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**Agenda item 7: Population Groups**

## **Child well-being index in the Kyrgyz Republic**

Prepared by the National Statistical Committee of the Kyrgyz Republic<sup>1</sup>

### **Summary**

Methodology of formation and calculation of the child poverty index, based on method HERITIGJ-fund a principle of the world famous index of economics freedom. We use indicators to calculate child poverty which characterize different aspects of child well-being, easy circumstances, the availability of the conditions where can children have free access to the most necessary for their health and full development to become a person. The basis of development methodology using index, was accept model of set 28 indicators, and combined into 6 equal groups. All the usable indicators are divided into two types – positive and negative. Positive indicators consist in next statistical index, the growth of value which characterizes the positive process, and other is negative indicators, the growth of value which characterizes the negative process.

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For a long time the National Statistical Committee of the Kyrgyz Republic (NSC) has been carrying out sample household budget surveys and poverty monitoring in the country. The subject of the survey is a family as a consuming unit of the society i.e. its size, gender and age structure, employment status of able-bodied family members, their educational and professional level, income sources of family members and family consumption patterns, possession of durables, leisure organization etc.

A sample household budget survey conducted by the state statistical authorities is a key source for estimating the poverty line. Family material well-being is the baseline for measuring child poverty.

Research into the problem of child poverty is linked to the lack of possibilities in the life of children caused by poverty.

Children living in poverty are missing out on the material, spiritual and esthetical resources essential for survival, development and well-being and therefore are not able to enjoy their rights, live up to their potential or participate in the life of the society as its full and equal members. Poverty deprives children of dignity, puts their lives at risk and shrinks their opportunities.

The findings of a sample integrated household survey showed that in 2013, out of all children aged 0-17, 45.2% were living in poverty, while 3.7% of them were classified as extreme poor. The level of child poverty in rural areas was 48.9%, which is 12.0% higher than in urban areas.

**Table 18: Share of children living in poverty, 2013**

*(percentage to total)*

|                       | Total      | Urban      | Rural      |
|-----------------------|------------|------------|------------|
| <b>Total</b>          | <b>100</b> | <b>100</b> | <b>100</b> |
| Non-poor              | 54.8       | 63.1       | 51.1       |
| Poor                  | 45.2       | 36.9       | 48.9       |
| Of which extreme poor | 3.7        | 2.1        | 4.5        |

The level of child poverty is affected by a combination of factors such as child morbidity and mortality, level of education and upbringing, access to health services, crime situation and other aspects directly or indirectly influencing the quality of children and adolescents lives.

A more precise tool to measure levels of deprivations among children is integral indices representing various aspects of child well-being.

The child poverty index is built on the principle of the world famous Heritage Foundation index of economic freedom. Child poverty index is calculated using the indicators describing various aspects of child well-being such as their material security and the environment that gives children free access to the essentials of health, further overall development and achievement of personhood.

The methodology behind the above said index is based on a model set of 28 indicators merged in 6 equal groups. All used indicators are divided into two categories– positive and negative. The positive indicators are statistical values the growth of which means a positive process and vice versa the negative indicators are values the growth of which shows a negative process.

The selected indicators capture almost all the aspects of child well-being thus being a first attempt

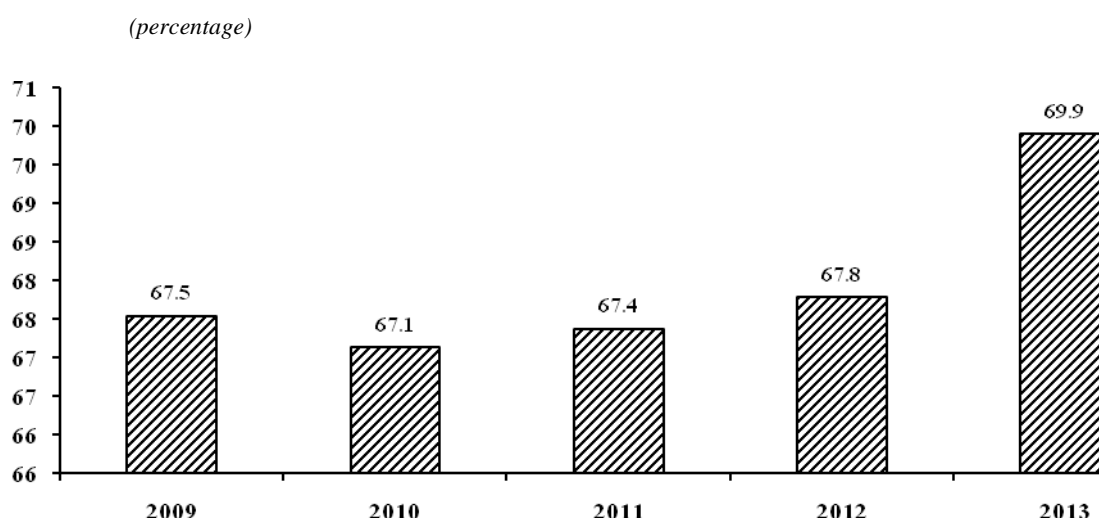
of a multidimensional approach in the republic to measure the standard of living of children.

| Group No    | Indicators   | Type of indicators<br>N-Negative<br>P-Positive |
|-------------|--|--|
| <b>I.</b>   | <b>Material child poverty</b>  |  |
| 1.1         | Level of child poverty, percentage to total population of children aged 0-17   | N  |
| 1.2         | Level of extreme child poverty, percentage   | N  |
| 1.3         | Depth of children poverty, <i>percentage</i>   | N  |
| 1.4         | Share of children (aged 1-6) having low weight for age, percentage   | N  |
| <b>II.</b>  | <b>Child health situation and prevention</b>   |  |
| 2.1         | Share of children born underweight (less 2.5 kg), <i>percentage</i>  | N  |
| 2.2         | Tuberculosis incidence among children (aged 0-14), <i>per 100,000 of population</i>                                  | N  |
| 2.3         | Anemia incidence among pregnant women ( <i>percentage</i> )  | N  |
| 2.4         | Share of children immunized against measles, <i>percentage</i>   | P  |
| 2.5         | Share of children immunized against tuberculosis, <i>percentage</i>  | P  |
| <b>III.</b> | <b>Death rates</b>   |  |
| 3.1         | infant mortality rate, <i>per 1000 births</i>  | N  |
| 3.2         | Prenatal mortality rate, <i>per 1000 dead or live births</i>   | N  |
| 3.3         | life expectancy among children aged 5  | P  |
| 3.4         | Child mortality rate before aged 5, <i>per 1000 births</i>   | N  |
| 3.5         | Maternal mortality, <i>per 100,000 live births</i>   | N  |
| <b>IV.</b>  | <b>Education and early childhood care</b>  |  |
| 4.1         | Share of children (4 grade) received positive grades in "mathematics" test, <i>percentage</i>                        | P  |
| 4.2         | Share of children (4 grade) received positive grades in "literacy" test, <i>percentage</i>                           | P  |
| 4.3         | Share of children enrolled in preschool education, <i>percentage</i>   | P  |
| 4.4         | Share of children (Net Enrolment Rate) enrolled in primary education (1-4 grades), <i>percentage</i>                 | P  |
| 4.5         | Share of children (Net Enrolment Rate) enrolled in secondary education (5-11 grades), <i>percentage</i>              | P  |
| <b>V.</b>   | <b>Conditions and quality of life</b>  |  |
| 5.1         | Share of population without access to health care, <i>percentage</i>   | N  |
| 5.2         | Share of deliveries attended by skilled health workers, <i>percentage</i>  | P  |
| 5.3         | Share of population without access to safe potable water, <i>percentage</i>  | N  |
| 5.4         | Share of population without access to adequate sanitation, <i>percentage</i>   | N  |
| <b>VI.</b>  | <b>Child risks</b>   |  |
| 6.1         | Share of minors who committed crimes in the total crime committed population, <i>percentage</i>                      | N  |
| 6.2         | Share of children born by women in early age (under 18), <i>percentage</i>   | N  |
| 6.3         | Child and adolescent aged 15-24 mortality rate from suicide, <i>per 100,000 of the same age population</i>           | N  |
| 6.4         | Registered HIV infected children aged 0-17 with a first-time diagnosis per <i>100,000 of the same age population</i> | N  |
| 6.5         | Number of identified children without parental care (aged 0-17), <i>per 100,000 of population</i>                    | N  |

Low level of material security among the population is the main reason of poverty. Insufficient financial resources make some of the population struggle for survival and in this situation the most affected are children. It is the material well-being that indicates the quality of the life – a determining factor for the availability of adequate food, quality and scope of the services received.

In 2009 – 2013, the nationwide value of the index raised from 67.5% to 69.9%. Out of six sub-indices comprising the child poverty index a demographic loss sub-index grew by 8.0%, a health sub-index – by 5%, a child risks sub-index – by 2.4%, an education and upbringing sub-index – by 1.9% and a child deprivation and adversities sub-index – by 1.6%. Alongside with that this period showed a decrease only in a child material poverty sub-index (by 4.8%).

**Figure 6: Child poverty index dynamics**



Significant variations in well-being of children are observed depending of the region where they live. The gap in the value of the child poverty index in the country's regions comprised a five-year average of 14.4%. The highest value of the index in 2013 was observed in the city of Bishkek (79.3%), Chu (72.2%) and Talas (71.4%) oblasts while the lowest was in Dzhahal-Abad (67.9%), Osh (66.1%), Batken (65.2%) and Naryn (64.9%) oblasts.

**Table 22: Child poverty index by territories**

(percentage)

|                        | 2009        | 2010        | 2011        | 2012        | 2013        |
|------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Kyrgyz Republic</b> | <b>67.5</b> | <b>67.1</b> | <b>67.4</b> | <b>67.8</b> | <b>69.9</b> |
| Batken oblast          | 65.5        | 64.8        | 65.0        | 66.2        | 65.2        |
| Dzhahal-Abad oblast    | 68.5        | 67.6        | 68.2        | 63.3        | 67.9        |
| Issyk-Kul oblast       | 66.7        | 67.9        | 68.0        | 67.9        | 69.2        |
| Naryn oblast           | 66.0        | 61.3        | 62.8        | 66.7        | 64.9        |
| Osh oblast             | 62.6        | 61.7        | 64.4        | 63.0        | 66.1        |
| Talas oblast           | 66.3        | 64.6        | 65.6        | 71.0        | 71.4        |
| Chu oblast             | 69.3        | 68.5        | 67.9        | 72.7        | 72.2        |
| City of Bishkek        | 76.6        | 78.3        | 75.3        | 77.8        | 79.3        |
| City of Osh            | 66.0        | 63.7        | 62.8        | 62.1        | 69.4        |

Each index group or component incorporates an individual set of indicators describing the situation of children in a particular context.

**Table 23: Child poverty index dynamics by sub-indices**

| <i>(percentage)</i>                |      |      |      |      |      |
|------------------------------------|------|------|------|------|------|
| Indices                            | 2009 | 2010 | 2011 | 2012 | 2013 |
| Child material poverty             | 78.0 | 72.2 | 77.6 | 72.4 | 73.2 |
| Health                             | 77.3 | 75.9 | 73.7 | 80.7 | 82.3 |
| DemoFigureic losses                | 66.5 | 69.9 | 70.6 | 72.4 | 74.5 |
| Education and upbringing           | 27.7 | 27.5 | 27.5 | 28.4 | 29.5 |
| Child deprivations and adversities | 73.4 | 75.6 | 75.0 | 74.8 | 75.0 |
| Child risks                        | 82.4 | 81.7 | 79.8 | 78.0 | 84.9 |

The education and upbringing sub-index is the lowest among the components of the child poverty and deprivations index, however in 2009 – 2013 its value increased by 1.9 percent reaching 29.5%. The sub-index is influenced by the quality of education indicator which reflects the proportion of children not enrolled in school and preschool education allowing to estimate the degree of deprivation of the children who has no access to the world of knowledge.

Mainly this links with a decrease in income of the family and growth in direct costs related to education which particularly affects poor families.

The educational system should be accessible to all children and provide quality education.

Education is a key priority of the state development strategy. The level of education of a person directly increases the chances to gain higher income. People with higher level of education have a higher level of life and health as well as broader social connections.

Social and economic status of students is one of the strongest factors influencing the quality of education.

In order to get a calculation index on the child education and preschool upbringing indicator, the statistics authorities use different international studies that are carried out from time to time in our country. The aim of these studies is to get an objective evidence-based understanding of the level of knowledge and skills of students in line with the country's current standards of education.

In 2009 a national assessment of student educational achievements (NASEA) ordered by the Ministry of Education and Science was carried out, and this year with support of the Organization for Economic Cooperation and Development (OECD) the Kyrgyz Republic was included into PISA survey - an international comparative assessment of the skills and knowledge of 15-year-old students.

The survey tested functional literacy of girls and boys in reading, mathematics and natural science and their preparedness for independent life in the society.

The results of the assessment help reveal strengths and weaknesses of modern school education, identify its primary needs and track the changes that took place since the last survey.

The Kyrgyz Republic is the first country in the CIS Central Asian region to participate in the

survey. All assessments were done by the Center for Educational Assessment and Teaching Methods (CEATM) at the request of the KR Ministry of Education and Science.

Among all 65 countries – participants of the survey the Kyrgyz Republic is ranked last with an average of 314 points being the country with the lowest GDP per capita among the participating countries.

Such surveys are used in all developed countries as well as in many developing countries as a tool to monitor the situation with the education in the country and act as a basis for taking informed and coherent efforts aimed at improving school educational system and strategic decision-making in this area.

However, in order to assess the real changes and shifts in the results of students' education and link them to the measures taken in the field of education such surveys need to be carried out on a regular basis. Surveys samplings do not always meet the targets pursued by the statistics committee in calculation of an annual child well-being indicator. Representation of students in such surveys is not full and some schools are excluded from the sample because they are not always located in easily accessible areas. Some of the students are excluded as they have special educational needs or study the language which is not used in the process of testing.

From 2002, an annual nationwide Republican testing of secondary school graduates (RT) is carried out in our country. The testing is conducted to insure a transparent and fair process of entering higher education institutions of the republic. Testing results are mandatory for admission. The graduates receiving the points below an established threshold may not participate in the admission process.

The purpose of RT is to identify high school graduates most able for further education and as such it takes place in all schools across the country. The National Statistical Committee suggests that the testing results are used to estimate the education quality indicator on the grounds that the values of this indicator will give a fair representation of the child well-being in the field of education since RT covers almost all high school graduates as it is conducted among students of 9 and 11 grades.

Knowing the number of the children who graduated the school and took part in the testing, as well as the percentage of the students whose testing results were higher than the established threshold we can estimate the child well-being index using the calculation formula for a positive indicator as the value exceeding the threshold points means a possibility for a graduate to be admitted to a higher education institution.

Having determined that this indicator is a positive one, the calculation of the rating is done using the formula:

$$I_{\text{positive}} = \frac{\text{actual value} - \text{min}}{\text{max} - \text{min}} * 100 \quad (1)$$

Calculation of indicators is done using ratings of equal weight categories followed by calculation of average category values.

The child poverty index is calculated in three stages:

- an individual index for each indicator is calculated using the formulas;

- an index for a group of indicators is calculated to obtain an average values of individual indices;
- the child poverty and deprivation index is a result of a calculated average value of group indices and the value that approaches 100 per cent if all indicators are improved.

The state child policy aims at:

- exercising children's rights, insuring non-discrimination, strengthening fundamental guarantees of the rights and legitimate interest of children, as well as restoring the violated rights of children;
- developing legal frameworks to protect the rights of children;
- fostering physical, intellectual, spiritual and moral development of children as well as developing a child's personality in the society;
- state family support ensuring proper upbringing of children and protection of their rights and preparing them to live a rewarding life in the society.

Research into child poverty is linked to the lack of opportunities in the lives of children deprived of these due to different reasons which may lead to adverse impacts both on their lives and the life of the society.

Measurement of child poverty in statistics is based on the estimation of family material well-being. However, the level of child poverty is influenced by a combination of factors such as child morbidity and mortality rates, level of education and upbringing, access to health services, crime situation and other aspects, which have a direct or indirect impact on the quality of the life of children and adolescents.

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