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**APPROACHES TO MEASURING POVERTY AT THE NATIONAL
AND SUBNATIONAL LEVELS**

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of the National Academy of Sciences of Ukraine¹

Abstract

The study is devoted to the most pressing issues of poverty in Ukraine. It addresses both the aspects which are well defined in terms of methodology and the new approaches that are mainly of research nature. An attempt is made to outline a number of different aspects of poverty studies: to give a comparative analysis of key profiles and high risk poverty groups depending on the methodological approaches to the definition of poverty; to assess the impact of social assistance on poverty; to give an idea of 'mapping' poverty for 'small territories'; to identify new forms of poverty and to determine relevant vulnerability thresholds. The main source of statistical data is the data from household surveys.

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I. Comparative analysis of key poverty profiles and high risk groups using monetary and non-monetary approaches

For many years poverty studies in Ukraine have been focused on defining a monetary criterion for defining a line between the poor and non-poor. The definition of such criterion also affected the evaluation of the number of the poor and poverty incidence. However, irrespective of the monetary poverty line chosen² the poverty profiles remained unchanged, and higher poverty risks were common for families with children (in particular, with many children), with unemployed members, and for rural population.

A different pattern is observed when using non-monetary poverty lines: the centres and vectors of key profiles change and in some cases move into other planes (Figure 1). Thus, the monetary poverty analysis does not show higher risks among retirees, the gender and age structure of poverty demonstrates high values only in the group of the so-called ‘elder retirees’, whereas non-monetary poverty lines clearly indicate the vulnerability of persons of retirement age, in particular, in elder age groups.

In contrast, children move from the highest risk group of monetary poverty to a medium risk group of non-monetary poverty. And it is the case both for subjective poverty³, and consumption⁴ or deprivation⁵ poverty lines.

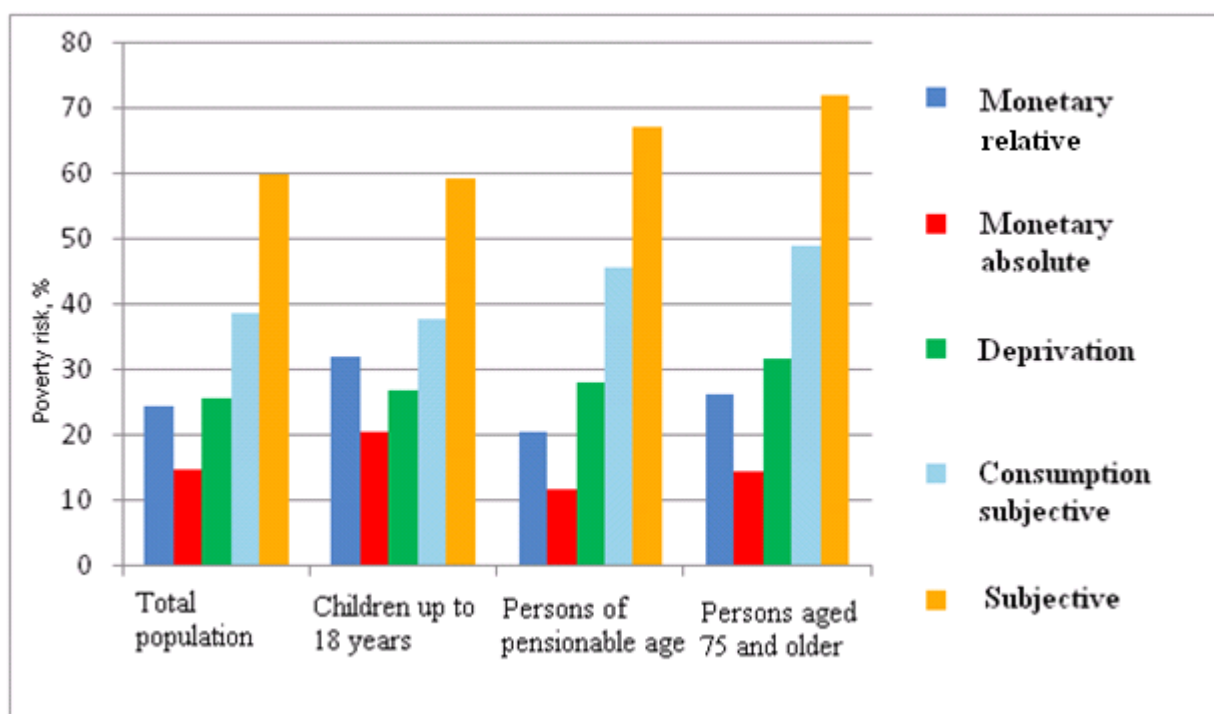


Figure 1. Changes in main poverty profiles depending on the poverty line, Ukraine, 2011

Thus, the main vector of poverty profiles is different between monetary and non-monetary lines: higher risks of monetary poverty are found among children whereas non-monetary poverty is notably higher in elder age groups.

The main vector of profiles determines the groups with higher risks of poverty. Under monetary approaches the highest poverty risks are common for families with many children and families with both children and unemployed members (Figure 2). Higher risks are also found in other types of households: with double

² For profile analysis this study uses two monetary poverty lines: relative (as per official poverty monitoring in Ukraine) and absolute one, based on the officially approved subsistence minimum on the basis of household expenditures.

³ Subjective poverty is understood as people who consider themselves being poor based on self-assessment.

⁴ Consumption poverty line is understood as a value of purchasing power of household income which is not sufficient to satisfy the needs in food or other basic needs, apart from food.

⁵ Deprivation poverty line is based on 4 or more deprivations experienced by a household.

demographic and economic burden, with 2 or more children, with children under 3 years old. According to non-monetary poverty lines (consumption and subjective) the group that has the highest poverty risks includes the households comprised of only persons of elder age (75+). Higher risks of deprivation-based poverty are found in households with children.

If we look at the so-called ‘core’ of poverty that is found at the intercrossing of those who are poor based on monetary relative, subjective and deprivation poverty lines, we can see that the centres of profiles and risk group tend to be around children. Thus, the ‘triple’ poverty rate among children is 10.3% vs. 5.5% among persons of retirement age.

One of the factors affecting poverty in Ukraine is the place of residence and the size of a settlement. In monetary poverty, there is a continuing trend over many years of studies that the smaller is a settlement the higher are risks (Figure 3). The gap between urban and rural monetary poverty rates continued increasing until 2009.

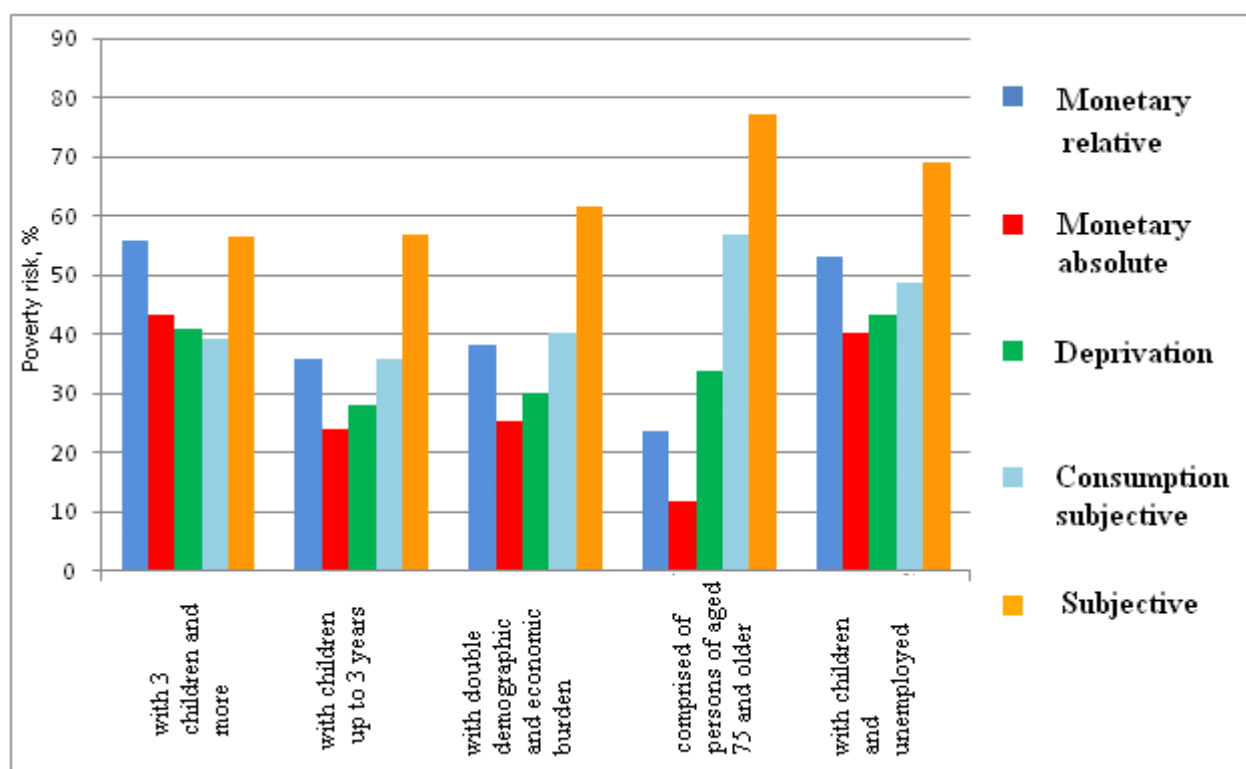


Figure 2. Households with highest poverty risks depending on the poverty line, Ukraine, 2011

The residence factor offsets consumption-based and partially subjective poverty, thus minimizing the gap. At the same time, the place of residence serves as a kind of dividing line in deprivation-based poverty: the rate across rural areas is twice as high as in urban areas. And while the determinant for monetary poverty risks is the presence of children in a household, for deprivation poverty such determinant is definitely living in a rural area.

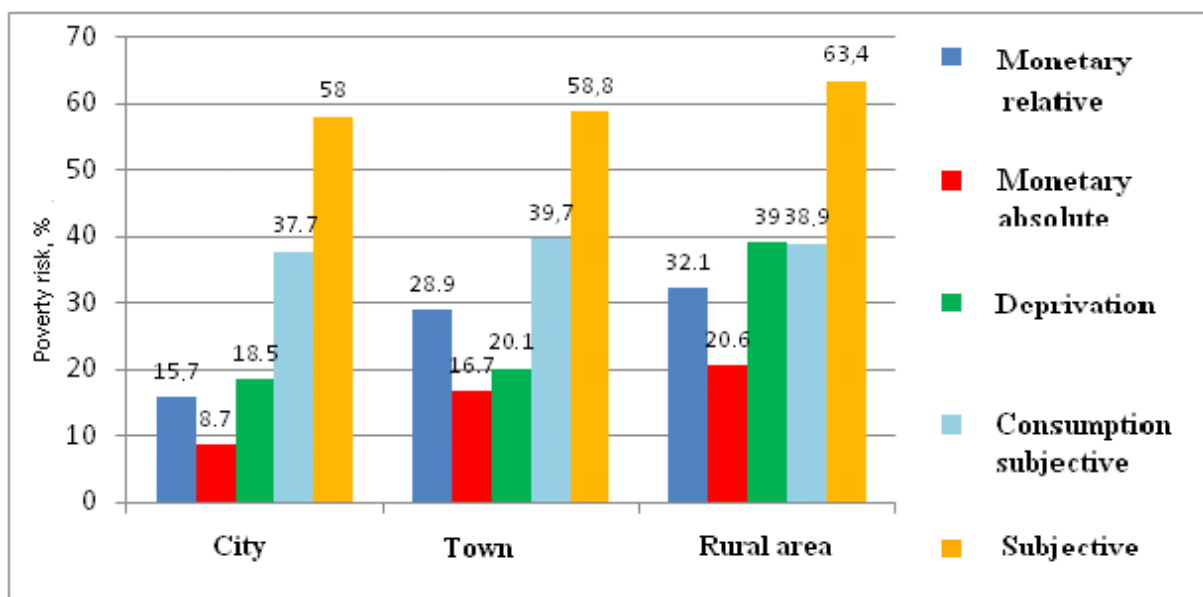


Figure 3. Monetary and non-monetary poverty risks depending on residence, 2011, Ukraine.

When the residence factor is overlaid on the household profiles, this usually gives a cumulative effect and significantly increases poverty risks of the most vulnerable groups. Specifically, high monetary poverty risks among rural families with many children may be seen as a classic example proven to be true throughout the whole period of studies.

II. Assessment of impact of social programmes on poverty (based on data from a specialized survey module)

The social assistance system in Ukraine at large has no tangible impact on poverty (Figure 4). A noticeable impact of child allowances on the reduction of poverty rates was observed after 2005 (when child birth allowances were significantly increased). At the same time, over the last 8 years all other programmes had almost no impact. And in the last 2 years a new trend can be found that social benefits increase relative poverty in the society. Thus, in 2013 the poverty rate before benefits was 0.2 percentage points lower than after benefits, and in 2012 the difference was even 0.5 percentage points.

Such negligible impact of a particular social assistance programme on the population at large can be due to not only shortcomings of such programme but also due to the fact that it is focused on small groups of people. In fact, the assessment of impact on target groups shows more optimistic results (Table 1). Most noticeable is the impact of child birth allowances which helped to reduce poverty risks among the target groups by two-thirds. Targeted assistance to low-income families almost halves poverty risks among its beneficiaries. At the same time, other programmes have no such tangible impact even on their target groups.

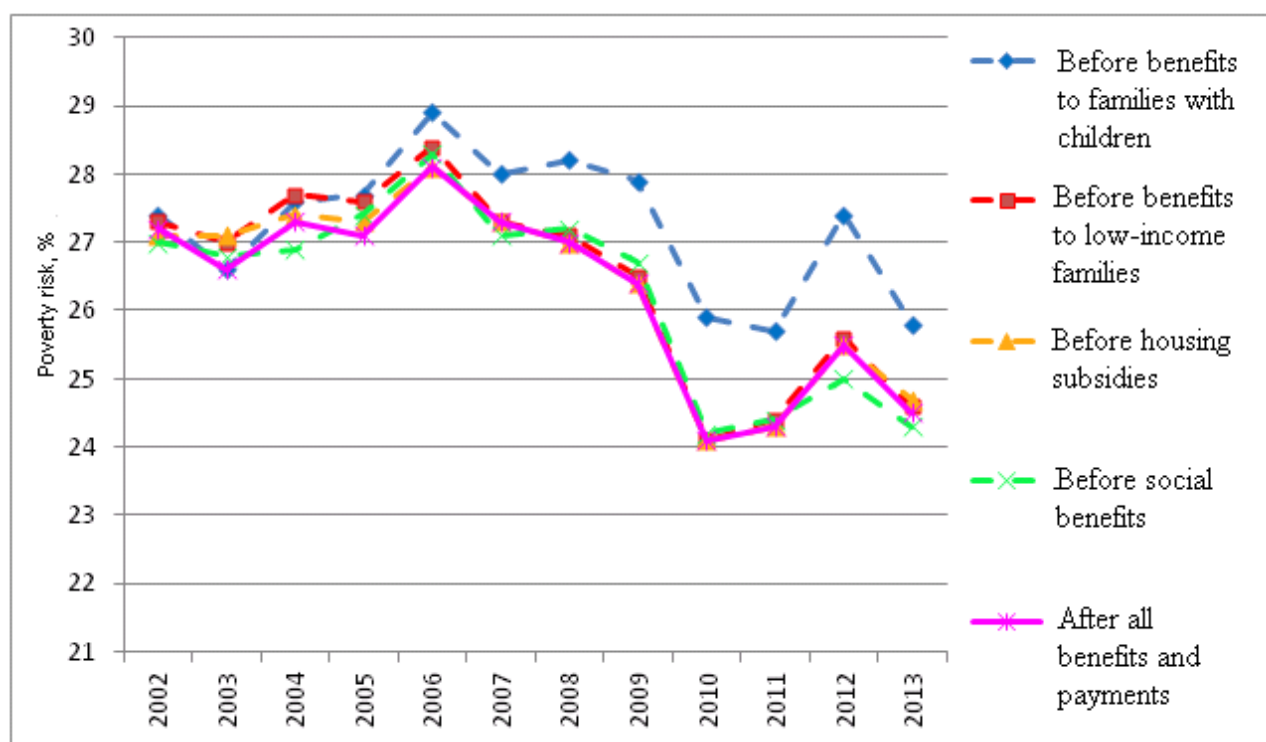


Figure 4. Poverty rates before and after social benefits, Ukraine, 2002-2013

In addition to traditional evaluation of the extent to which social programmes are focused on the poor, the extent to which the poor are covered by benefits, ‘inclusion’ and ‘exclusion’ errors, and assistance efficiency which is carried out through a standard household survey, the introduction of a special module made it possible to analyse satisfaction with these programs as well as public attitude towards them.

Table 1. Absolute poverty rates⁶ before and after selected forms of assistance (by target groups), 2013, Ukraine

	Poverty rate among beneficiaries, %	
	Before benefit	After benefit
Child birth allowance	32.1	11.7
Child care allowance up to the age of 3	17.5	13.5
Single mother child care allowance	35.4	23.2
Low-income family assistance	34.0	17.8
Housing subsidy	9.5	6.2

Thus, over 90% of households positively view the impact of child birth allowances and low-income family assistance on their well-being which proves out earlier objective estimates (Figure 5). The appreciation of child birth allowances is driven by significant sizes of payments and in case of low income families such appreciation is because programme funds are well-targeted (over 60% of total amounts are received by the poor).

⁶ Rates estimated using official subsistence minimum as an absolute poverty line.

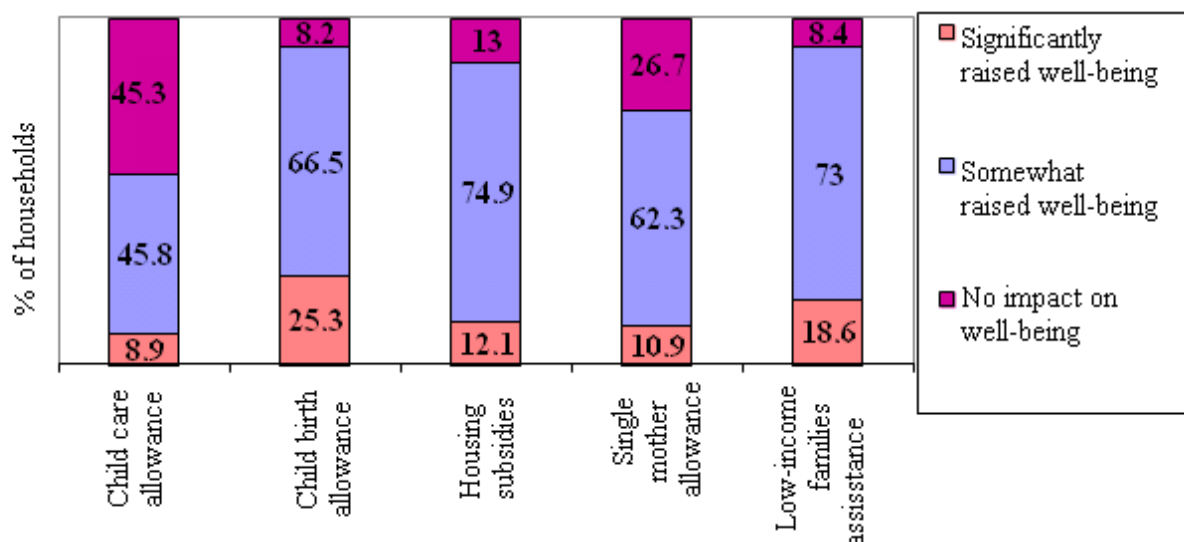


Figure 5. Subjective assessment of impact of social programmes on the well-being of assistance beneficiaries, 2013, Ukraine (based on data from a special household survey module).

In general, today 67.7% of the population believe that the government assistance is made available only to those who really need it, while only 5.5% completely disagree with this statement. At the same time, 48.3% have noticed positive changes in social assistance programmes over the last 2 years. Therefore the social assistance system is quite positively viewed by the people despite the issues related to its functioning and low impact on poverty incidence.

III. Poverty measurements at a subnational level based on the data from various sources

The idea of poverty mapping at the level of ‘small’ territorial units emerged from studying household poverty profiles and drivers. Since poverty risk determinants were considered to include demographics of households and a place of residence it was quite reasonable to use census data to draw up the so-called ‘poverty map’. This mapping exercise involved the combination of data sources:

- microdata of household living conditions surveys – to model poverty rate as a function of various, primarily demographic variables;
- disaggregated census data – to determine household structure at the level of territorial units (in accordance with selected attributes).

As a result of the modelling exercise the following criteria for household categories were defined: presence or absence of children; age; absence or presence of persons with university degree⁷. Social and demographic characteristics underpinning the categorization of households are:

- Presence of children: one child; two children; three and more children;
- Presence of persons of certain age: working age; elder working age, among them: below 70 years and aged 70 and older;
- Presence of persons with university degree: at least one member has university degree; no members have university degree

⁷ Residence was incorporated into the ‘small’ territorial unit database and as such was not used as a factor in the modeling exercise.

As a result, 18 categories of households were identified to capture the total population in Ukraine. The overall poverty rate and the poverty rate for each category of households are estimated using the microdata from household surveys⁸. Then the estimated poverty rates by categories of households are applied as coefficients to measure territorial poverty rates based on the population structure in each small territory. The population structures of small territories by selected categories of households were derived from the 2001 National Population Census⁹. To build the population structure by 18 categories of households a dataset was developed specifying the number of persons in these categories living in each administrative unit of Ukraine. The dataset was the basis for estimating poverty rates in small territories using the derived coefficients.

As a result, the 2001 ‘poverty map’ was drawn up which suggested that the poverty rates in ‘small’ territories are consistent with the estimated values on the condition that the national poverty factors had a dominant effect for this particular territorial unit (Figure 6). Generally, the poverty map reflected the big picture of regional poverty derived from direct estimations using the microdata from household surveys. The largest issues related to accuracy of estimates may arise in the boundary areas which are more influenced by external factors.

The next stage was to develop a methodology for extending the poverty map to the intercensal period which resulted in drawing up a map for 2006 (Figure 7). However, as the next census has been postponed we are not able to verify the appropriateness of the proposed methodology.

A new way to measure poverty at the level of ‘small’ territories was a fundamentally new approach enabling a broad use of current demographic statistics and the statistics available with the Ministry of Social Policies. However, today we can speak only about initial results that have to be further verified and adjusted.

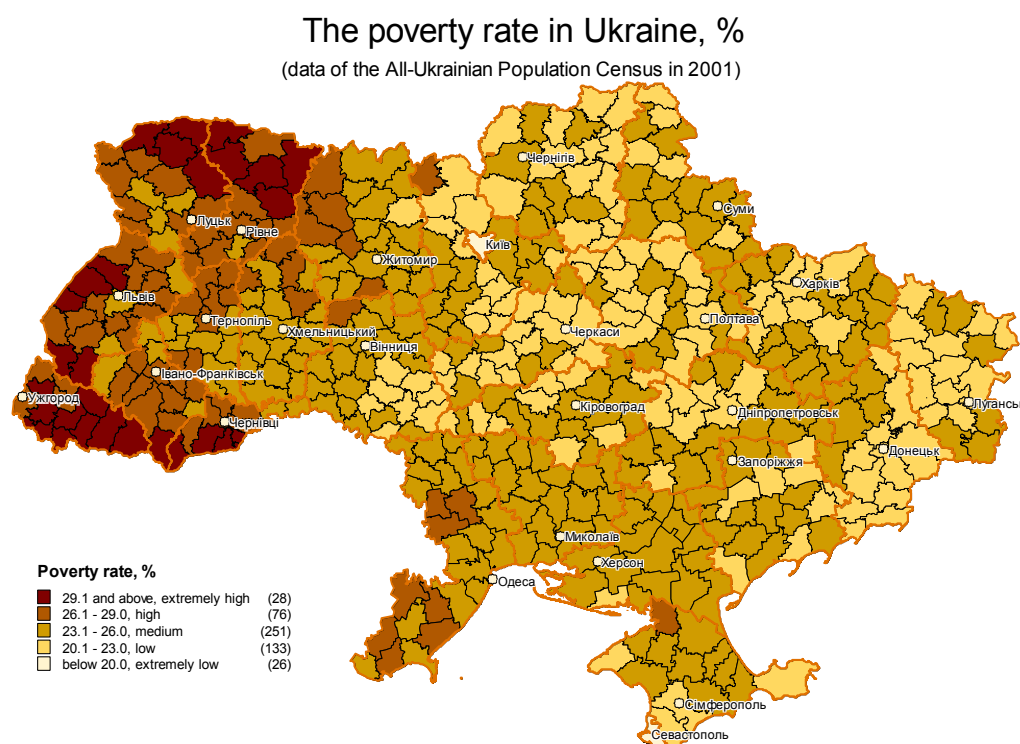


Figure 6. 2001 Ukrainian Poverty Map based on various data sources

⁸ The resultant household categorization was tested against the outcomes of the 2001-2006 household survey. For each year it was proven that this model corresponds to the structure of Ukrainian population.

⁹ The enumeration form includes all questions required for constructing a poverty map.

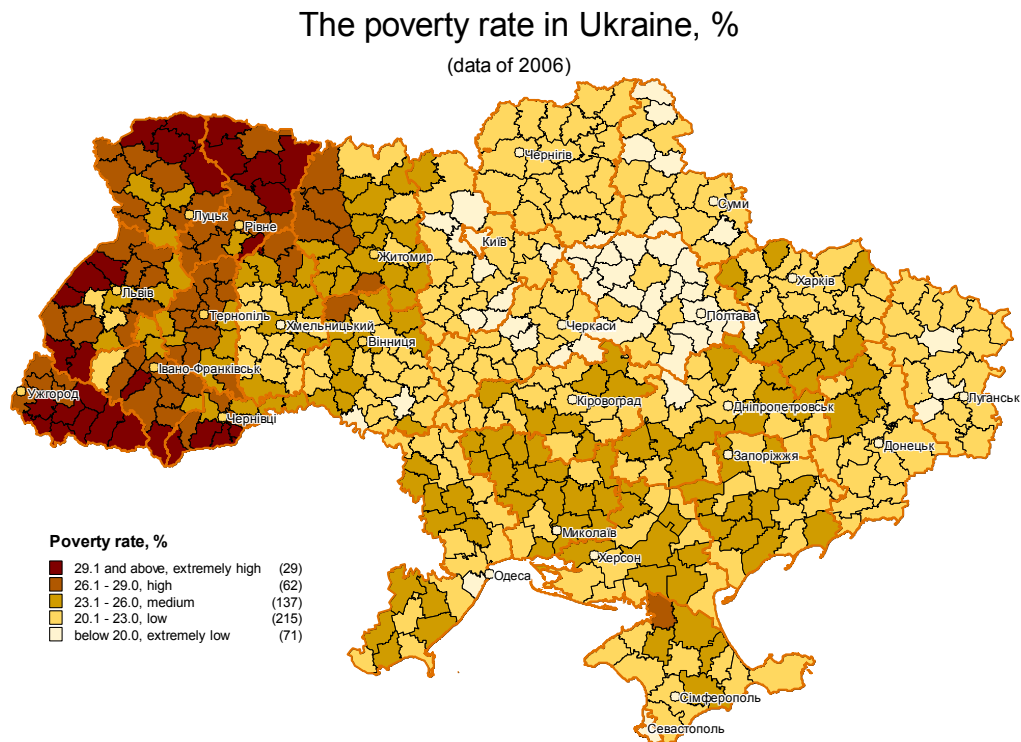


Figure 7. 2006 Ukrainian Poverty Map built by extending the data from the 2001 National Population Census

IV. New poverty forms emerging in Ukraine. Issues related to analysing and establishing a threshold of vulnerability to different forms of poverty

New important manifestations of poverty in Ukraine that can be identified based on the 2013-2014 data include: 1) inability to pay for health services, 2) unsatisfactory housing conditions or risks of housing deterioration, 3) financial insolvency of households, 3) losses of property and livelihoods due to the warfare.

First to mention is poverty as a consequence of an illness, or medical poverty. A serious illness may affect even well-off families, but in case of a minor surgical intervention with a medium rehabilitation period such families are safe. Such intervention would mean accumulated debts for the poor (if they are eligible for borrowing); whereas those vulnerable to this poverty will spend all their reserves and most probably will be impoverished. In the worst case such families will not be able to access health services at all: in 2013, 22.1% of people who required health treatment could not afford health services or purchase of required medicines.

If we draw the line for vulnerability to poverty because illness at the level of a subsistence minimum threshold increased by a value of actual median expenditures for health goods and services, the share of vulnerable population (apart from the poor against the subsistence minimum level) will be around 16% and the poverty rate (including vulnerability) will increase up to 36% (Table 2). If instead of median expenditures we use average health expenditures, the poverty rate (including vulnerability) increases up to 55.4%. Thus, in case of a non-severe illness the treatment of which requires median or average expenditures, additional 6.1% – 35.6% of the population may find themselves amongst the poor and the level of vulnerability to poverty due to illness will be 35.9%-55.4%.

Table 2. Estimation of poverty levels due to illness and vulnerability to this form of poverty, 2013, Ukraine

Medical poverty vulnerability threshold	Threshold value, hryvnia per person per month	Share of those vulnerable to medical poverty, % (excl. the poor)	Level of medical poverty (including vulnerability), %
Subsistence minimum + annual median actual health expenditures	1,351	16.1	35.9
Subsistence minimum + annual average actual health expenditures	1,677	35.6	55.4

If we look at housing poverty, over a half of the country's population (51%) today falls within the definition of housing poverty as long as their housing conditions are characterized by at least one out of four negative attributes: 13.7% have inadequate housing floor area, almost 9% suffer from overcrowding, 27% live in extremely worn-out and neglected housing and almost every fourth family lives in an apartment without basic facilities.

The survey found that today 3.4% of households rent their accommodations. It is obvious that the share of tenants is higher in lower quintiles, while the risk of a job loss is decreasing. However, in unstable economic situation the risks related to loss of a job and main livelihoods are less correlated with a family's wellbeing unlike the periods of economic stability. It is clear that the representatives of the fifth quintile have more chances 'to stay afloat' in hard times, however, they account for less than a third of all tenants (31.7%). Thus, one can assume that about 2.5% of families will be affected by housing poverty in case of a loss of a main source of livelihood. Therefore, the level of housing poverty including the vulnerability is estimated at 53.6%.

According to the household survey, in 2013, 11.7% of households had outstanding loans and another 3.7% paid for financial services. If we assume that the vast majority of families who have to repay loans in 2013 are at risk of becoming financially insolvent (due to loss of income, hryvnia depreciation, etc.), and add to them those who are considered poor as measured against subsistence minimum threshold (who have very little chances to use a loan not speaking about its repayment) then the poverty level by indebtedness can be estimated at 30%.

An absolutely new phenomenon for Ukraine is poverty caused by the warfare. Poor families who have lost their property due to the war are living at the edge of survival and today can only rely on support from the government and volunteers. The second group may include families who used to have certain savings and well-paid jobs but as a result of the war have lost everything and became poor. This is the group of the so-called 'new poor'. The threshold of vulnerability to this form of poverty is too high because savings and other current income of the affected families are to cover such high costs as housing rental, replacement of essential everyday goods (even if lost temporarily), clothes and footwear, school accessories for children, etc. Thus, the emergence of sudden poverty due to the warfare and related processes can be viewed as follows (Figure 8).

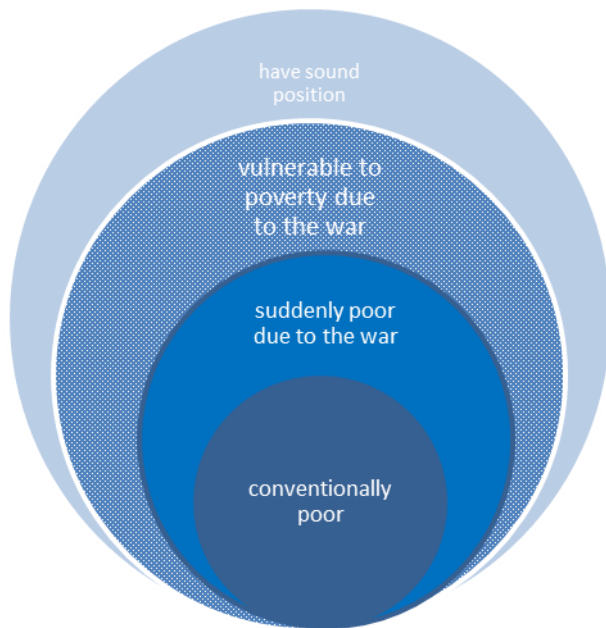


Figure 8. Theoretic pattern of sudden poverty and vulnerability due to the warfare

Today the estimation of sudden poverty incidence due to the war is limited for two reasons. First of all, insufficient time has passed to generalize statistical data flows and to compare the data from current statics and sample surveys. Secondly, the irregularity of the situation requires other sources of information in addition to the conventional ones for in-depth studies as the current statistical system is unable to identify all dimensions of the new phenomenon. As of the 1st quarter of 2014, over a half of the population in Donetsk and Lugansk oblasts (59.1%) had income as small as one or two subsistence minima while the income of 27.4% was even below the subsistence minimum. Thus, the vast majority of the population in the region (5 million) was considered as suddenly poor or vulnerable to poverty due to the warfare irrespective of whether they have moved to another area in the country or stayed home.

The four forms of poverty demonstrate different poverty incidence but still they determine to a varying degree the modern 'face' of the Ukrainian poverty and call for a fundamental revision of policies to address poverty and social exclusion.
