

Living Conditions and Poverty in Belarus: Concepts and Measures

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ABSTRACT

Socio-economic changes emerged in Belarus in the 1990's dramatically affected the well-being of the households and contributed towards the deterioration of the demographic situation. Nowadays, the official statistics reports a steady progress in population welfare while the demographic situation does not reveal any signs of improvement. Does Belarus represent the case when demographic indicators do not improve as living standards rise, or the observed phenomenon is simply due to the measurement bias? In our work we are focusing on the methodological aspects of measuring living conditions and poverty. We assess the situation from different perspectives and propose using alternative approaches of measuring poverty such as the food-energy (caloric) intake approach and the application of different types of equivalence scales. Our analysis is based upon the data of the "Income and Expenditures of Households" Survey and refer the period since 2000.

INTRODUCTION

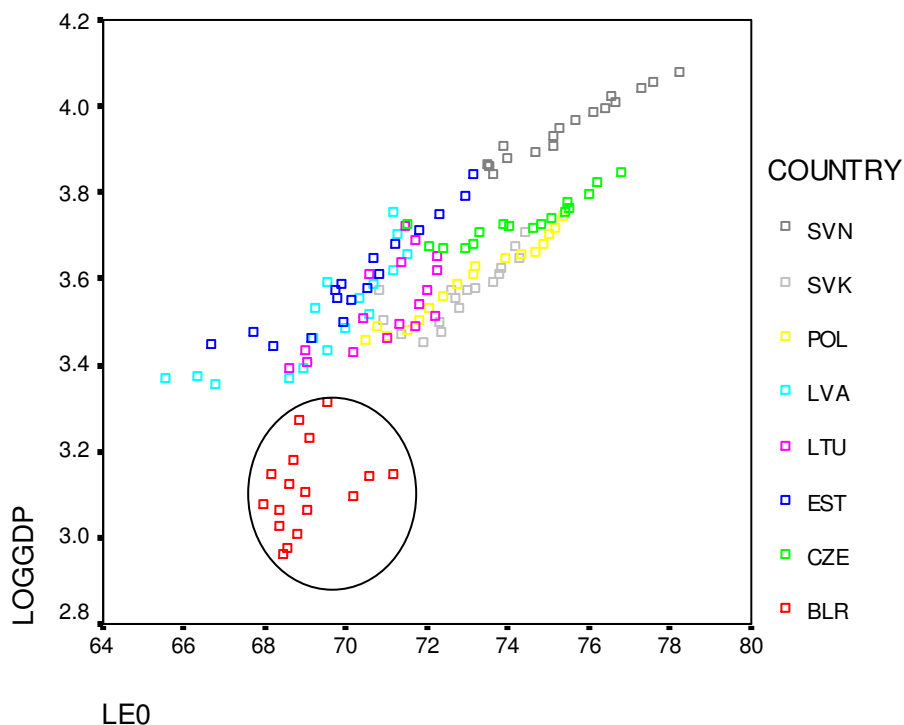
Fundamental political and socio-economic changes emerged in Belarus in the beginning of the 1990s had dramatically affected the welfare of the most of households. In 1995, 31% of them were recognized as the poor and the majority of them stayed in poverty from 4 to 9 months in a year. Households with children were affected at most, 45% of them had the level of per capita income below the poverty line. In the same year, the Gross Domestic Product (GDP) constituted just 65% of its value in 1990; real salaries and real disposable income of the population were 56% and 62%, respectively. Recently, the official statistics reports the sustainable poverty reduction in Belarus. Nevertheless, the World Bank evaluates the gains in poverty decline as shallow and fragile. The sustainability of poverty reduction in Belarus is questionable as the administratively-set real wage growth outstrips the productivity growth (World Bank, 2004). For instance, during 2000-2006 real income and real salaries of population increased by 112% and 142%, respectively. Meanwhile, the GDP growth constituted only 57% (Minstat, 2007).

Deteriorating living standards during the first years of the transition period contributed towards worsening the demographic situation. During 1990-1995, the crude births rate and the total fertility rate decreased by almost 30% and 27%, respectively, while the crude death rate grew by 21%. During the same period, life expectancy at birth decreased by 3.4 years among men and 1.6 years among women. Since the middle of the 1990s, official statistics has been reporting the steady improvement of well-being of the population and households that presumably should have contributed to some progress in the demographic situation as well. However, such an important indicator of the quality of life as life expectancy at birth does not seem to have responded to the favorable changes in the

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socio-economic situation. For example, in 2005, male life expectancy at birth was 62.9 years or by 0.4 year less than in 2000. Unlike in other post-communist countries, in Belarus, the per capita income¹ growth and the improvement in life expectancy do not seem to be associated with each other (Figure 1).

Figure 1. Association between GDP per capita PPP (constant US\$ 2000) and life expectancy at birth in 8 post-communist countries during 1990-2006



Sources: TRANSMONEE Database; Human Mortality Database
 Note: SVN – Slovenia, SVK – Slovakia, POL – Poland, LVA – Latvia,
 LTU – Lithuania, EST – Estonia, CZE – Czech Republic, BLR - Belarus

Given the complicity of and contradictory nature of the income-mortality relationship, the situation observed in Belarus may very well reflect the reality. Nevertheless, it is also possible that the way how living standards in Belarus are measured might play a role. In our work we are focusing on the methodological aspects of measuring living conditions and poverty. We assess the situation from different perspectives and propose using alternative approaches of measuring poverty and assessing living conditions.

DATA

Our analysis is based upon the data of the "Income and Expenditures of Households" Survey and refer the period since 2000. This survey is the major source of information on the socio-economic status of the Belorussian households. Each year a sample of about 6000 households is selected. It covers all types of households with the exclusion of the institutionalized population (persons living in nursing homes, boarding schools, prisons, convents, etc.).

¹ We use the measure of per capita income as a proxy for living standards to compare the situation in different countries

METHODOLOGY

Along with the widely employed descriptive analysis of the living arrangement of households we construct the index of living standards from the information on household ownership of durable goods and its housing characteristics by means of the principal components analysis¹. The result of principal components is an asset index (A_j), calculated for each household by the formula (1):

$$A_j = f_1 \times \frac{a_{j1} - a_1}{s_1} + \dots + f_m \times \frac{a_{jm} - a_m}{s_m} \quad (1)$$

where f_1 is the scoring factor for the first asset;

a_{j1} is the j^{th} household's value for the first asset;

a_1 and s_1 are the mean and standard deviation of the first asset variable over all households;

m is total number of assets included in the procedure.

The assumption for applying this method is that household's long-run wealth determines the most common variation in asset variables.

The advantages, limitations and applications of this index have been widely discussed in the literature (e.g., Filmer, Pritchett, 1998, 2001; Falkingham and Namazine, 2002; Vyas and Kumaranayake, 2006; Mishra, 2007). An important aspect of the construction of the index of living standards is a choice of variables to use; there is no universal solution of set to be applied. In the present work the housing conditions of the household (presence of central heating, bath or shower, hot-water and telephone), the ownership of durable goods (TV, refrigerator, washing machine and car), the ownership of land-plots, the per capita living space and the percentage of food expenditures in total consumption expenditures are used for the computation of this index. Each variable besides the per capita living space and the share of expenditures on food takes the value 1 if true, 0 otherwise. The last two measures are included in the form of comparison with their median levels (1-is less than median level; 0 is median level or above – for the share of food expenditures and 0-is less than median level; 1 is median level or above – for the living space). Scoring factor is the “weight” assigned to each variable (normalized by its mean and standard deviation) in the linear combination of the variables that constitute the first principal component.

While assessing the developments in the welfare of the different types of households, we calculate several poverty measures. Besides the income-based approach of measuring poverty used in Belarus, we apply the food energy intake (direct caloric intake) approach as well as equivalence scales computed by using the Organization for Economic Cooperation and Development (OECD, 1982, 1999) formula:

$$N_e = 1 + (N_a - 1) \times 0.7 + 0.5 \times N_c \quad (2)$$

where, N_e is the adjusted household size

N_a is the number of adults in household

N_c is the number of children in household

According to OECD model the first adult is given weight of 1. Other adults take weights of 0.7 to reflect economies of scales. For children a weight of 0.5 is given to reflect their presumably lower needs (for food, housing space, etc.).

¹ The principal components statistical procedure is a technique for extracting from a large number of variables those few orthogonal linear combinations of the variables that best capture the common information. The first principal component is the linear index of variables with the largest amount of information common to all of the variables (Filmer and Pritchett, 1998).

RESULTS

Living conditions

As a summary measure for the living standards of households the index of living standards was computed. According to the results, the majority of the variables are associated with higher socio-economic status of households, except for the ownership of a land-plot and per capita living space. The presence or ownership of any component of the index changes its value in a different way. For instance, the presence of central heating system, bath, or hot water in a household increases the index by 0.6, the possession of the car or the smaller share of food expenditure out of total expenditure increases the value by 0.2, while the ownership of land plot and smaller size of the per capita living space decrease the index of living standards by 0.35 and 0.19, respectively.

During the seven-year period the living standards slightly increased for all household types. In 2007, the value of the index calculated for the households with children was by more than four times higher compared to those households having no kids (table 2). Single households have the lowest value of the index. On average, these households have worse housing conditions and possess less durable goods compared to the other household types.

Table 2. Index of living standards by types of households; 2000 and 2007

| | Single HH | HH with children | HH without children |
|-------------------------|-----------|------------------|---------------------|
| | | 2000 | |
| Mean value of the index | -0.579 | 0.330 | -0.103 |
| Standard Deviation | 1.091 | 0.821 | 0.990 |
| | | 2007 | |
| Mean value of the index | -0.507 | 0.342 | -0.010 |
| Standard Deviation | 1.095 | 0.830 | 0.948 |

Source: based on the IEHS data

The difference in the index across households is particularly produced by a combination of such assets as owning a car or washing machine, as well as the difference in per capita living space and share of food expenditures in custom expenditures.

Consumption expenditures

The analysis of the structure of household expenditures is particularly interesting in Belarus. There is a positive tendency of declining proportion of food expenditures in the total consumption; if in 2000, on average, households spent more than a half for foodstuffs (56.1%), in 2007 this percentage reached 41.5, or less by about 15 percentage points.

However, this decline does not necessary represent the improvement in the living conditions of households. During the same period of time the share of expenditures devoted to services increased, reflecting though not necessary an increase in affordability and physical consumption but an increase in the relative prices for services. Starting from around 2000 some steps to reform the housing and communal system were undertaken by the government. Among them, an increase in share of the net-cost of housing and communal services paid by individuals (households)¹. According to the national statistics,

¹In Belarus individuals have never paid the full amount of cost of the communal services. During the 1990s, they were obliged to pay only 20% of the total cost and the rest (80%) was covered by the government. Starting from around 2000, the share of the cost covered by individuals has been increasing. In 2003, it reached 50% and according to some estimates by 2015 the cost of the communal services will be fully covered by individuals (Soviet of Ministers of Belarus, 2003).

during 2000-2006 the consumer price index for services increased by seven times and particularly the increase was pronounced for the prices for housing and communal services (it grew by more than 11 times throughout the same period) (Minstat, 2007).

The share of food expenditures in the total consumption expenditures tends to be more important for the single households; in 2007 they dedicated a half of their consumption on food.

Table 3. Composition of household consumption expenditures, 2000 and 2007 (%)

| | Single HH | HH with children | HH without children |
|-----------------------------------|-------------|------------------|---------------------|
| As % of consumption expenditures: | 2000 | | |
| foodstuffs | 64.6 | 53.9 | 60.0 |
| non-foods | 16.6 | 24.3 | 19.2 |
| paid services | 14.8 | 19.2 | 17.2 |
| alcohol | 4.0 | 2.6 | 3.6 |
| | 2007 | | |
| foodstuffs | 50.5 | 38.4 | 42.2 |
| non-foods | 18.4 | 29.7 | 26.3 |
| paid services | 28.3 | 29.9 | 29.0 |
| alcohol | 2.8 | 2.0 | 2.5 |

Source: from IEHS data

Despite the decrease in the proportion of food expenditures in Belarus, it is still much higher than in most Western countries. For instance, in 2003 the average share of expenditures devoted to food in EU-25 countries constituted only 12.9%. Households in such countries as Germany, Austria, the Netherlands and Denmark spent only about 11-12% of their custom expenditures on food in 2003 (Eurostat, 2005).

Incidence and Assessment of Poverty

In Belarus until 1999 the normative method for determining poverty was used. The definition of the poor (low income) person was one whose available resources were less than 60% of the minimum consumer budget. Local executive authorities were recommended to use this method for classifying citizens as being needy and for determining the possibility of providing them with assistance. This norm was not confirmed legislatively, however, and was only recommendatory in character.

The current approach of the Belarusian government to the problem of poverty is based on the normative method together with the absolute poverty concept. The law "On the Subsistence Minimum" creates a legal framework for the definition of minimum subsistence and, consequently poverty level. Starting from January 1, 1999 all individuals or households with incomes below the minimum subsistence level qualify as poor and are eligible for support. Minimum subsistence level is defined as the set of material goods and services necessary to meet minimum physiological and social needs of people. Sets of the minimum food items and clothes are fixed separately for a man at working age (16-59 years), a woman at working age (16-54 years), a boy aged 13 years and a girl aged 7 years in accordance to their physiological peculiarity and needs. The minimum norms of food items are elaborated by the State Scientific Center for expert estimation of quality and safety of foodstuffs under the Ministry of Public Health and reflect the socio-economic conditions and fully formed traditions in Belarus.

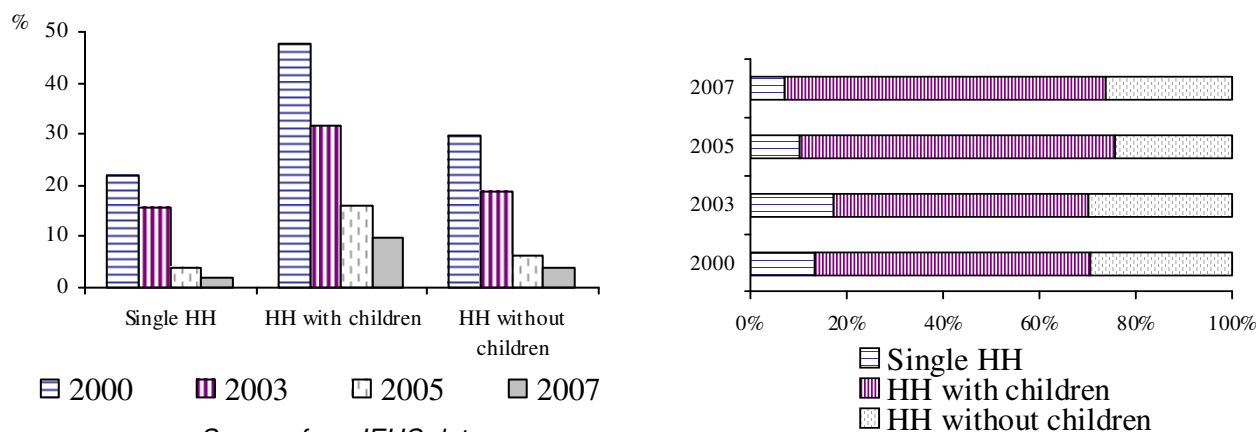
For the monetary estimation of the subsistence level an indicator of the minimum subsistence budget is used. In addition to the cost of the material goods, the budget includes values of necessary payments and fees. The minimum subsistence level is calculated separately by the main socio-economic groups of population (population at working age, pensioners, students, children aged 3-16 years and children at age below 3 years) and as average for the whole population. The value of the budget confirms each quarter of a year.

The notion of subsistent minimum budget is an important instrument of social state policy because the value of the budget is used as a basis for estimation of the minimum state socio-economic guarantees (minimum salary, pensions, scholarships and subsidies) and as a main criterion for recognizing a person (a household) as poor. The determination of poverty line is of principal importance to the definition of poverty. Traditionally, the poverty line is based on income or expenditures; in Belarus the indicator of disposable resources is used for the estimation of poverty level. In addition to the total amount of money resources, which households spend for their consumption and savings, disposable resources include the value of consumed in-kind income obtained from the individual land plots less the expenses of its production (transportation, purchasing of seeds, fertilizers, payment of veterinary services, etc.) and also the value of in-kind subsidies and benefits granted to a household for the acquisition of in-kind goods and services in form of full or partial compensation of their cost. In-kind income from plots is valued at average purchase prices while the estimation of in-kind privileges is based on information provided by respondents.

Before going into the analysis of poverty incidence in Belarus, it is worth mentioning a few points regarding the methodological issues. First of all, it seems that the use of the indicator of disposable resources in Belarus on the one hand helps to overcome the problem of unreliability of income (by using expenditures instead) but on the other hand, the inclusion of other sources of in-kind income consequently maximizes the value of the poverty line and decreases the proportion of those in need of support. Secondly, even though the structure of the set of minimum subsistence level differentiates the needs of several groups of population, it covers a very extreme minimum of goods and services people may have. For instance, according to the Law "On the subsistence Minimum" a family may have only four blankets and pillows to use them from 15 to 20 years; or one jacket and/or coat is assumed to last a person of working age 8-9 years; a pair of winter shoes for 5 years, a dress for 5 years and so on. Obviously, this set is not in agreement with even the lowest level of the material aspirations.

Over the last years poverty has fallen significantly in Belarus; according to the results of the IEHS, in 2007, only 5.6% of the households were recognized as poor, decreased by 30 percentage points from levels in 2000.

Figure 2. Poverty rates and composition by types of households, 2000-2007



Throughout the last seven years the composition of poverty by household types has not changed significantly. In 2000 as well as in 2007 the majority of the poor households were represented by the households with children (57 and 67%, respectively). The share of single households and households with no kids among the total number of poor households slightly decreased.

Since the food expenditure constitute the highest and considerable share in consumer expenditures, another approach to determine the poverty level is based on its share. The thought that share of food expenditure in the budget declines as people become better off (Engel's Law) is one of the earliest and most widely confirmed empirical generalizations in economics (Citro, 1995). By setting up as a poverty line the level of 60% or more expenses devoted to food out of the total expenditures, it is found that in 2007 there were about 7% of poor households, or by 1.4 percentage points higher than officially estimated level. In addition, the application of this poverty line reveals that single households have higher poverty than other household types (table 4).

Table 4. Poverty rates by household types, 2000 and 2007 (%)

| | Official (income-based) approach | | Poverty rates based on food expenditures | | Relative poverty rates | |
|---------------------|----------------------------------|------|--|------|------------------------|------|
| | 2000 | 2007 | 2000 | 2007 | 2000 | 2007 |
| Single HH | 21.7 | 2.1 | 64.2 | 16.5 | 15.0 | 15.1 |
| HH with children | 47.8 | 9.7 | 34.2 | 2.3 | 12.5 | 14.1 |
| HH without children | 29.7 | 3.8 | 51.8 | 5.6 | 10.9 | 10.0 |

Source: from IEHS data

As it was mentioned, the recent approach to the problem of poverty in Belarus is based on the normative method together with absolute poverty concept. Among the world-widely used poverty measures, however, an indicator of relative poverty is introduced. At the European Union level, for instance, the median is the basic measure used as a reference for the setting of the standard risk-of-poverty threshold (60% of the median income). Here, the poverty threshold is set as 60% of the median equalized household income. According to this measure, all poverty rates are found to be higher than the official estimations for the year 2007. Moreover, there was almost no change in the rates, except for the households with children.

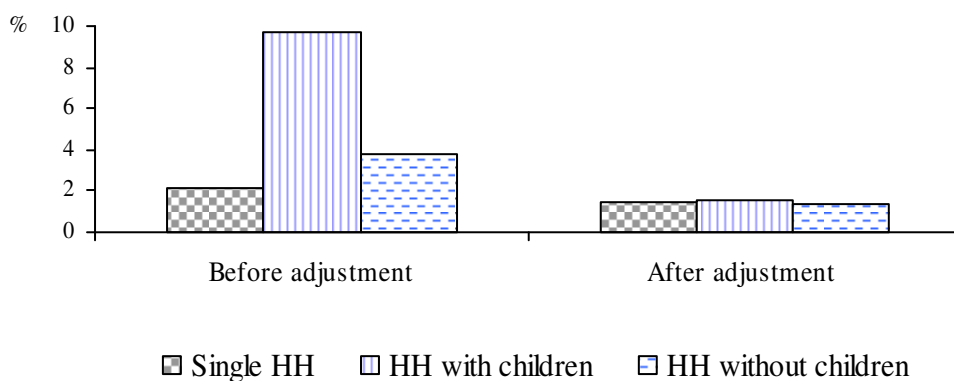
Scaling Poverty Indicators

In Belarus the comparison of household disposable resources is based on its direct division by the number of household members and, thus, the household with the higher per capita resources is considered to be the wealthier. This simple approach is obviously inconsistent with the actual phenomenon of the reduction in household expenditure resulting from the economies gained due to household size and composition. Therefore, for any given household, equivalence scales should be used to approximate the number of single adults, based on observed consumption behaviour. Adult females and children are usually assigned a male equivalence of less than one since they typically consume less.

There is a number of ways to measure the relative living cost of different households and the choice of equivalence scale may affect the poverty extent and the composition of the poor. Here we applied the OECD scale since it takes into consideration not only household size and but also household composition.

Application of scales yielded the expected increase in the level of per capita income by 20.4% (from 480 before adjustment to 577 thousand BRB after scaling). The share of poor households in Belarus consequently decreased by 4.1 percentage points after the scaling and only 1.5% of households could be recognized as poor. The changes in the headcount poverty indexes before and after the adjustment are represented in the following figure (3).

Figure 3. Poverty indexes before and after adjustment of the household size, 2007



Source: from IEHS data, 2007.

Interesting to note that after application of the OECD scaling the variation in poverty incidence across different types of households was almost eliminated; poverty rates varied from 1.4-1.6%.

The fact that the scaling procedure reduces the poverty level is not surprising and is quite anticipatable. The idea of scaling is not to adjust the existing poverty level but to determine the most vulnerable individuals to poverty in order to provide them with prior social support. Unfortunately, the current system of the distribution of governmental allowance for low income households in Belarus is not completely fair and some steps should be done to improve the situation. Elaboration of flexible scales based on already developed methodology and taking into account national features seems to be one of the most important directions for the improvement of social security system in Belarus.

Food Energy (Caloric) Intake Approach

Typically, determination of the poverty level is based on the cost of obtaining minimum food or nutritional intake, therefore, the analysis of the level of food consumption could be considered as an important element of the poverty assessment. In Belarus during 2000-2007 the consumption of the basic foodstuffs, such as meat, fish, vegetables and fruits increased. According to the IEHS results, in 2007 households consumed by 32% more meat products, by 38% more fish and by 50% more fruits than in 2000 (table 5 below). Taking into consideration that these food products are the basic sources of protein and also that the consumption of such products as bread and potatoes decreased during the same period of time (by 20 and 28%, respectively), it is possible to assume that Belorussian households consume much healthier food than before.

However, not all households were able to improve their consumption during the last seven years. The consumption of vegetables, for example, decreased between 2000 and 2007 by 6% among the households with children. Overall, single households as well as households without children are found to eat more than those with kids. For instance, in 2007 alone, the consumption of meat products and vegetables was higher among households with no children than those with children by 39 and 51 per cent, respectively. Such difference in consumption across different households can be partially explained by the variation in the production of several products on the land-plots. For example, in 2007, the share of consumed vegetables received from private land-plots among households without children constituted 65%, the share of fruits was 26%, milk – 12%. For the households with children these numbers were 61, 20 and 10 per cent, respectively.

Table 5. Consumption of basic foods by households depending on their type, 2000 and 2007 (per capita quantity consumed per year; kg)

| Food item | 2000 | | | 2007 | | |
|------------------------------|-----------|------------------|---------------------|-----------|------------------|---------------------|
| | Single HH | HH with children | HH without children | Single HH | HH with children | HH without children |
| Bread and bakery | 176 | 96 | 151 | 136 | 75 | 107 |
| Milk and dairy products | 437 | 271 | 390 | 420 | 240 | 323 |
| Meat and meat products | 58 | 44 | 57 | 71 | 56 | 78 |
| Fish and fish products | 17 | 11 | 15 | 23 | 13 | 22 |
| Vegetable oil and other fats | 17 | 9 | 14 | 17 | 8 | 12 |
| Eggs | 276 | 164 | 239 | 249 | 162 | 224 |
| Potatoes | 134 | 78 | 129 | 98 | 59 | 85 |
| Vegetables and melons | 108 | 71 | 101 | 119 | 67 | 101 |
| Fruits and berries | 39 | 39 | 38 | 67 | 49 | 57 |
| Sugar and confectionery | 40 | 23 | 34 | 37 | 22 | 29 |

Source: from IEHS data

The changes in the level of consumption of certain amount of food consequently affected the level of chemical composition and caloric value of food products. In Belarus there is no clear trend in the level of caloric value of consumed food products, but the level of daily per capita calories in 2007 (2646kcal) is found to be by 4.7% less than its level in 2000 (table 6).

Table 6. Chemical daily per capita composition and caloric value of foods consumed by households, 2000 and 2007

| | Single HH | HH with children | HH without children |
|-------------------------------------|-----------|------------------|---------------------|
| 2000 | | | |
| Caloric content of foodstuffs, kcal | 3983 | 2286 | 3229 |
| Protein, gram | 110.6 | 68.6 | 127.1 |
| Fats, gram | 154.2 | 89.8 | 127.1 |
| Carbohydrates, gram | 535.6 | 299.0 | 423.6 |
| 2007 | | | |
| Caloric content of foodstuffs, kcal | 3616 | 2143 | 3002 |
| Protein, gram | 109.7 | 68.6 | 97.3 |
| Fats, gram | 155.2 | 94.6 | 133.6 |
| Carbohydrates, gram | 444.8 | 255.1 | 353.1 |

Source: from IEHS data

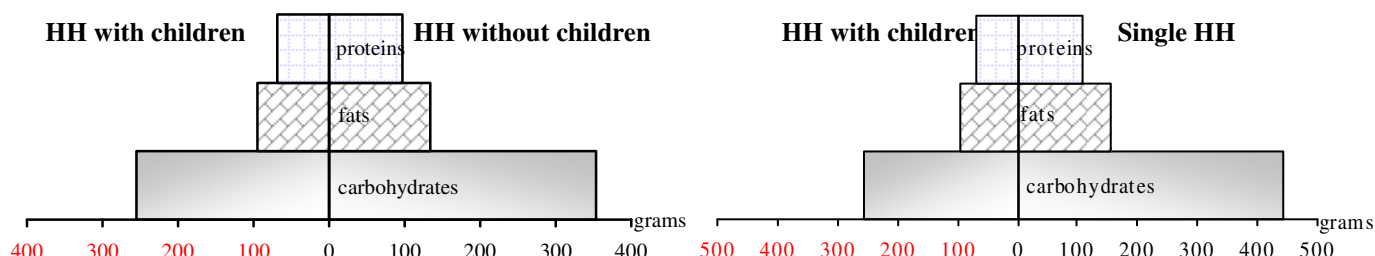
Notes: Chemical composition and caloric value of foods consumed are calculated on the basis of protein, fat and carbo-hydrate content of 100 grams of a product. Foods consumed are those bought and obtained from individual land plots.

The difference in the amount of consumed calories across households might be caused by the variation in the share of expenditures they spend on food and public catering. For instance, in 2007 single households spent a half of their custom expenditures on food while households with children devoted only 38% to foodstuffs (table 3); the level of consumed calories was 70% higher among the single households that among those with children (table 6).

In addition to the variation in caloric intake across households, there is also a divergence in the chemical composition of consumed foodstuffs. Households with children are again

found to have less favorable nutrition compared to the other household types. For instance, the level protein consumed in 2007 by households with children was about 30% less compared to households without children and by 38% less compared to single households. Graphically, the difference in the chemical composition of consumed food by different households is represented in the following figure.

Figure 4. Per capita daily average of the chemical composition of foods (grams) consumed by different household types, 2007



Source: from IEHS data

According to the Belorussian Law "On the Subsistence Minimum", the level of daily chemical composition of food required for minimum consumption varies by main socio-demographic groups of population. If we simply assume an average household consisting of two adults and two children, the rational level of required protein would be 75 gram, fats - 64 gram and carbohydrates - 320.5 gram a day per person. Clearly, the chemical composition of food products consumed by the households with children in 2007 does not satisfy these requirements, with an exception for fats.

The analysis of the level of household welfare may rely on the food-energy intake (caloric intake) approach. This method is based on measuring the consumed level of food calories and its comparison with certain established standards. Similarly to the level of daily chemical composition of food, the Law "On the Subsistence Minimum" recommends different levels of required calories for minimum consumption, but on average over different groups leads to approximately 2470 kcal/day. According to the World Health Organization (WHO) estimation, the recommended level of the energy requirement is 2100 kcal/day per person for the countries with economic transformation (Kerimbekova, 2004). At the same time, Food and Agriculture Organization of the United Nations (FAO) established the level of 1600 kcal/day as a critical survival minimum (FAO, 2001).

Taking into consideration the standard caloric content of foodstuffs determined by Belorussian government and assuming its level of 2470 kcal/day as a criteria of poverty line, it may be concluded that during 2000-2007 the proportion of poor households increased by about 5 percentage points); table (7).

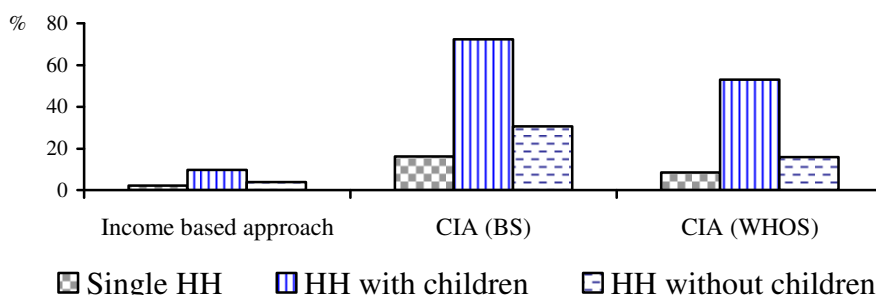
Table 7. Percentages of households with level of per capita daily caloric consumption less than certain standards, 2000 and 2007

| | Percentage of households with per capita level of daily caloric consumption | | |
|------|---|----------------|----------------|
| | less 1600 kcal | less 2100 kcal | less 2470 kcal |
| | Single HH | | |
| 2000 | 1.3 | 5.5 | 10.5 |
| 2007 | 2.3 | 8.4 | 16.1 |
| | HH with children | | |
| 2000 | 16.2 | 44.7 | 63.6 |
| 2007 | 20.9 | 53.0 | 72.4 |
| | HH without children | | |
| 2000 | 2.0 | 11.4 | 23.5 |
| 2007 | 3.6 | 15.8 | 30.7 |

Source: from IEHS data

The level of poverty based on the caloric intake approach is significantly higher than the level of poverty based on income approach. For instance, in 2007 the share of poor households was 42.8% or by 37 percentage points higher when calculated using caloric poverty line.

Figure 5. Percentages of poor households calculated by using different approaches; 2007



Source: based on IEHS data, 2007.

Note: CIA – caloric intake approach; BS – Belorussian standards; WHOS – World Health Organization standards

Particular increase in poverty incidence after the application of caloric intake approach is pronounced among the households with children. If according to the income approach in 2007 there were about 10% of poor households with children, the percentage calculated on the basis of consumed calories increased to 63%.

CONCLUSION

The main conclusions derived after the application of different methods and approaches of assessing living conditions and measuring poverty can be summarized as follows:

| <i>Method/approach</i> | <i>Conclusion</i> |
|--|---|
| Income-based poverty (official approach) | Decrease in poverty rates during 2000-2007. Poverty is the highest among the households with children. |
| Living arrangements of households | Slight improvement of living arrangements for all types of households. Households with children have better living conditions. |
| Poverty based on the share of expenditures devoted to food | Poverty is the highest among the single households. Considerable increase in poverty rates among single households and households without children. Decrease in poverty for households with children. |
| Caloric intake approach | Significant increase in poverty rates. Households with children affected at most. |
| Relative poverty | No decline in poverty rates. Poverty incidence is the highest among single households. |
| Scaling | Poverty level gets lower for all types of households. Almost equal poverty rates for all household types. |

As it can be observed from the summary table, using the different approaches to poverty measurement yields different results. For instance, according to the official approach there is the considerable reduction in poverty rates while following the caloric intake approach poverty in Belarus is increasing. According to the measure of relative poverty, all rates are

found to be higher than the official estimations in 2007. The index of living standards indicates the slight improvement of living condition among all types of households. Nonetheless, the analysis of living arrangements can not be based only on this rough summary measure; more detailed assessment and measures are required.

The analysis suggests that the income-based approach used in Belarus is not sufficient for the impartial assessment of welfare and poverty. A number of other outcomes with respect to nutrition and living arrangements should be taken into account to provide a more realistic picture. The application of equivalence scales is necessary for the poverty rate adjustments and revealing population groups most vulnerable to poverty in order to provide them with the priority social support. Our findings also suggest that not only the monetary estimation of the minimum subsistence level but also the set of items covered in this measurement should be regularly reassessed.

The analysis of poverty profiles is crucial in the evaluation of a poverty level since it helps to determine the best type of assistance to households. For instance, for households with children monetary allowances seem to be a serious preference, while any kind of improvement in housing seem to be the priority for the single households.

It is premature to label Belarus “an unusual case” in terms of the response of demographic indicators to improving living standards because the official data indicating such improvement are rather questionable.

REFERENCES

- Citro C. F., Michael R.T., Panel on Poverty and Family Assistance (United States) (1995). *Measuring Poverty: A New Approach*. 4th Edition. National Academies Press.
- Eurostat (2005). News release. <http://www.europe.org.sg/en/images/eurostat-yearbook-2005.pdf>
- Filmer D., Pritchett L.H. (1998). Estimating wealth effects without expenditure data – or tears: educational enrollments in India. Washington D.C., World Bank.
- Filmer D., Pritchett L.H. (2001). Estimating wealth effects without expenditure data – or tears: an application to educational enrollments in states of India. *Demography*, v.38, #1, p.115-132.
- Falkingham J. and Namazie C. (2002). *Measuring health and poverty: a review of approaches to identifying the poor*. London: DFID Health Systems Resource Centre
- Food and Agriculture Organization of the United Nations (FAO) (2001). *The State of Food Insecurity in the World*. Rome. www.fao.org
- Kerimbekova R.A. (2004). *Application of the European Experience of Poverty Reduction in the Kyrgyz Republic*. Bishkek.
- Mishra S.K. (2007). A comparative study of various inclusive indices and the index constructed by the principal components analysis. MPRA paper #3377. www.mpra.ub.uni-muenchen.de
- Ministry of Statistics and Analysis of the Republic of Belarus (Minstat) (2007). *Belarus in Figures*. Statistical Abstracts. Minsk.
- Organization for Economic Cooperation and Development (OECD) (1982). *The OECD list of social indicators*. Paris.
- OECD (1999). *Methodological Note on Poverty Indicators*. Paris. <http://www.oecd.org>
- Soviet of Ministers of the Republic of Belarus (1999). *Manual for calculation of minimum subsistence budget*, Resolution # 458. Minsk
- Soviet of Ministers of the Republic of Belarus (2003). Resolution “About a Concept of the development of the housing and communal service in Belarus until 2015”, # 943.
- Vyas s., Kumaranayake L. (2006). Constructing socio-economic status indices: how to use principal components analysis. *Health Policy and Planning*, #21 (6), p.459-468.
- World Bank (2004). *Belarus: poverty assessment. Can poverty reduction and access to services be sustained?* Report #27431-BY