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Some aspects related to poverty measurement methods and practices in Ukraine

Prepared by the State Statistics Service of Ukraine[1]

Summary

The paper examines the impact of social and economic processes on poverty incidence and trends in Ukraine in 2000-2013 and gives an analysis of different forms of poverty: monetary and non-monetary, including subjective and deprivation poverty. It outlines the approaches to certain methodological challenges related to poverty measurement such as those aimed at improving the reliability of poverty indicators at subnational level and minimizing possible bias in main indicators of household incomes and expenditures due to insufficient coverage of high-income population groups. The paper provides summary outcomes of experimental estimations. The final part of the paper outlines the activities related to future tasks related to the harmonization of studies on household incomes and material deprivations in the national statistical system of Ukraine with the European living conditions survey methodology.

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I.   INTRODUCTION

Poverty is a multidimensional phenomenon which cannot be comprehensively measured using only one estimation approach or a criterion. Similarly, it is difficult to develop poverty measurement methodology that would be relevant for all possible uses, for measuring poverty in all its forms.

Research into poverty issues in Ukraine is carried out based on various criteria and methods. This makes it possible to carry out an in-depth analysis of trends in poverty incidence and profiles as well as to determine the impact that economic factors, distribution processes in the society and existing social protection systems have on poverty.

The following definitions are used in Ukraine:

Poverty is an inability caused by lack of funds to maintain standard of living inherent to a given society in a given period of time. Poverty level is a share of population (households) whose consumption (income) level per capita is below an established poverty threshold. Poverty threshold is a level of income (expenditures) below which it is impossible to satisfy basic needs.

Subsistence minimum is a cost estimate of an adequate set of food products to ensure normal functioning of a human body and health and a minimum set of non-food goods and services essential to satisfy basic social and cultural needs of a person. Subsistence minimum is established for different social and demographic groups of population and used as a basis for defining state social support.

Official poverty monitoring is implemented in compliance with an approved methodology on comprehensive poverty estimation using a monetary approach and the following criteria for defining poverty thresholds:

– 75% of median equalized monthly expenditures per capita used as a relative poverty threshold and 60% of the median used as an extreme poverty threshold;

– official subsistence minimum used as an absolute poverty threshold, the share of the poor is estimated on the basis of equalized income;

– $ 5 per capita a day by purchasing power parity (PPP) used as an absolute poverty threshold for international comparisons estimated on the basis of equalized expenditures.

Millennium Development Goal 1, to eradicate extreme poverty, provides for monitoring of poverty levels defined on the basis of the following poverty thresholds:

– 75% of median equalized monthly expenditures per capita;

– equalized monthly consumption expenditures below actual subsistence minimum (estimated using actual prices);

– equalized consumption expenditures below $5 per capita by PPP.

For the purposes of monetary poverty monitoring an equivalence scale is used according to which the first household member is assigned a coefficient of 1 and each next adult is assigned a coefficient of 0.7.

Also, monitoring of subjective and deprivation poverty is carried out.

The main source of information for poverty analysis in Ukraine using all mentioned criteria is a sample household survey conducted by the State Statistics Service of Ukraine from 1999. This survey provides researchers with other criteria to estimate poverty (structure, daily calories intake and etc.) as well.

It is necessary to emphasize that the information provided in the paper pertains to the period of 2000-2013 when the government declared and developed socially oriented policy and, consequently, the public budget. At the same time, starting from 2014 these approaches are not implemented in Ukraine due to external factors. The poverty incidence is growing dramatically due to deteriorating socioeconomic conditions caused mainly by the occupancy of the Autonomous Republic of Crimea and Sevastopol by the Russian Federation and the antiterrorist operation (ATO) in Donetsk and Lugansk oblasts. Twenty percent of Ukrainian economic potential was destroyed as a result of the occupancy and warfare. More than 6,000 people were killed, dozens of thousands of people were wounded. Over a million people was forced to leave their homes and flee from the occupied territories and areas affected by military operations. Only in last few months over a billion hryvnias were spent in the framework of targeted assistance to temporarily displaced people. Each day almost 100 million hryvnias are spent by Ukraine for ATO. Inflation rate in 2014 reached 124.9%.

II. IMPACT OF SOCIAL AND ECONOMIC PROCESSES ON POVERTY INCIDENCE AND TRENDS

Poverty is one of the most acute problems of the society that significantly limits the opportunities for human development and is likely to cause large-scale social conflicts. This determines the strong focus on poverty eradication made by all social dialog stakeholders and all branches of government and civil society in overall. Alongside with monitoring of main poverty indicators, research into the impact of social and economic process on poverty incidence and trends is an important part of effective and efficient efforts to eradicate poverty.

The transformation of the Ukrainian economy during the first years of independency led to almost a 60% decrease in monetary income of an average family. A vast part of the population with traditionally medium incomes ended up living below the poverty line. Starting from 2001, poverty eradication was a strategic task of practically every government in Ukraine and measures related to this task had the status of national programs. The results of official poverty monitoring and monitoring of MDG1 on Poverty eradication for 2000-2013 are shown below.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Share of population with equalized expenditures below $5 per capita a day by PPP, %														
	11.9	11.0	3.0	4.0	2.0	9.0	9.3	6.6	3.8	3.5	2.5	1.9	2.3	1.9
Share of population with equalized expenditures below 75% of median equalized monthly expenditures per capita, %														
	26.4	27.2	27.2	26.6	27.3	27.1	28.1	27.3	27.0	26.4	24.1	24.3	25.5	24.5
Share of population with equalized expenditures below 60% of median equalized monthly expenditures per capita, %														
	13.9	14.9	13.7	13.7	14.2	14.4	14.8	13.8	13.6	13.0	11.2	10.7	11.2	11.0
Share of population with equalized monthly consumption expenditures below an actual subsistence minimum (determined on the basis of actual prices)														
	71.2	69.2	65.0	59.9	51.0	38.7	31.0	30.5	19.9	24.8	23.5	25.8	24.0	22.1
Share of population with equalized expenditures below an official subsistence minimum, %														
	87.4	83.7	80.5	67.3	50.0	28.4	21.4	12.7	7.1	5.8	8.8	7.8	9.1	8.4

* up to 2005 a value of $ 4.3 per day by PPP was used

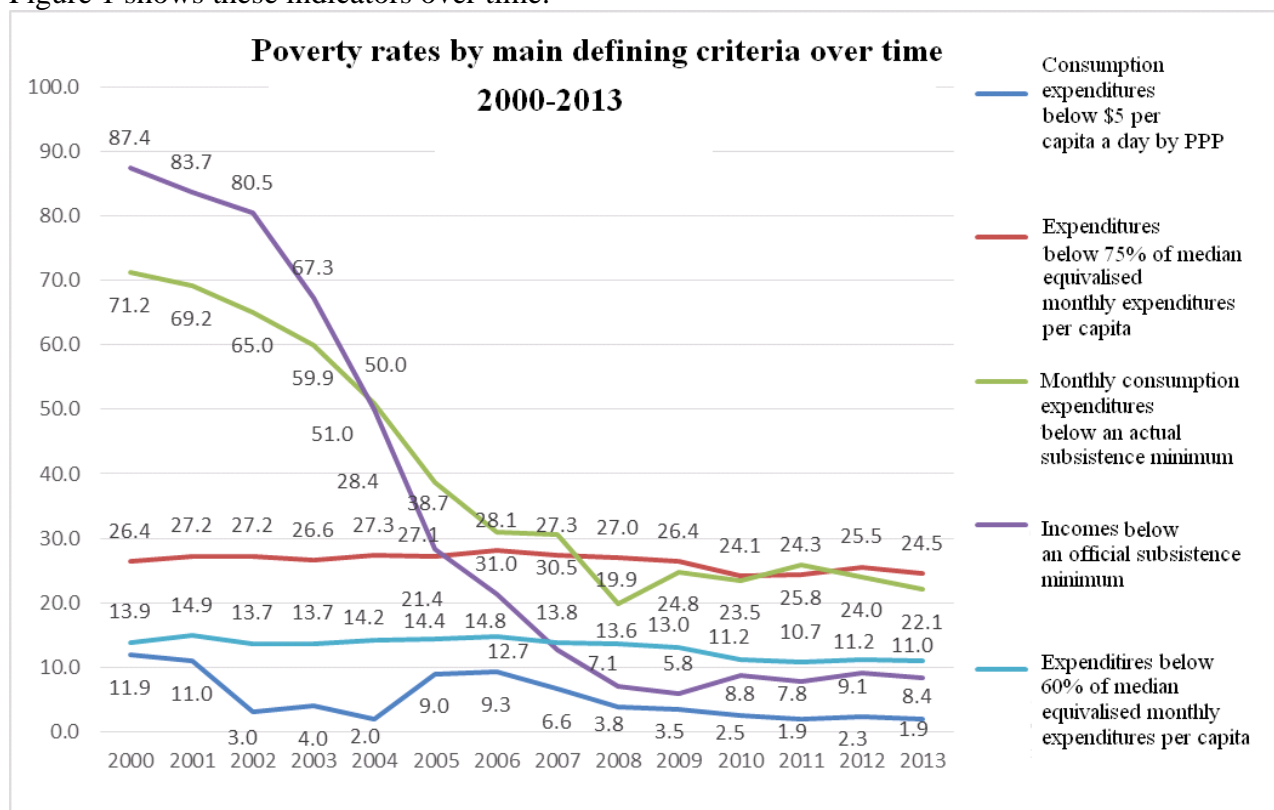Figure 1 shows these indicators over time.

Figure1. Poverty rates by main defining criteria over time (2000-2013)

There were certain positive developments in addressing poverty reduction. The absolute poverty rate estimated by incomes was reduced tenfold as compared to 2000 and threefold as compared to 2005. The absolute poverty rate by expenditures and by actual subsistence minimum decreased threefold and twofold, respectively. The share of the population with daily consumption below $5 by PPP has decreased 5 times as compared to 2005. The maximum reduction in absolute poverty rates was seen in the period of 2000-2007.

These processes were largely driven by certain factors:

- actual disposable income of people was growing faster than the inflation, in the absence of adequate positive changes in the economy (from 2004 GDP growth was lagging behind);
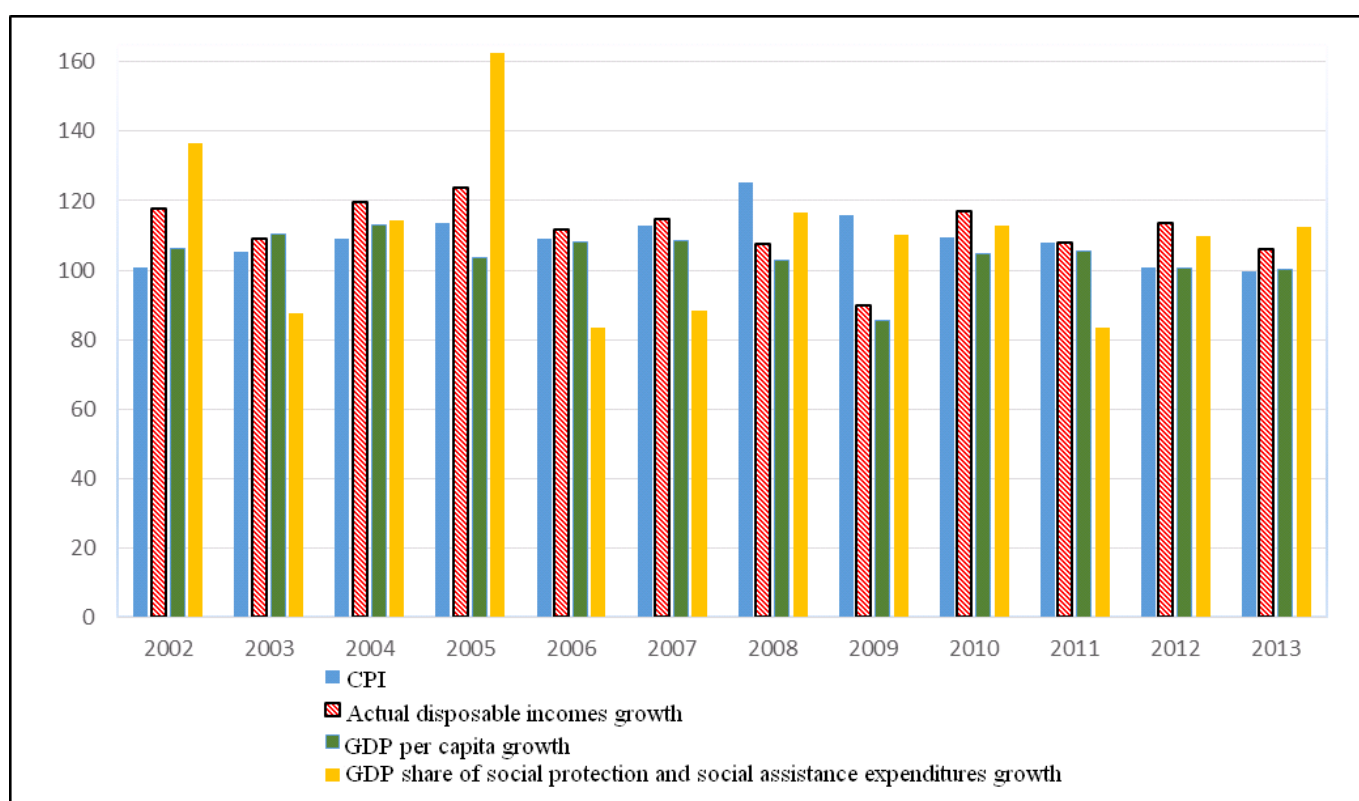

Figure 2. Growth dynamics of actual disposable income of the population, GDP and share of social protection and social assistance expenditures in GDP in 2002 - 2013.

- systematic measures implemented to approximate the amounts of minimum social guarantees (minimum wage and minimum pension) with the amounts of relevant subsistence minimums (Figure 3), the introduction of a number of significant targeted payments to families with children (childbirth assistance in 2001 was equal to 2 subsistence minimums and in 2006 - 23 subsistence minimums), which had an indirect impact on poverty reduction rates in this group at risk of poverty;
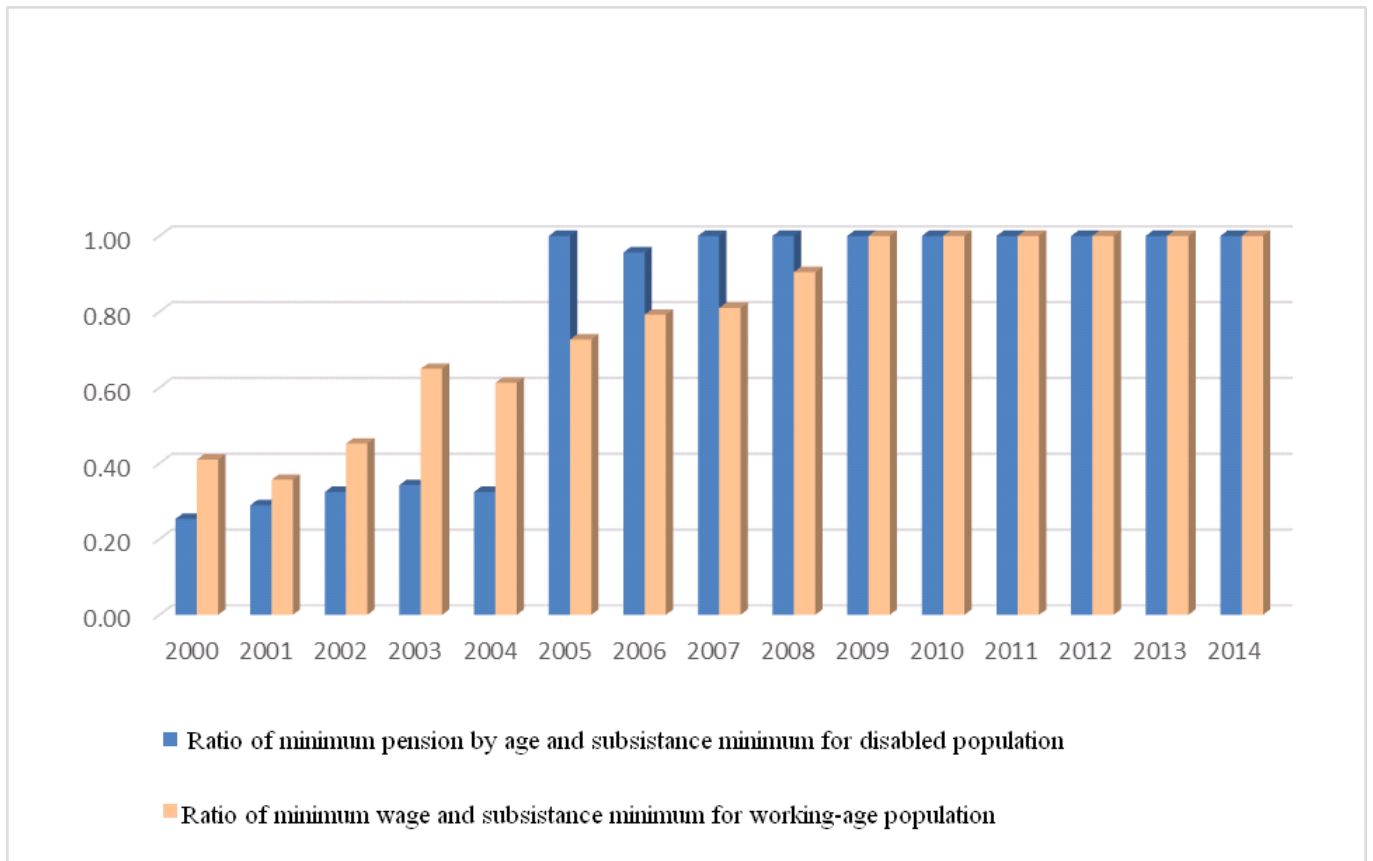
Figure 3. Approximation of amounts of minimum social guarantees with the amounts of relevant subsistence minimums, 2000 - 2013

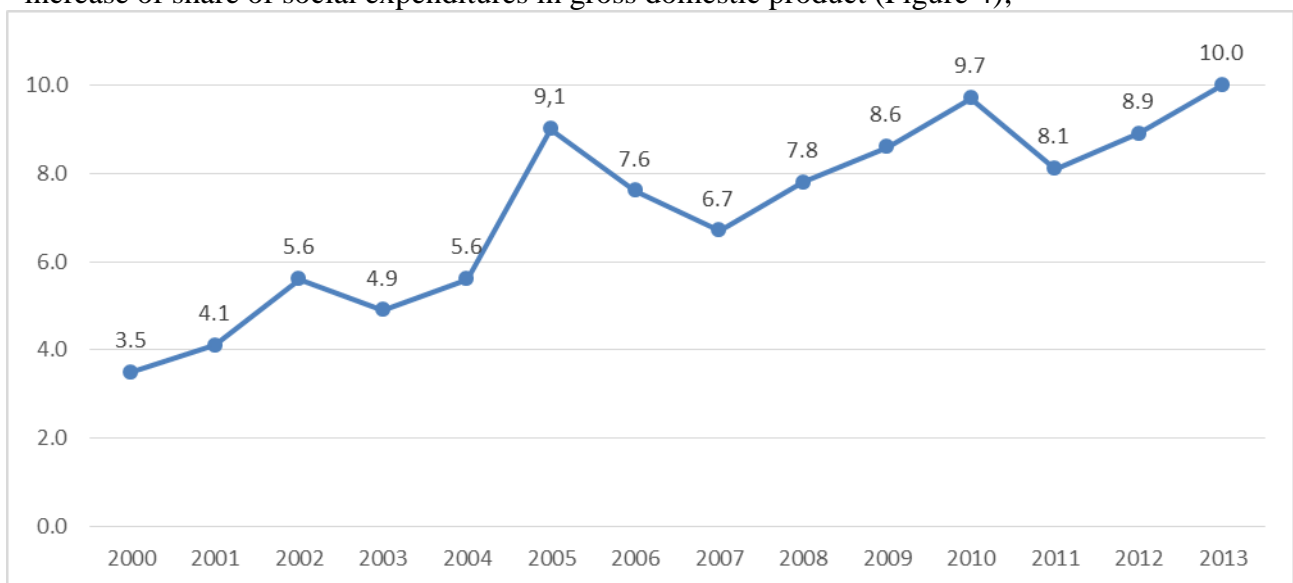- increase of share of social expenditures in gross domestic product (Figure 4);

Figure 4. Pubic expenditures for social protection and social security of population as % of GDP, 2000 - 2013
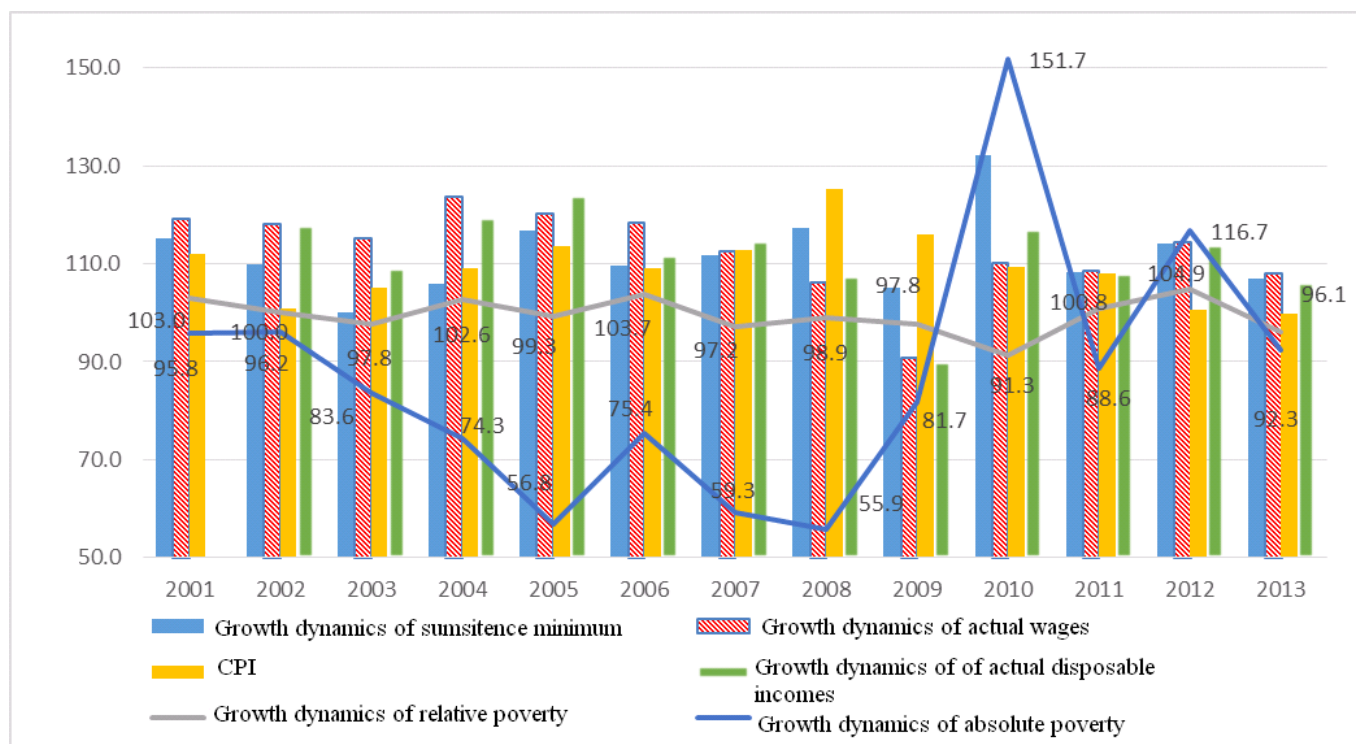
Figure 5. Growth dynamics of consumption prices, population income and subsistence minimum, 2001-2013

- 'freezing' in the legislation the official value of subsistence minimum as compared the growth of prices (2003-2004 and 2007-2009) often in the context of continued growth of actual wages and actual disposable incomes of the population except for the economic crisis period (2008 and 2009). Since the vast majority of the population had (and continues to have now) low income, a minor change in the value of poverty threshold (subsistence minimum) entails significant fluctuations (in our case, a decrease) of poverty rates.

At the same time the use of several criteria helped to find out that there were no positive changes in poverty rates. Though absolute poverty rate reduced in 2001-2008, relative poverty rate did not show significant improvements. Relative poverty reduction was constrained by no changes in the principles and mechanisms of income distribution which resulted in the formation of a polarized society – with an extremely small group of rich people and considerable number of low-income population. On the other hand, low efficiency of the state support system, which was not focused only on the poor population, also hampered the process of overcoming monetary poverty. Social assistance funds were distributed among vast groups of beneficiaries[1] and only a small part of such funds was delivered to the poor[2].

Main poverty profiles broken down by social demographic and social economic groups remain stable. Regardless of a selected criterion, poverty rates among the population of working age and persons of retirement age are below the national average, and vulnerable groups include children and 'elder' pensioners. Traditionally, the most vulnerable are families with many children, households with children under 3 years and with double demographic and economic burden.

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[1] 57% of households are beneficiaries of at least one social assistance program.
[2] 30% of the poorest are traditionally allocated with less than 50% of social assistance funds.

III. LINKS BETWEEN DIFFERENT FORMS OF POVERTY: MONETARY AND NON-MONETARY, INCLUDING SUBJECTIVE AND DEPRIVATION POVERTY

Currently the use of non-monetary approaches alongside with traditional monetary measures is becoming increasingly relevant in the analysis of poverty issues. In the long term it is planned to integrate one of such approaches (deprivation poverty) in the official poverty monitoring system. When using non-monetary criteria a household will be considered as poor, whereas poverty incidence measures a share of households. Based on the needs of users poverty incidence rates can be also estimated at the level of population, rather than households.

Deprivation poverty characterizes limited possibilities of some population related to the access to certain benefits not only those satisfying basic physiological needs, but also the needs attributed to personal development and adequate level of comfort. The national list included 18 deprivation attributes that covered different aspect ranging from the inability to buy food, clothes, durables, medicines and to ensure adequate housing conditions through to unavailability of social infrastructure. All attributes were tested for frequency (attributes that were present in the majority of households were chosen) and consensus (most of the respondents found them essential for adequate living). The list of these 18 attributes is provided in Attachment 1 to this paper. Deprivation poverty line is defined as a presence of at least 4 attributes out of 18 in a household. The level of this form of poverty decreased from 25% in 2009 to 22% of households in 2013.

The level of subjective poverty can be defined as a share of households that consider themselves as poor. In 2009-2013, the rate increased from 59% to 68%. On the other hand, the poverty level based on household self-assessment of incomes (permanently denied themselves in basic things except for food or even were unable to provide themselves with adequate food) in this period decreased from 44% to 39%. Thus, a psychological aspect of the signs of crisis and uncertainty about the future has greater impact on self-assessment than the actual financial situation itself.

Figure 6 shows poverty incidence among population defined on the basis of different criteria. In 2013, out of the total population at risk of relative poverty 32% had 4 and more deprivations. Among the population who suffered from absolute poverty measured by income 40% had the same number of deprivations. On the other hand, out of 22% of the population with 4 or more deprivations, 15% were categorized as poor by income and 36% of population was at relative poverty risk. Three percent of the population was at risk of absolute, relative and deprivation poverty simultaneously. Thirty nine percent of the population was affected at least by one of these forms of poverty.
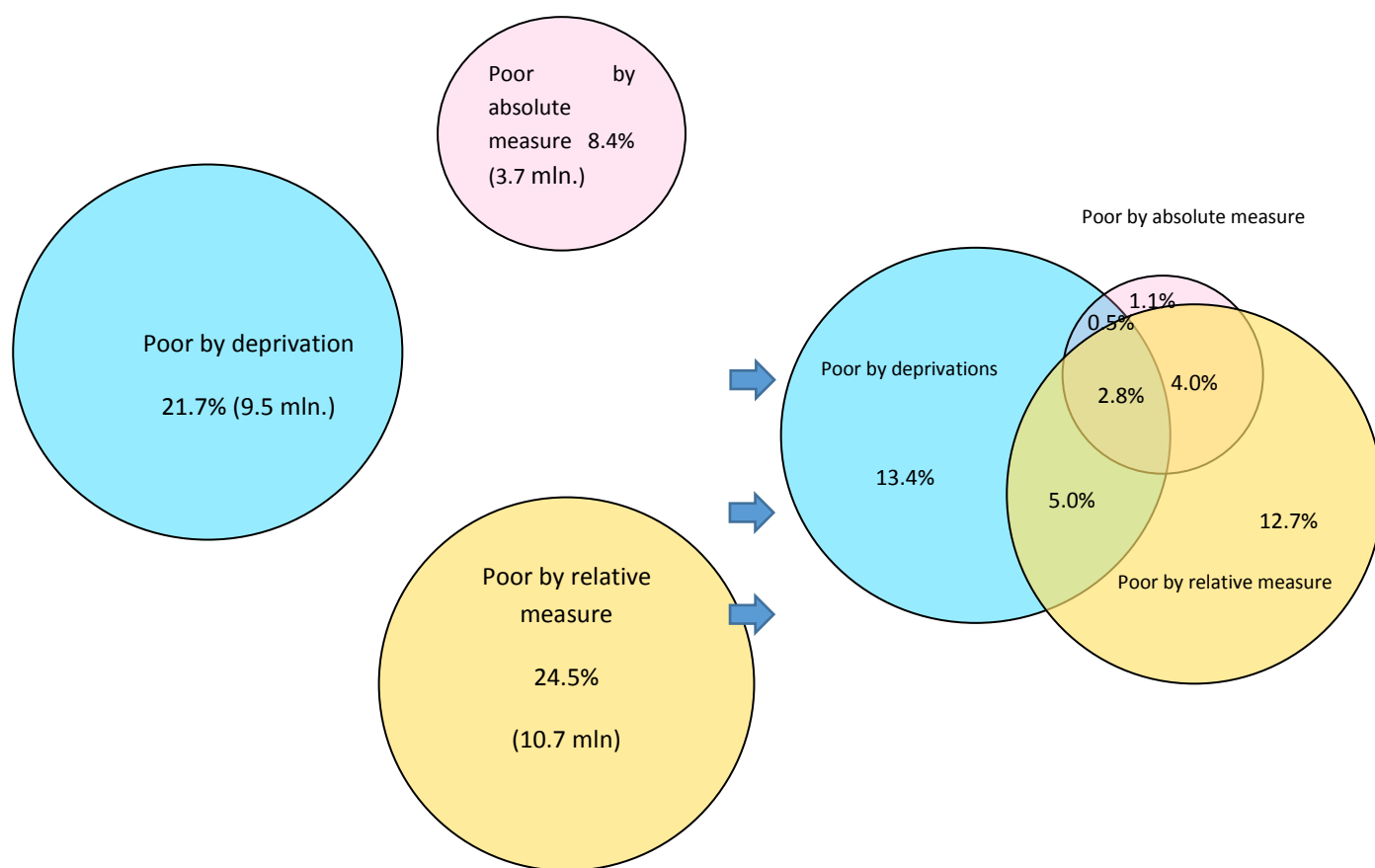
Figure 6. Poverty rates estimated using different criteria, 2013

IV. METHODOLOGICAL APPROACHES TO IMPROVE THE RELIABILITY OF POVERTY INDICATORS AT SUBNATIONAL LEVEL

Poverty indicators are traditionally measured based sample household surveys. One of the main challenges for a survey-based approach to measuring poverty is a lack of statistical reliability of direct estimations at the level of individual locations or population groups. The same problem is typical also for the poverty indicators that are being measured against data of household living conditions surveys in Ukraine. With the sample size (13,000 of households in 2013) and participation level (83%) direct estimations of poverty indicators at the subnational level are not reliable. This is confirmed, for instance, by coefficients of variation which in 2012 were above 10% for relative poverty estimates in 26 out of 27 regions, and 15% in 14 regions (Figure 8). This results in instability of estimations over time and limits the possibilities of poverty monitoring.

An efficient and modern approach to improving the reliability of poverty indicators for different levels of data aggregations is the use of additional (external) data together with survey data and specific methods of sampling design. A World Bank Project implemented by the Ministry of Social Policies and the Statistics Service of Ukraine found it useful to use specific approaches to improve sample design in surveys used for measuring poverty indicators together with the methods of indirect estimation, specifically related to the evaluation in small regions.

Experts (representatives of ministries, departments, and academia) involved in poverty measurement in Ukraine jointly defined basic poverty indicators, the reliability of which should be adequately ensured, and namely, relative poverty rate and absolute poverty rate (measured by income). It was also decided that sample design should be optimized subject to maintaining a nationwide sample size. Sample design should be optimized through minimizing the sum of weighted standard errors of subregional estimates of poverty indicators and relative errors of the national estimates. In doing this the weights are determined based on priority levels of certain indicators and levels for which they are being estimated - national and subnational.

Sample design optimizations are carried out once in 5 years during the process of subnational sampling. The impact of improved accuracy of relative poverty estimations made in 2012 as a result of optimized sampling design is presented in Figure 8. The data demonstrate that the reliability of this indicator in the majority of the regions has slightly improved. However, some indicators show lower reliability which can be explained, on the one hand, by the requirement to keep the sample size unchanged and. on the other hand, by the use of an additional indicator at subnational and national levels in the process of reliability improvement.

Indirect estimation of the poverty indicators for Ukrainian regions is carried out using a triple-factor function of compositional estimation function built at a region level as a weighted sum of direct estimation of an indicator in the reporting year and estimates made based on external data: direct estimation of an indicator in the previous year, its direct estimation at the national level in the reporting year and the value of final consumption expenditures per capita calculated using national accounts data in the reporting year. According to the small region estimation methodology the weights are defined as to minimize compositional evaluation error. The results obtained through the application of these methods are shown in Figure 7.

When selecting external data to be used in compositional estimation function, an analysis of statistical correlation between subnational poverty indicators and a number of indicators in addition to the mentioned above was undertaken. Such indicators include the regional distribution of: income in the form of wages and other payments and compensations paid to individuals according to the data of the State Tax Authority; average monthly wage of employees and a share of employees with wages below the minimal level (data from an enterprise survey on labor statistics conducted by the State Statistics Office); cash income and gross subnational product per capita (national accounts data); employment and unemployment rates (data from the economic activity survey) and others. Based on the findings, at this stage it was decided to build the model using the above mentioned information.

It is noteworthy that models for each of the two poverty indicators are the same in the form. The difference is only in the data used for measuring and model parameters, i.e. a system of weight factors. It is also important that the process of sample design optimization aimed to improve the reliability of estimated poverty indicators uses the reliability levels of compositional estimations, not direct ones, thus linking the optimization and indirect measurement processes. The reliability levels of compositional estimations of relative poverty by Ukrainian regions after sampling design optimization are presented in Figure 8. The data shown confirm that the impact of reliability improvement of indirect measurements can be very significant for the majority of the regions.

Figure 7. Modeling results of relative poverty indicators by the regions of Ukraine, 2012

Currently, the refined estimates of poverty indicators by regions are calculated once a year and are considered experimental. The search for effective sources of external data for the model refinement continues.

Figure 8. Relative errors of subnational estimates of relative poverty under direct measurement before sampling design refinement, direct measurements after sampling design refinement and compositional measuring with sampling design refinement, 2012.

V. METHODOLOGICAL APPROACHES TO MINIMIZING POSSIBLE BIAS IN MAIN INDICATORS OF HOUSEHOLD INCOME AND EXPENDITURES DUE TO INSUFFICIENT COVERAGE OF HIGH-INCOME POPULATION GROUPS

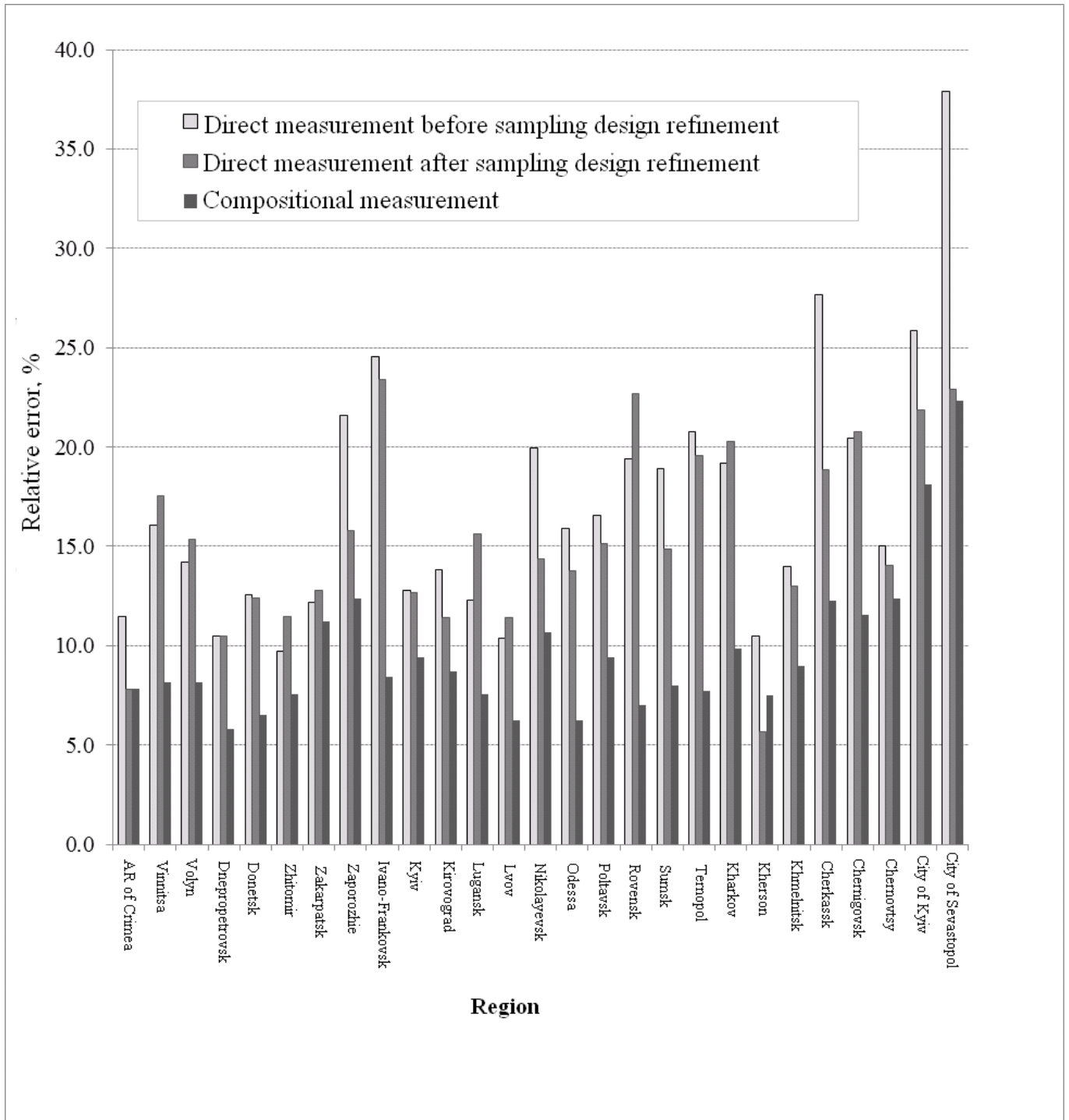The problem of insufficient coverage of high-income groups of the population in statistical surveys of household income and expenditures is faced by many countries where such surveys take place. This problem is most relevant for those countries which lack quality population and income registers. The problem arises first of all due to refusal of well-off households to participate in surveys or to provide information about their actual standard of living. Consequently this gives rise to a potential risk of bias in direct estimations of indicators towards the poorer groups of population. In its turn, this may lead to lower reliability of estimates of a number of indicators at national and subnational levels, in particular, of those related to population segregation by standards of living.

These problems are found in household living conditions surveys in Ukraine as well. Though there is generally a high level (83%) of a household participation in surveys nationwide, the highest rates of non-responses are found in the regions with by medium level of income. Specifically, the participation rate in Kyiv is 50% and the share of those who refused to participate in a survey is 28%.

It should be noted that high rates of refusals are not always related exclusively to a respondent's level of income (the reasons may include being busy with work and domestic chores, lack of free time among the youth, religious aspects, prohibition by the family, reluctance to take part in any surveys etc.).

The Statistics Service carries out systematic work aimed at increasing the level of respondent participation. In this regard all interviewers receive special training on establishing contacts with households and motivating them to participate in a survey. Also regular networking meetings of interviewers, trainings and business games with participation of supervisors are organized, interviewer efficiency and performance is continuously monitored, etc.

At the same time, rather complex procedures for adjusting weights for non-responses and methods for weight calibration enabling in particular to align age and gender profiles of non-institutional population derived from the survey results with available external data are used to build a system of statistical weights for extending sample survey results to the total population.

Possible inadequacy of coverage of well-off households is stated in a survey report prepared annually for data users. At the same time, the problem related to the lack of information on well-off groups of population cannot be addressed by only using the above methods. Methodological approaches to possible adjustments for missing information on income and expenditures of the well-off using external data were developed under the World Bank project.

Identification of sources of such information is another challenge. First, it is necessary to establish statistical link with the relevant sample survey results. Secondly, external data should meet certain criteria such as have an adequate degree of reliability, cover relevant population categories and have an identical or similar in timeline reporting period and frequency and be methodologically aligned with the survey results.

It is noteworthy that the results of sample surveys in practice can be reasonably adjusted only by modifying the measuring procedures, namely, the methods for calculation of household statistics weights.

At that, the most efficient adjustment method is the calibration of weights that aims at minimizing a distance function between calibration weights and weights being adjusted, provided that the calibration weights meet the criteria defined on the basis of external data.

The statistical weights of surveyed households aiming to offset the impacts related to insufficient coverage of well-off groups of population are calibrated through an alignment of households (population) incomes or expenditures distribution derived from the survey results with the distributions estimated on the basis of external data. The process of calibration of statistical weights is accompanied by quality assurance. If more than one external data source is available the most adequate source is chosen based on the quality analysis of results obtained from the calibration of statistical weights. At the same time it was decided that the parallel use of several sources is not practical due to the limitations related to the integration of a considerable number of additional conditions in the process of calibration.

Below are shown the results of the use of national accounts data on the structure of final household consumption expenditures as a source of external information. In order to assure methodological conformity, the national accounts data were adjusted for the amount of 'imputed rent', and housing subsidies were deducted from household expenditures. Household expenditure structures estimated by survey data and the national accounts system show a considerably high level of correlation (in 2012, Pearson correlation coefficient was 0.963).

Table 1

Consumption expenditures structure, 2012

COICOP main expenditure groups	Survey before adjustment		National accounts		Survey after adjustment	
	Mln. hryvnia	% of consumption expenditures	Mln. hryvnia	% of consumption expenditures	Mln. hryvnia	% of consumption expenditures
Food and alcohol-free beverage	367,263	55.56	372,176	39.79	379,062	43.73
Alcohol beverages and tobacco products	25,920	3.92	79,178	8.46	63,526	7.33
Clothing and footwear	44,959	6.80	56,927	6.09	54,303	6.27
Housing, water, power, gas and other fuels	67,811	10.26	60,308	6.46	64,145	7.40
Household items, home appliances, housing maintenance	16,877	2.56	40,722	4.35	33,835	3.90
Healthcare	24,839	3.76	46,318	4.95	40,334	4.65

Transport	31,285	4.73	124,703	13.33	96,925	11.18
Communication	20,317	3.07	26,015	2.78	24,741	2.86
Leisure and culture	14,678	2.22	41,392	4.43	33,579	3.87
Education	9,648	1.46	13,481	1.44	12,532	1.45
Restaurants and hotels	18,290	2.77	24,257	2.59	22,854	2.64
Other goods and services	19,108	2.89	49,887	5.33	40,936	4.72
Total	660,995	100	935,364	100	866,772	100

The above procedures helped to approximate household expenditure structures obtained from various sources (Table 1) and it was found that the distribution of equalized total income by decile groups of households is more polarized (Figure 9). Apart from that there was a certain increase of inequality indicators estimated using both household expenditures criteria and income criteria (Table 2).
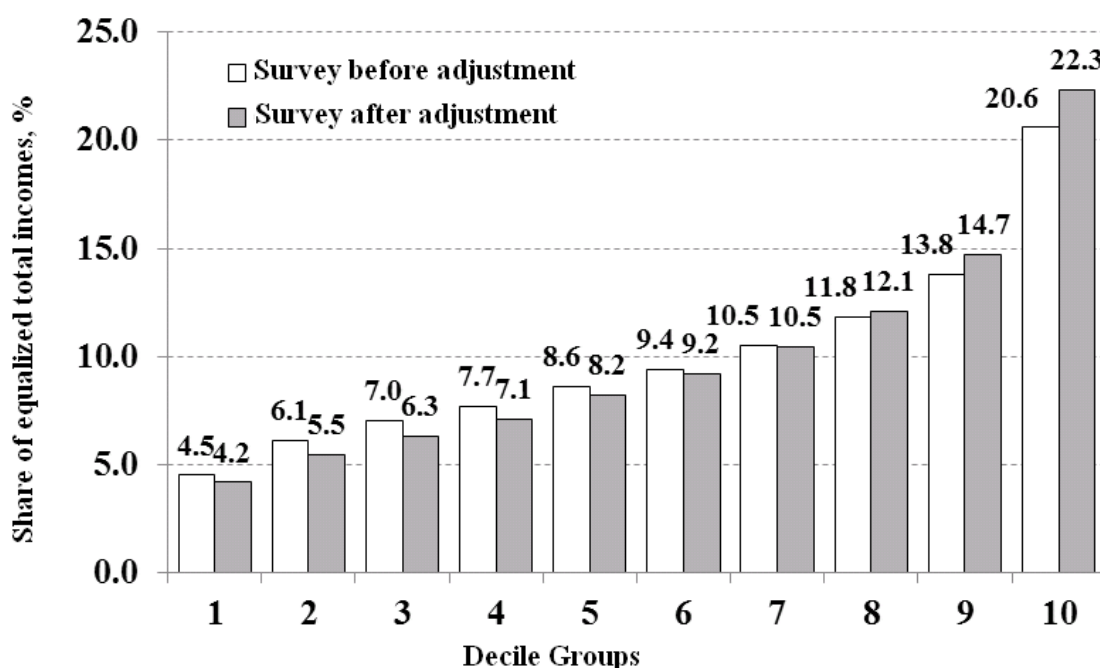

Figure 9. Distribution of equalized total incomes by household deciles based on data from surveys before and after adjustment, 2012

Table 2

Inequality indicators, 2012

Indicator	Equalized monthly consumption expenditures per capita		Equalized monthly total income per capita	
	Before adjustment	After adjustment	Before adjustment	After adjustment
Gini coefficient	0.24	0.29	0.23	0.27
Decile concentration coefficient	3.02	3.81	2.80	3.33
R/P 10% ratio	4.79	6.17	4.60	5.36
R/P 25% ratio	3.46	4.31	3.30	3.85

At present, evaluations of survey indicators adjusted for coverage of the well-off groups of population are considered experimental. A search for effective sources of external data for the process refinement is ongoing.

VI. FUTURE TASKS RELATED TO HARMONIZATION OF RESEARCH ON HOUSEHOLD INCOME AND MATERIAL DEPRIVATIONS IN THE NATIONAL STATISTICAL SYSTEM OF UKRAINE WITH THE EUROPEAN LIVING CONDITIONS SURVEY METHODOLOGY

The Action Plan for implementation of the Association Agreement between Ukraine and the European Union for 2014 - 2017 (Item 213) approved by the Government in September 2014 provides for using household income concept harmonized with the Eurostat requirements in the statistical practice of Ukraine.

Relevant activities will be performed in a staged way in order to ensure that this is done by 2017. To date the methodology for household income estimation has been developed with the assistance of Twinning international consultants. Given the difficult economic and political situation and lack of sufficient funds for a full-scale implementation of the European household living conditions survey, two options that may help to assure the transitional harmonization of main indicator estimations are being considered at the moment:

1) A modular survey on income and material deprivations (panel part excluded) on the basis of the existing national primary survey.
2) Inclusion of some indicators into the existing national survey.

Draft questionnaires have been prepared.

In both cases this approach will help to ensure the possibility to obtain both national and European-based indicators during the transition period.

In particular, estimations of household 'total gross income' and 'total disposable income' indicators will be implemented. For evaluation of the imputed rent indicator it is planned to develop a model using price statistics data. If compared with the national 'household total income' indicator, the European indicator of

'total disposable income' will be significantly lower due to the exclusion of the cost of consumed self-produced goods as well as in-kind assistance and transfers. According to preliminary estimates the difference will be about 6%, and for rural households – 12%.

In the near future the issue of introducing of a new system of indicators will be discussed with national users. The results will be issued in a separate publication and placed on the Web site of the State Statistics Service as well. After finalizing the procedures on confidentiality and related control, micro data are planned to be made public.

In addition, the deprivation-related content of the surveys will be enlarged with a number of new indicators related to social participation and material deprivation among children. Estimates of poverty rates, including material deprivation poverty, will be carried out using European methodologies.

Attachment 1

Assessment of poverty attributes by households (percent)

Poverty attributes	Percentage of households that				Percentage of urban households that				Percentage of rural households that			
	considered as poverty attributes		had poverty attributes		considered as poverty attributes		had poverty attributes		considered as poverty attributes		had poverty attributes	
	2013	2009	2013	2009	2013	2009	2013	2009	2013	2009	2013	2009
Economic deprivation												
1. **Food**												
Not enough money to												
- provide oneself with basic inexpensive food products	98.9	99.7	4.8	11.0	98.8	99.8	4.4	10.2	99.0	99.4	5.6	13.0
2. **Non-food products**												
Not enough money for												
- renewal when necessary of outwear and footwear for cold weather for adults once in 5 years	98.4	98.3	17.8	21.0	98.6	98.6	17.8	21.1	97.9	97.5	17.9	20.4
- purchase when necessary of outwear and footwear for children	99.1	99.0	6.6	8.3	99.2	99.2	6.0	8.0	98.9	98.7	7.7	9.2
Lack of												
- a TV set	96.9	94.6	2.4	2.5	97.7	95.8	2.0	1.8	95.0	91.8	3.4	3.6
- a refrigerator	98.5	96.6	3.1	3.3	98.9	97.3	2.3	2.3	97.6	94.9	4.8	5.8

3. **Household housing conditions**

Lack of

| - housing in adequate condition (available housing requires major repair, is damp, shabby, old) | 99.4 | 99.0 | 9.4 | 14.8 | 99.3 | 99.1 | 6.8 | 13.3 | 99.4 | 98.6 | 15.1 | 18.0 |

Not enough money to

| - pay in time and in full housing and utilities bills or for gas used for cooking | 98.8 | 98.5 | 8.4 | 13.4 | 98.8 | 98.6 | 8.3 | 14.4 | 98.8 | 98.3 | 8.4 | 11.4 |

Availability of living space not exceeding

| - 5 m2 per person | 97.9 | 97.1 | 3.6 | 4.0 | 98.1 | 97.6 | 4.1 | 4.6 | 97.3 | 95.9 | 2.2 | 2.5 |

4. **Healthcare**

Not enough money to pay required

- health services (except for dentist) in a health facility (in the absence or difficulty to obtain such services free of charge), analyses, examinations and procedures prescribed by a doctor	98.9	99.1	21.2	20.5	99.0	99.2	20.2	19.8	98.7	99.0	23.6	22.1
- medicines and medical equipment prescribed by a doctor	99.2	99.4	21.6	22.1	99.4	99.6	20.7	21.4	99.2	99.2	23.4	23.9
- inpatient treatment without a surgery (if such service is unavailable free of charge) or a vital surgery (except for cosmetic) and subsequent inpatient treatment (if such services are unavailable free of charge)	99.2	99.1	21.2	21.3	99.3	99.3	19.4	20.3	99.0	98.6	25.1	23.5

5. **Education and early childhood care**

Not enough money to

	- receive professional education	97.4	96.4	6.2	6.4	97.6	97.0	5.3	6.0	97.0	95.1	8.4	7.5

Infrastructure development

1.	Lack of retail stores close to home	96.6	94.5	6.0	7.7	96.8	94.9	2.2	3.2	96.1	93.6	14.6	17.6
2.	Lack of establishments providing consumer services (hairdressing, laundry, dry-cleaning, clothes, footwear and home appliances repair, etc.) in the neighbourhood	95.5	94.0	17.0	18.6	95.6	94.3	4.4	5.0	95.3	93.2	45.7	49.4
3.	Lack of a health facility (medical and obstetric centre, outpatient clinic, polyclinic), a drugstore close to home	98.7	97.6	13.0	14.2	98.6	97.6	6.2	7.2	98.8	97.6	28.5	29.9
4.	Lack of access to modern emergency ambulance services in the locality	99.1	98.4	15.7	18.7	98.9	98.3	4.2	5.0	99.5	98.7	41.8	49.5
5.	Lack of pre-school facilities (kindergartens, nurseries) close to home	98.2	96.9	2.8	3.5	98.7	97.1	1.2	1.5	97.2	96.5	6.3	7.9
6.	Lack of regular daily transport connection with another locality with higher level of infrastructure (shop network, cultural and educational facilities, etc.)	98.2	96.8	8.6	8.9	98.3	96.8	1.7	2.1	98.2	97.0	24.4	24.4