IN-DEPTH REVIEW OF POVERTY STATISTICS

Note prepared by the State Statistics Service of Ukraine and Eurostat

I. INTRODUCTION

1. The Bureau of the Conference of European Statisticians (CES) regularly reviews selected statistical areas in depth. It selected poverty statistics for an in-depth review at its November 2011 meeting. The review gives an overview of the methodological issues underlying poverty measurement. It presents two case studies: one at international level (Eurostat) and the other at national level (Ukraine). Recommendations associated with these case studies are presented.

2. The Bureau is invited to discuss the in-depth review and give recommendations for possible follow-up actions. The secretariat would like to draw the attention of the Bureau members to the conclusions and recommendations of Ukraine (in chapter IV) and EU (in chapter VI).

II. SCOPE/DEFINITION OF THE STATISTICAL AREA COVERED

3. This review covers poverty statistics that belong to the statistical area “3.3.1 Living conditions, poverty and cross-cutting social issues” of the DISA classification.

4. The definition of poverty is often closely connected with political decisions that direct attention to key issues to be measured by poverty indicators and with the type of social aid system in a country.

5. Poverty is a concern for the functioning of societies, for the political forces, the majority of public organizations and the mass media. How we define poverty is critical to policy making.

6. The notion of poverty has many interpretations. It is affected by value judgements and varying aspects of social equity due to the different social, cultural and historical contexts.

7. With such an approach, many kinds of poverty surveys can exist in different countries. To support decision making, however, a certain basic criterion for poverty measurement must be selected. This would also facilitate international comparisons.

8. The multidimensional nature of poverty may require the use of different poverty measures depending on the purpose. Different poverty measures may be needed for
evaluating the functioning of the social aid system; for ensuring social equity; for comparing the poverty situation among countries, etc.

A. Theoretical and methodological principles to overcome the problem

9. No statistical approach can provide an estimate of poverty relevant to all possible uses and to estimate all aspects and manifestations of the poverty. The EU’s social inclusion process uses a relative definition of poverty that was first agreed by the European Council in 1975: “(...) people are said to be living in poverty if their income and resources are so inadequate as to preclude them from having a standard of living considered acceptable in the society in which they live. Because of their poverty they may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalised from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted”. Such a definition stimulates the development of different approaches to the measurement of poverty since it allows a multiple interpretation of the notion.

10. Both the Commission Communication on GDP & beyond and the Stiglitz-Sen-Fitoussi report on measurement of economic performance and social progress underline the importance of the multidimensional measurement of poverty.

11. The selection of the poverty criterion for countries with poor economic security is especially problematic. The place of the poverty line on the income distribution curve, in the area of low income, significantly increases in error depending on the methodological tools selected. For instance, if the relative poverty threshold is set at 75% median expenditure level1 the estimates are twice as high compared to when the threshold is 60%2. A similar situation appears with the absolute criteria. When the cost value of the poverty line is raised by 1 UAH (around 0.1 euro3), the poverty rate increases by 0.7% (according to Ukrainian data for 2008).

12. The Western European countries accepted the following definition of relative poverty: “the poor are those people or families whose living standards are significantly lower than the living standards of the majority of the population, i.e. lower than a certain threshold, which is a per cent ratio of the living standard recognized as a norm.” At present, EU monetary poverty4 line is established at 60% median income level. Relative poverty can be difficult to understand and contains paradoxes. If all income in the society is doubled (or halved), the poverty level does not change. If the whole income is increased, the rate of relative poverty can increase, provided that the income in the poorest part of the population rises more slowly than in the richest.

13. After the Eastern enlargement of the EU, it was decided to use 60% medians, instead of 50%, for comparisons within the EU.

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1 The national poverty line in Ukraine.
2 The national extreme poverty line.
3 I.e. this could be an increase in size of cost of living or other standard that are in the similar numeric diapason.
4 The monetary poverty is the poverty defined on the basis of monetary component: income, expenditure or household resources.
14. The approaches to measure absolute poverty are based on the estimate of the possibility to acquire a conventional consumer basket. The general principle of this type of approaches is to define a certain standard of consumption as an expression of the fundamental needs of a given society in a given time. According to such an approach, “the poor are those households or persons who cannot ensure for themselves a certain standard of consumption of the essentials at the lowest market prices, regardless of the living standards of the well-to-do sections of the population.” The danger of this normative approach, based on minimum needs, is that a value system is imposed regarding both the selection between certain goods and services, and the way of living as a whole.

15. Recently, some experts have proposed a mixed approach. The poverty line can be defined as the geometric average of the absolute and relative thresholds with elasticity, which should be defined between 0 and 1, where 0 is a value that fully corresponds to the absolute approach, while 1 corresponds to the relative approach. A measure should reflect the normative conditions of the society, while the elasticity value should be derived from the real observed behaviour.

16. It is also important to mention a subjective approach to poverty measurement, which interprets poverty not from the sociological point of view, as a reference to the relevant social stratum but from economic point of view, as the possibility to survive based on the available income. In other words, “poor is a person who experiences difficulties in balancing his budget, who believes that he needs more resources for life or survival.” One widely spread method to apply the subjective criterion to measure poverty in the developed countries of Europe, is the compilation of a consensus deprivation index. Its compilation is based on polling the respondents by list with components connected with the consumption and way of life.

17. Based on the analysis of approaches to the measurement of poverty, the following scheme could be considered for classifying the measurement approaches:

   (a) Monetary or non-monetary;

   (b) Relative or absolute;

   (c) By income or by consumption (by income or output, by income or possibilities);

   (d) Objective or subjective.

18. The absolute criteria are more often used for international comparisons, while in some cases, the structural ones are applied. This mostly refers to three approaches:

   (a) Monetary: based on minimum of monetary resources needed for consumption during a day;

   (b) Consumption: based on minimum of energetic value or the amount of micro elements needed for daily consumption;

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19. However, the relative criteria are more widely used for international comparisons. The joint use of several approaches is recognized by a majority of researchers as the best way to estimate such a complex and multidimensional phenomenon as poverty.

III. SPECIFICS OF THE POVERTY RESEARCH IN UKRAINE

20. The main information base for poverty research in Ukraine is the sample survey of household living conditions, undertaken by the State Statistics Service of Ukraine (SSSU) since 1999. The survey results allow carrying out methodologically comparable poverty research using all the above-mentioned criteria. The survey is a unique source for analysing poverty issues as a whole and by selected population groups. The comprehensiveness of the survey and the availability of micro-data permit analysis of the social and demographic profile of poverty, expenditure, income and other resources of households, their living conditions, availability of modern durable goods, health status, access to medical goods and services and to information and communication technologies. Integration of additional sociologically oriented modules regarding the “subjective” households estimates (on sufficiency of income to satisfy needs, social status and economic expectations, access to selected goods and services, etc.) with the data derived from the living conditions survey gives an opportunity to explore the changes in subjective perceptions of population regarding their general well-being, as well as to identify the scale and level of subjective poverty, and to compare these with data on objective poverty.

21. Poverty monitoring, introduced in Ukraine on a regular basis by the National Strategy for Poverty Reduction in 2001, is conducted quarterly and aims at analysing the poverty situation using basic indicators for the whole country and its regions. The complex process of poverty monitoring is coordinated by the Ministry of Social Policy. The Ministry of Economic Development and Trade, the State Statistics Service and the National Academy of Sciences participate in the work. To assess poverty, the following indicators are compiled:

- Poverty line and level of poverty;
- Total and average deficit in income of the poor population;
- The depth of poverty;
- Disaggregation of the poor population into subgroups.

22. The poverty indicators are compiled both for Ukraine as a whole and by type of settlement (rural areas, big (more than 100 thousand inhabitants) and small towns) and type of household: with children (by the number of children, with children less than 3 years old, where all adults are working; where there are employed and unemployed adults); and without children (where everybody is of working age; all are of pension age; all are above 75; there is at least one unemployed person). As a follow-up to the poverty reduction goals of the National Strategy, administrative data and data from the state statistical observations are used to estimate the effectiveness of policy measures, including employment and labor market development, changes in income from labor activity, social support to handicapped
persons, families and children deprived of parental care and improvement of housing conditions for the socially vulnerable population.

23. The 2001 National Strategy for Poverty Reduction and the Methodology for complex assessment of the poverty (2002) identify the following criterion for poverty: 75% median level of total equivalised income (expenditure)\(^6\). Thus, the poverty line is defined on the basis of a relative criterion to refer the different sections of the population to the category of the poor which is compiled using the fixed share of per capita average income (expenditure).

24. At the same time, the state social standard sets the minimum subsistence level which is the basis for estimating the state social guarantees and which is considered the absolute poverty line.

25. The poverty level, according to the minimum subsistence level, decreased in Ukraine from 2002 to 2009. According to the relative criterion, however, the poverty level remained stable from 1999 to 2009. The economic crises led to structural changes in the economic welfare of population. Thus, the two official poverty measures gave totally different results.

26. Currently in Ukraine, poverty research is planned to be conducted using the combined approach, which permits identification of the level of absolute and relative poverty.

27. Monitoring of changes in poverty for a number of years on the basis of the two main approaches – absolute and relative – makes it possible to analyse in depth the development trends in poverty, and reply to the following questions: How do the levels of absolute and relative poverty change? Where lies the difference in their dynamics? How do the main profiles of poverty change depending on the selected approach? How do the economic factors and redistribution processes in society influence the effectiveness of the social protection system, and the situation with absolute and relative poverty?

28. According to the State Special Purpose Social Program for Poverty Reduction and Prevention 2011, the level of poverty will be monitored using three criteria: the relative (75% of median income as a relative poverty line and 60% of median income as an extreme poverty line); the national absolute (according to officially fixed subsistence level); and the absolute for international comparisons (5 US dollars per person per day by purchasing power parity). Furthermore, the monitoring of poverty will be expanded by calculating poverty indicators by gender.

29. Apart from official approaches to the poverty measurement, the state statistics bodies carry out research of subjective poverty and deprivation issues (for example with regard to access to certain goods and services).

30. The levels of subjective poverty are identified on the basis of allocating respondents to the relevant social stratum within the survey module conducted as part of the living conditions survey.

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\(^6\) The basis for the calculation of equivalised income (expenditure) is a scale according to which the first member of household is assigned coefficient 1 and the others (adults and children) 0.7 (for instance, household of three persons has in its structure 2.4 conventional persons: 1+0.7+0.7=2.4).
31. Deprivation is analyzed using the results of another survey module that is also conducted as part of the living conditions survey. This module was developed by research with the participation of scientists. The research program included a study of the perceptions of population regarding poverty attributes and deprivation such as their consumption opportunities as compared to the general standards in the society as well as an analysis of the opportunities of households to satisfy not only their minimal needs, but also the needs connected with personal development and comfortable level of living standards. The research studied the respondents' opinions about 46 poverty attributes or components. In addition, the study analysed whether the level of perceived deprivation had increased.

32. For a continuous monitoring of poverty issues and deprivation, a list of indicators was identified. The attributes included into this list were mentioned by more than 90% respondents. Moreover, if a majority of households mentioned the absence of certain goods and services, these were considered as essential components of living standards in Ukraine. The selected essential components include the following:

(a) Economic deprivation:
- by meals (lack of funds to ensure a certain quality of meals)
- by non-foods (lack of funds to acquire the needed not expensive goods, and lack of their certain types)
- by housing conditions (lack of normal housing conditions, lack of funds to improve housing conditions)
- access to health care and education (lack of funds to obtain the needed not expensive goods and services)

(b) Development of infrastructure as an attribute of geographical accessibility of services and non-geographical barriers that identify such deprivation as:
- absence of establishments providing consumer services and retail products
- regular transport link to other inhabited localities with more developed infrastructure
- lack of pre-school establishments, medical facilities, pharmacies near housing

33. To define the poverty line, households were distributed according to how poverty components are concentrated in the group. The poverty line was defined as a percentage of households below the nationally defined level of monetary poverty\(^7\). The category of the poor included households that experience four or more poverty components.

34. According to the results of research conducted in 2011, 3% of the Ukraine population suffered from three types of poverty (by deprivation, absolute and relative criteria) at the same time.

**IV. CONCLUSIONS AND RECOMMENDATIONS - UKRAINE**

35. In Ukraine, it is most likely that we will introduce multidimensional indicators in order to monitor poverty levels. This will enable in-depth analysis of the situation and identification of the main tendencies. It is necessary to develop the concept of poverty to include absolute, relative, structural, subjective and combined approaches.

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\(^6\) 75% of median level of per capita total equivalised expenditure per month (poverty level for 9 months of 2011 was 24.6%).
36. The consensus deprivation approach, or measuring poverty by living conditions, is a promising direction for improving research of poverty issues in Ukraine.

37. It is necessary to develop a special technique for comprehensive assessment of the impact of social aid on poverty, which enables:

   (a) Comprehensive analysis of the targeted social aid system as a tool to decrease the scale of poverty in the country;

   (b) Identification of the problems concerning the functioning of the targeted social aid system and exploring possible ways to resolve them;

   (c) Estimation of the different alternatives to organize the targeted aid system and the impact of these alternative solutions on poverty;

   (d) Identification of the expected fund requirements of the targeted aid.

38. It is necessary to design a system of indicators and improve the availability of information needed for monitoring access to health care and education services.

39. Given the complexity of approaches used in poverty measurement, a unified criterion (approach) will be needed for international comparisons. This criterion could be adjusted for different levels of human development and groups of countries (an example of such criterion is the 5 US dollars per person per day poverty line). However, the internal social and economic policy of each country should be based on a specially-tailored system of poverty criteria and indicators reflecting national conditions more exactly.

40. An important direction for developing poverty statistics is to improve the reliability of poverty measurement on the basis of indirect assessment methods, including for small areas.

V. SPECIFICS OF MEASURING POVERTY IN EUROPE - THE EUROPE 2020 STRATEGY

41. The treaty on the functioning of the European Union foresees (art. 151) that the Union and the Member States shall have as their objectives the promotion of employment and improved living and working conditions and that (art. 156) the Commission shall encourage cooperation between the Member States and facilitate the coordination of their action in all social policy fields included in the treaty.

42. In this context, the open method of coordination (OMC) is a voluntary process for political cooperation based on agreeing common objectives and common indicators, which show how progress towards these goals can be measured.

43. European Statistics on Poverty and Social exclusion are inscribed in this framework as the means to measure progress towards common goals in social policy.

44. In June 2010, the European Council adopted a social inclusion target as part of the Europe 2020 Strategy: to lift at least 20 million people in the EU from the risk of poverty and exclusion by 2020.
45. To monitor progress towards this target, the 'Employment, Social Policy, Health and Consumer Affairs' (EPSCO) EU Council of Ministers agreed on an 'at risk of poverty or social exclusion' indicator. This indicator is sourced from EU-SILC.

A. Poverty indicators in the EU

46. In the Europe 2020 Strategy, the "at-risk-of-poverty or social exclusion" indicator defines the number of people who are at risk-of-poverty or severely materially deprived or living in households with very low work intensity. It consists of three sub-indicators that are derived from EU-SILC data:

   (a) People at risk-of-poverty have an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income (after social transfers);

   (b) People who suffer from severe material deprivation have living conditions severely constrained by a lack of resources. They experience at least 4 out of the 9 following deprivations:

      (i) They cannot afford to pay rent or utility bills;

      (ii) They cannot afford to keep their home adequately warm;

      (iii) They are unable to face unexpected expenses;

      (iv) They cannot afford a meal with meat, fish or a protein equivalent every second day;

      (v) They cannot afford a week’s holiday away from home;

      (vi) They cannot afford a car, a washing machine, a colour TV, or a telephone.

   (c) People living in households with very low work intensity are people aged 0-59 years who live in households where the adults worked less than 20% of their total work potential during the past year.

47. This broader "at-risk-of-poverty or social exclusion" indicator is relevant in capturing several dimensions of poverty. Figure 1 shows how the three sub-indicators intersect partially for 2010.
Figure 1. People at risk of poverty or social exclusion, EU-27, 2010 (million persons)

Note: People are only counted once even if they are present in more than one sub-indicator. Source: Eurostat EU-SILC (online data code t2020_50, t2020_51, t2020_52, t2020_53 and ilc_pees01)

48. The degree of overlap between the households identified under the three criteria varies across Member States, and this should be taken into account when monitoring progress.

B. European Union statistics on income and living conditions (EU-SILC)

Background

49. Since the beginning of the 1980s, Eurostat has been carrying out work on poverty statistics. However, when the EU commitment to fighting social exclusion became definitive, the European Community Household Panel (ECHP) was set up. ECHP was a pioneering data collection instrument, launched on a gentleman's agreement basis in 1994.

50. It was based on a standardised questionnaire which provides comparative data on income and living conditions for the years 1993 to 2000 in most of the EU-15 countries. However, despite a high level of overall harmonisation in most countries, the ECHP suffered from some comparability and timeliness issues.

51. After its expiration in 2001, the ECHP has been progressively replaced with data collection under the EU-SILC regulations. Seven countries presented a preliminary version of EU-SILC in 2003 and the project was formally launched in 2004. However, EU25 coverage starts from 2005 reference year.

52. Since regulations became fully applicable in 2007, EU-SILC is the reference source of statistics on income and social exclusion in the European Union.
Characteristics of the EU-SILC instrument

53. EU-SILC is a sample survey conducted in the 27 Member States and in other 5 countries. It is organised under a framework regulation, thus, it is compulsory for all EU Member States.

54. EU-SILC is based on the idea of a “common framework” in contrast with the concept of a “common survey”.

55. The **common framework** is defined by harmonised lists of target:

   (a) Primary (annual) and secondary (every four years or less frequently) variables;

   (b) A recommended design for implementing EU-SILC;

   (c) Common requirements (for imputation, weighting, sampling errors calculation);

   (d) Common concepts (household and income); and

   (e) Common classifications (ISCO, NACE, ISCED) aiming at maximising comparability of the information produced.

56. Thus, EU-SILC is a harmonised data framework involving **ex ante standardisation** but allowing countries a large degree of flexibility in the underlying source(s) and some flexibility in the concepts and definitions. The aim of this procedure is to secure **output harmonisation** rather than input harmonisation.

57. EU-SILC covers only people living in private households. Thus, it does not include persons living in collective households and in institutions. Some vulnerable groups living in private households may also be underrepresented because they are not easy to reach.

Contents

58. EU-SILC provides two types of annual data:

   (a) Cross-sectional data pertaining to a given time or a certain time period with variables on income, poverty, social exclusion and other living conditions; and

   (b) Longitudinal data pertaining to individual-level changes over time, observed periodically over a four year period.

59. EU-SILC is a multidimensional dataset because it is not only focused on income, but also on other elements relevant to the multidimensional approach to social exclusion such as health, education, labour and housing conditions.

60. The **primary** target variables relate to either household or individual (for persons aged 16 and more) information and are grouped into the following areas:

   (a) At **household** level, five areas are covered: (1) basic/core data, (2) income, (3) housing, (4) social exclusion and (5) labour information;
(b) At personal level, five areas are also covered: (1) basic/demographic data, (2) income, (3) education, (4) labour information and (5) health.

61. The secondary target variables are not collected every year but introduced periodically in the cross-sectional component. One ad-hoc module per year has been included since 2005:

(a) 2005: Inter-generational transmission of poverty;
(b) 2006: Social participation;
(c) 2007: Housing conditions;
(d) 2008: Over-indebtedness and financial exclusion;
(e) 2009: Material deprivation;
(f) 2010: Intra-household sharing of resources;
(g) 2011: Inter-generational transmission of disadvantages;
(h) 2012: Housing conditions;
(i) 2013: Well-being.

Income concept

62. EU-SILC adheres to the recommendations of the Canberra group on the definition on household income.

63. Total gross household income (GI) and total disposable household income (DI) are defined as follows:

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GI = EI + SEI + PP + CTR + OI \\
DI = GI - CTP
\]

Where:
EI = employee income (cash or near cash income and non-cash employee income).
SEI = self-employment income, except goods for own consumption.
PP = pensions received from individual private plans.
CTR = current transfers received (social benefits and regular inter-household cash transfers received).
OI = other sources of income received (e.g. other capital income)
CTR = current transfers paid (tax on income and social insurance contributions, tax on wealth and regular inter-household cash transfers paid).
Sample requirements

Design

64. Eurostat proposed an integrated design with a four-year rotation. The fundamental characteristic is that the cross-sectional and longitudinal statistics are produced from essentially the same set of sample observations. Thus, it avoids unnecessary duplications which would be involved if entirely separate cross-sectional and longitudinal surveys were used.

65. Data are to be based on a nationally representative probability sample of the population residing in private households within the country, irrespective of language, nationality or legal residence status. All private households and all persons aged 16 and over within the household are eligible for the operation.

66. Representative probability samples must be achieved both for households and for individual persons in the target population. The sampling frame and methods of sample selection should ensure that every individual and household in the target population is assigned a known probability of selection that is not zero.

Size

67. The reference sample size is the minimum effective sample size. This is the size that would be required if the survey were based on simple random sampling (design effect in relation to the ‘at-risk-of-poverty rate’ indicator = 1.0). The actual sample sizes have to be larger to the extent that the design effect exceeds 1.0.

68. The sample sizes for the longitudinal component refer, for any two consecutive years, to the number of households or individuals aged 16 and over that are successfully interviewed in both years.

69. For the cross-sectional component, a minimum effective sample size of around 131 000 households, or 273 000 individuals aged 16 and over in the EU as a whole, has to be achieved. As for the longitudinal component, the respective requirements are 98 000 households and 204 000 individuals.

VI. CONCLUSIONS AND RECOMMENDATIONS - EU

A. Way Forward - EU SILC revision process

70. EU SILC has become the reference instrument to measure poverty and social exclusion in the EU. After eight years of implementation its key features work well nowadays.

71. Some areas are currently under review in order to further improve the survey while ensuring a maximum of stability when delivering key policy indicators. In particular it is worth mentioning the following areas:
Timeliness

72. Currently, cross-sectional data pertaining to Year N – and referring in most countries to the income and tax of Year (N-1) - are available at November of Year N+1. The time between data collection and data dissemination needs to be shortened, particularly in the current economic crisis where we need to know quicker the impact on the crisis on poverty and social exclusion.

Content

73. In order to reduce burden and to comply with the modernization strategy on social statistics SILC variables are being scrutinized in order to streamline data collection while maintaining its informative power. In particular the periodicity of some variables is under revision.

Indicators review

74. The Council decided that the mid-term review of the EU social inclusion target in 2015 would include a review of its three sub-indicators above described. Additionally, it stated that the mid-term review of the EU target should step up work on improved measures of material deprivation.

75. In this framework, according to the lessons learned in the last module on material deprivation in 2009, there is work in progress to define the characteristics of the new module for material deprivation to be launched in 2014 and that will include some new items that will update the current material deprivation indicator, including some social participation aspects and a specific measurement of children material deprivation.

B. Further recommendations

76. Stiglitz-Sen-Fitoussi report (2009) recommends a greater focus on the household perspective and the distribution of income, consumption and wealth. The Canberra group handbook sets up standards and guidelines for measuring household income. A similar work is on-going for building guidelines to measure household wealth. The practical application of these guidelines should allow improving poverty measurements.

77. The EU experience shows the importance of measuring poverty in modern societies beyond the traditional absolute monetary and consumption criteria. Firstly, monetary poverty is relative whenever households receive at least a very low but minimum income from social benefits or family transfers. Secondly, in such a situation, social exclusion should be also measured in relation to non-monetary elements such as deprivation and labour market inclusion. The EU "at-risk-of-poverty or social exclusion" indicator follows these principles and its different dimensions identify indeed sub-populations that only partially overlap. While such measurement is still not applicable in many rural areas all over the world, the situation of urban areas in numerous countries might be adapted for the use of a relative and multidimensional approach.

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