes and methodologies; and
7. Project management.

One of key subcomponents of Component 6, Improvement of individual subject matter programmes and methodologies, is the development of living standards statistics (F18). Here major project activities include:

- Improving household surveys by implementing modern technologies into the process of data collection and processing (introduction of CAPI, adaptation and integration of CAPI software with E-Statistics modules;

- □ Developing additional indicators required for estimation of living standards (developing methodology of calculating income indicators taking into consideration income of wealthy families, developing supplementary modules, forecasting, analysis, developing multidimensional indicators of living standards statistics).

A number of activities were implemented under this subcomponent in 2013, including 2 consultancies by an international expert Lars Lundgren (Sweden) on the issues of developing the methodology of calculating income indicators taking into consideration income of wealthy families as well as introduction of CAPI (computer assisted personal interviewing) into the sample household survey on living standards. In addition, the Agency's officials had a study tour to the Statistical Office of Finland to learn best practice of living standards surveys, including specialized thematical modules.

During the consultancy on developing the methodology of calculating income indicators taking into consideration income of wealthy families after the detailed and comprehensive review of the subject matter (analysis of various data sources, including administrative data) the consultant recognized that further work on the subject matter as a separate activity of F18 subcomponent is unpractical and recommended to focus on increasing respondent participation in surveys which will help to improve its quality. Such recommendation was given on the ground that there is no:

- evidence that wealthy households are insufficiently represented in the living standards survey (the survey demonstrated the same proportion of the population with higher education as the 2009 census: 19.8%);

- relevant variable against which the results of the sample survey could be compared (the consultant reviewed the possibilities of the Housing Register (in terms of availability of data on housing types) and the vehicle database (year of manufacture, make, and engine capacity).

After the first mission on 'Improving household surveys by implementing modern technologies into the process of data collection and processing' the expert provided preliminary recommendations, including the need to assess technical feasibility of modifying electronic versions of statistical survey forms as well as mandatory links and integration of software products for primary data input with E-Statistics systems. In addition, the expert also proposed useful recommendations on modifying forms, survey design, software development and CAPI design.

After the activities planned under the KAZSTAT Project are implemented the Agency plans to use Computer Assisted Personal Interviewing (CAPI) for the sample household survey on living standards from 2015.

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New network of households for living standards measurement survey

No.	Region	No. of interviewers	Including		No. of households	including	
			urban	rural		urban	Rural
1	<i>Akmola</i>	28	12	16	840	360	480
2	<i>Aktobe</i>	28	12	16	840	360	480
3	<i>Almaty</i>	24	8	16	720	240	480
4	<i>Atyrau</i>	18	10	8	540	300	240
5	<i>East Kazakhstan</i>	30	14	16	900	420	480
6	<i>Zhambyl</i>	23	9	14	690	270	420
7	<i>West Kazakhstan</i>	22	8	14	660	240	420
8	<i>Karaganda</i>	32	20	12	960	600	360
9	<i>Kostanai</i>	27	12	15	810	360	450
10	<i>Kyzylorda</i>	20	8	12	600	240	360
11	<i>Mangystau</i>	20	12	8	600	360	240
12	<i>Pavlodar</i>	28	12	16	840	360	480
13	<i>North Kazakhstan</i>	22	9	13	660	270	390
14	<i>South Kazakhstan</i>	26	10	16	780	300	480
15	<i>Almaty city</i>	30	30	0	900	900	0
16	<i>Astana city</i>	22	22	0	660	660	0
17	Total in Kazakhstan	400	208	192	12,000	6,240	5,760