

# MEASURING POVERTY

## – Theoretical Concepts, Status and Recommendations on Serbia

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# Study: Measuring Poverty – Theoretical Concepts, Status and Recommendations on Serbia

Author: Prof. Gordana Matković, PhD

Editor: Žarko Šunderić

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NOTE: All terms used in the masculine gender in this analysis encompass the corresponding terms in the feminine gender. This publication does not represent the official position of the Government of the Republic of Serbia. Responsibility for the contents and information in the publication lies solely with the author.

# ABBREVIATIONS

|                       |                                                        |
|-----------------------|--------------------------------------------------------|
| AROE                  | At risk of poverty or social exclusion                 |
| Eurostat              | Statistical office of the European Union               |
| FSA                   | Financial social assistance                            |
| GDP                   | Gross domestic product                                 |
| HBS                   | Household Budget Survey                                |
| LSMS                  | Living Standard Measurement Survey                     |
| MISSOC<br>secretariat | Mutual Information System on Social Protection         |
| NIBUD                 | National Institute for Family Finance Information      |
| OECD                  | Organisation for Economic Co-operation and Development |
| PPP                   | Purchasing power parity                                |
| RSD                   | Serbian dinar                                          |
| SILC/EUSILC           | Survey on Income and Living Conditions                 |

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# FOREWORD

Towards the end of 2013, the Social Inclusion and Poverty Reduction Unit of the Government of the Republic of Serbia, in collaboration with the Center for Social Policies and Center for Liberal-Democratic Studies, launched a comprehensive project titled *Absolute Poverty and Trends in Measuring Poverty in the Republic of Serbia*. The project was conceived in response to the absence of official data on absolute poverty after 2010, as well as to the need to shed light on new trends in measuring poverty and their impact on the Republic of Serbia.

The project comprises two components: one (whose contents are presented below) aimed at reviewing in detail the poverty monitoring options and recommending measures for further monitoring in the Republic of Serbia, and another aimed at presenting a detailed poverty profile in the period 2011–2013, thus filling the existing data gap.

Until 2010, poverty was monitored in Serbia under the absolute poverty concept, whereas the relative poverty concept and measurement based on EU indicators were first applied in the *First National Report on Social Inclusion and Poverty Reduction*. The data on absolute consumption poverty were last officially published in 2010 and have not been monitored as part of official statistics since then, despite the fact that they have been included among country-specific financial poverty indicators (Tim za socijalno uključivanje i smanjenje siromaštva i Republički zavod za statistiku, 2010, 19).

The study below has two goals. First, to present different poverty notions, concepts and measurement methods, and second, to review options and propose measures for further poverty monitoring in the Republic of Serbia.

# I INTRODUCTION

According to estimates, as recently as 200 years ago, 84% of the world's population was poor according to the poverty line of \$1 per day. In Europe at the time, poverty was equated with not owning wealth as it inevitably meant that survival and subsistence depended solely on the supply of unskilled labour (Ravallion, 2013, 7–8). When work was scarce, crime and begging proliferated, and poverty began to be perceived as social pathology. Unlike in the middle ages, characterised by the predominantly tolerant view of the poor, who were part of God's order and hence not responsible for their position, when renunciation of earthly goods and voluntary poverty were regarded as the ultimate virtues and helping the indigent as a duty, in the period from 16<sup>th</sup> to 18<sup>th</sup> century the view that poverty was a result of laziness and an individual's personal responsibility became prevalent (Hanson, 1997, 192) (Gordon, 1988, 308). At the broader social level, mercantilism, as the prevailing economic philosophy, entailed the view that poverty was a prerequisite for economic growth since "hunger would encourage work", and an adequate supply of cheap labour was essential to export and, therefore, also to development (Ravallion, 2013, 8–9).

Nowadays, poverty is most commonly regarded as a multidimensional concept. The dimensions identified as significant for understanding and conceptualising the notion of poverty are material living standard (income, consumption and wealth), health, education, personal activities including work, political voice and governance, social connections and relationships, environment and insecurity (of an economic and physical nature) (Stiglitz, Sen, & Fitoussi, 2009, 14). Multidimensionality is also clearly reflected in the comprehensive official definitions accepted by the European Union and United Nations.

The European definition of poverty was first agreed in 1975 and is considered to be the official definition, used by the European Union: "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 disadvantage 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" (Council of the European Union, 2004, 8).

In the Copenhagen Declaration of the United Nations on Social Development, overall poverty is defined as "lack of income and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments; and social discrimination and exclusion. It is also characterised by a lack of participation in decision-making and in civil, social and cultural life." Absolute poverty, on the other hand, is defined as "a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services" (UN, 1995, 57).

One of the broadest approaches to comprehending poverty in the academic world is attributed to the Nobel laureate Amartya Sen, who argues that, in studying standard of living, the focus should not be on opulence, but on what an individual is capable of doing or being, what life he is capable of living with the available resources (Sen, 1985, 34) (Stiglitz, Sen, & Fitoussi, 2009, 143). "What's important in Sen's model is not whether a person owns a car or a mule or a bicycle, but whether they are capable of getting to where they need to go" (Braithwaite & Mont, 2008, 14). If poverty is understood as poor living (Sen, 2000, 3), Sen's "functionings and capabilities" model presents a considerable challenge in terms of measuring poverty and quality of life. Yet, as stated in the *Report by the Commission on the Measurement of Economic Performance and Social Progress* (known as the Stiglitz-Sen-Fitoussi Commission), "most data generally refer to functionings (i.e. description of individuals' states) rather than to capabilities (i.e. the set of opportunities that are available to each person). However, many functionings, such as health and education, also determine capabilities (to consume, to move, to participate)" (Stiglitz, Sen, & Fitoussi, 2009, 153). Two composite indices for measuring poverty in society have been developed on the basis of Sen's functionings and capabilities model, namely the *Human Development Index* (combining three indicators in three dimensions – income, health and education) and the *Multidimensional Poverty Index* (with ten indicators in three dimensions – education, health and standard of living).

Analyses of individuals' standard of living are still mainly focused on the material dimension only and its measurement, primarily under the absolute and/or relative poverty concepts. Absolute poverty represents the inability to meet the minimum, basic needs, while relative poverty entails the inability to achieve a standard of living adequate from the perspective of the society in which an individual lives.

Despite frequent conflicts between the advocates of the two concepts, another possibility is to think in terms of formulating basic needs in the context of a given society, thus reflecting a consumption model that differs at different development levels (Atkinson et al., 2002, 30). This model also entails a clear temporal dimension, or, as pointed out in the early 1960s by Mollie Orshansky in defence of her poverty line concept in America, "yesterday's luxuries become tomorrow's necessities" (Orshansky, 1965, 5). Given that the line is defined on the basis of actual consumption models, she also calls it the "relative absolute measure of poverty", since it reflects the standard of the overall population, rather than only the poorest (Fisher, 1992, 6).

That national absolute poverty lines are higher in countries with higher standards is substantiated by data, which means that poverty lines are, in the social and cultural sense, certainly "country-specific" and that, in all countries save the poorest ones, they exceed the psychological minimum of mere subsistence (Ravallion, 2010, 12).

In the context of his model, Sen is of the view that the capabilities relevant to a minimum standard (not be hungry, for example) should always be defined in the same way, in absolute terms, i.e. independently of the development level, whereas the material resources required to fulfil those capabilities vary widely, depend on numerous factors and are relatively higher in richer societies than in poorer ones. "The same absolute level of capabilities may thus have a greater relative need for incomes (and commodities)" (Sen, 1998, 299).

As a complementary concept, that of subjective poverty has developed; it entails individual assessment of one's material status. Despite scepticism surrounding the use of subjective data, there are also views that they may provide relevant information on well-being that cannot be obtained through standard methods, on the basis of objective data (Ravallion, 2011, 15).

As material poverty is a complex phenomenon as well, different measures facilitate insight into its scale and structure from different perspectives. Measures, thus, may be objective (measurement by income and consumption) or subjective, when an individual's perception of his material circumstances is taken into account. According to a different classification, measures may be indirect, such as poverty measurement by income, when one's income serves as the basis for the assessment what his standard might be, rather than what it actually is. Direct measures, on the other hand, facilitate assessment of one's material status on the basis of consumption or on the basis of indicators highly correlated with poverty, such as, for instance, extraordinarily unfavourable and inadequate housing conditions. Finally, measures may be monetary (income) and non-monetary (material deprivation indicators). Essentially different measures used to measure material standard and the material dimension of poverty are complementary, since, just as one's standard of living may be relatively low despite high income if this income is spent on medications, another's consumption may be low even with relatively decent income, as a result of saving or supporting relatives living in a separate household. Indeed, subjective and non-monetary measures may reveal certain aspects of poverty that are more difficult to detect through objective indicators.

The conceptual definition and measurement of poverty are important for identifying the scale and causes of disadvantage, as well as for the formulation of social and economic policies and measurement of their impact.



## II CONCEPT AND MEASUREMENT OF POVERTY

### Absolute and Extreme Poverty

**Absolute poverty entails the inability to meet the essential, minimum, basic needs.** “Ultimately poverty must be seen to be primarily an absolute notion..”. “If there is a starvation and hunger then – no matter what the relative picture looks like – there clearly is poverty.” (Sen, 1983, 153; 159).

In historical terms, this is the earliest developed concept; it ties poverty primarily to the inability to secure mere subsistence. Already in the mid- and late 19<sup>th</sup> century, detailed studies of poverty emerged in England; probably the most important among them is the study of the status of the working class in York in 1899 (Rowntree, 1902). On the basis of the collected data on all workers' families, namely data on their composition, members' occupations and income, and – for a number of them – also on consumption, the study endeavoured to identify the prevalence, depth and nature of poverty. A survey was used as the basis to assess different minimum nutritional caloric intakes sufficient for subsistence, which, together with other essential needs, were converted into monetary amounts by applying minimum prices and defined as poverty lines, which were differentiated by family size and composition. Families whose total wages did not suffice to cover the essentials required at least to maintain physical fitness were classified as living below the line, in "primary poverty". If the income was "sufficient", but the costs, justified and unjustified, exceeded it, the family was considered to live in "secondary poverty". Although the findings show that the direct causes of primary poverty could be death or incapacity of the male head of household, or a large number of children, the single most important problem, in fact, lay in very low wages (Rowntree, 1902, 121).

Relying, amongst other sources, on Rowntree's later research into poverty, in his report Beveridge defined social benefit amounts that were intended to ensure a minimum level of social protection for British citizens after the war (Townsend, 1979, 32). Even today, in most European countries, social benefits of the last-resort safety net type are based on subsistence indicators (World Bank, 2013, 15).

The USA Government's official poverty lines for households of different sizes and compositions were established already in the early 1960s and are also based on the absolute poverty concept<sup>1</sup>. In simplified terms, the poverty threshold for specific household types is established by multiplying the cost of an economy food plan by the factor of three, on the basis of an average family's assumed spending pattern (Fisher, 1992). These lines are

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<sup>1</sup> <http://aspe.hhs.gov/poverty/13poverty.cfm>

used for statistical and, in a modified form, for administrative purposes and, to this day, have been adjusted only by inflation.

In addressing the issues of poverty in underdeveloped and less developed countries, the World Bank also defines absolute poverty as the inability to attain a minimum standard of living (World Bank, 1990, 25)<sup>2</sup>; for estimates, it applies the "cost of basic needs" method, similar to that applied in the research into poverty in York one century ago (World Bank, 2001, 16-17)<sup>3</sup>. For developing countries, the key component of the poverty line is the food expenditure sufficient to meet the caloric intake guidelines. Expenditure on other basic needs is then added to this expenditure (Ravallion, 1992, 26).

The key indicators within this concept, which do not exclusively relate to absolute poverty, are poverty incidence, poverty gap and poverty severity<sup>4</sup>.

**Poverty incidence** indicates the share of individuals in society who are not able to meet their basic needs and whose income/consumption is below the poverty threshold (line). The absolute poverty line is, essentially, established on the basis of the nutritional minimum and the poorest households' consumption pattern. The line is commonly anchored at a given moment in time and updated by the consumer price index.

Poverty incidence, however, does not provide insight into how poor the individuals are, i.e. into the depth of poverty. The indicator used for this purpose is poverty gap.

**Poverty gap (depth)** shows how far off the poor population's consumption/income is from the poverty line. The total deficit (gap) indicates the amount of funds required, assuming perfect targeting, to raise all poor individuals' consumption/income to the level of the poverty line.

**Poverty severity** (poverty gap squared), as the third indicator, considers not only the distance from the poverty line, but also the inequality among the poor, by placing higher weight on those households that are further away from the poverty line.

Absolute poverty is most commonly measured by consumption (Ravallion, 1992, 7). The data sources comprise the *Household Budget Survey*<sup>5</sup> and the *Living Standard Measurement Survey*.

According to the data for 2012, the Serbian consumption poverty incidence amounted to 8.8% of the total population, while poverty depth and severity amounted to 1.9% and 0.7% of the poverty line, respectively. The total number of the poor reached approximately 642 thousand.

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<sup>2</sup> A previous report, dating from 1980, defines absolute poverty as living conditions so characterised by malnutrition, illiteracy and disease as to be beneath any reasonable definition of human dignity (World Bank, 1980, 30).

<sup>3</sup> <http://www.un.org/esa/socdev/wssd/text-version/agreements/poach2.htm>

<sup>4</sup> For more details on computation methodology and definitions of indicators, see e.g. (Republički zavod za statistiku, 2008) and the World Bank website <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/0,,contentMDK:20242881~isCURL:Y~menuPK:492130~pagePK:148956~piPK:216618~theSitePK:430367,00.html>

<sup>5</sup> Household budget survey is a generic term and, in fact, encompasses a wide range of surveys of different titles, such as family expenditure survey, expenditure and consumption survey, or income and expenditure survey. The common feature of all these surveys is that they attempt to capture the most important parts of everyday budgets (Pettersson, 2005, 12).

Under this concept, extreme poverty is defined in relation to the so-called food line, and all individuals who are unable to meet the basic food needs are considered to be extremely poor (Republički zavod za statistiku, 2008, 180).

The notion of extreme poverty is also used worldwide to designate the poor whose income/consumption, by the criteria of the poorest countries, is lower than \$1.25 PPP per day.

In the EU, absolute poverty is considered, and also described as, the extreme form of poverty which, in the most developed European countries, affects only certain segments of the population, such as the homeless. According to Bradshaw & Mayhew (2010, 22), the European Commission uses the term *extreme poverty* "because the notion of absolute poverty does not translate very well into other EU languages". Certain researchers recognise extreme poverty primarily in the case of pronounced and sustained, persistent poverty (Adelman, Middleton, & Ashworth, 2003) (Bradshaw & Mayhew, 2010, 68).

As part of the European Commission project on extreme poverty measurement options, it was proposed that extremely poor individuals should comprise either those who are at risk according to (revised) material deprivation indicators (see the section on material deprivation), or those who are both materially deprived and have an income below a budget standard threshold (see the section on reference budget below) (Bradshaw & Mayhew, 2010, 70).

Criticism of the absolute poverty concept is ample, from highlighting that its threshold is established on the basis of the consumption of the poorest, rather than on the basis of minimum needs (Townsend, 1979, 34, 42), claiming that it is a limited and simplified concept, to questioning the validity of the nutritional minimum based on caloric intake, in particular with regard to children (Pemberton, Gordon, & Nandy, 2012, 24). Naturally, critics also draw attention to the one-dimensional nature of the concept, which is, essentially, focused on material well-being and neglects the non-financial aspects of poverty (Townsend, 2006, 5). Another objection is that needs are reduced to sustaining mere physical existence, thus disregarding the satisfaction of social needs. "Philosophically, the idea of an absolute poverty line stems from times when it was natural to think in subsistence terms; but this can be argued to be out of place, at least in richer countries, when people live well above subsistence, and where the concept of deprivation is applied to emotional and cultural standards as well as to physical ones" (Barr, 2012, 109). Essentially, most criticism may be related to the question of the relevance of the absolute poverty concept to the most developed countries.

In addition to the "cost of basic needs" method, absolute poverty is also measured by means of reference (standard) budgets, as well as on the basis of social benefits ceilings (see the section on poverty by administrative criteria) (Boarini & Mira d'Ercole, 2006, 12).

*A reference budget (also termed standard budget, exemplary budget and budget standard) indicates the size of family budget required for a certain standard of living<sup>6</sup>. It*

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<sup>6</sup> Examples of reference budgets for some countries are available at <http://www.referencebudgets.eu/budgets/>

contains a list of goods and services needed by families of a given size and composition, accompanied by estimated monthly or annual costs. A reference budget may be developed for the minimum income level (basic basket), as well as for a higher income level (NIBUD, 2009).

A reference budget is usually based on normative, expert estimates and actual consumption established through a survey. A number of countries has, however, adopted the UK consensual budget development methodology, based more on focus group opinions on basket contents than on expert estimates.

In some countries, reference budgets are used for establishing the official poverty line, defining the legal threshold for awarding financial social assistance, assessing the adequacy of guaranteed minimum income schemes and/or determining the minimum income standard<sup>7</sup> (Hirsch, 2013) (Bradshaw & Mayhew, 2010, 53) (Oases, 2010, 10) (NIBUD, 2009, 44). Reference budgets may be used for the purpose of assessing the impact of specific policy measures; in all countries where they are developed, they also play a role in the financial sector with regard to preventing overindebtedness or advising clients on borrowing, purchasing insurance policies, mortgaging property and the like. (NIBUD, 2009, 10).

Although there are views that reference budgets have the advantage of being less arbitrary than at-risk-of-poverty rate (Bradshaw & Mayhew, 2010, 53), criticism points to subjectivity and many arbitrary decisions to be made in the process of their development (Oases, 2010, 17). When the methodology is not consensual, critics are of the view that the budget reflects the ideas of experts rather than those of the people involved (NIBUD, 2009, 7). There are also concerns that adopting the reference budget methodology would imply accepting the absolute poverty concept, which is unacceptable for some organisations (European Anti Poverty Network, 2010, 30). These concerns are intensified in view of the proposals to develop a consensual European budget standard (Bradshaw & Mayhew, 2010, 14) for the purpose of measuring absolute (extreme) poverty.

***In Serbia, the minimum and average consumer baskets constitute a type of reference budgets<sup>8</sup>.*** Both baskets are based on the Household Budget Survey data. The minimum basket is calculated on the basis of the consumption of the poorest three deciles, and the average – on the basis of the consumption from the third to the eighth deciles<sup>9</sup>. According to the data for 2012, the minimum consumer basket for a three-member household amounted to about 31.5 thousand dinars. The National Bank of Serbia uses consumer baskets in the development of the *Guidelines for Assessing Personal Debt*<sup>10</sup>.

Since it is based on national consumption standards, absolute poverty is not comparable among countries. ***With a view to international comparability, the World Bank expresses the poverty threshold in purchasing power parity dollars.***

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<sup>7</sup> The minimum income standard was developed in the UK and reflects the views of "members of the public" on items that should be covered by a household budget in order to achieve a minimum socially acceptable standard of living (Hirsch, 2013)

<sup>8</sup> <http://mtt.gov.rs/informacije/potrosacka-korpa/>

<sup>9</sup> Extract from the *Consumer Basket Methodology* is available on the website of the Ministry for Foreign and Domestic Trade and Telecommunications <http://mtt.gov.rs/informacije/potrosacka-korpa/>

<sup>10</sup> [http://www.nbs.rs/export/sites/default/internet/latinica/55/zaduzenost\\_fl\\_smernice.pdf](http://www.nbs.rs/export/sites/default/internet/latinica/55/zaduzenost_fl_smernice.pdf)

*For the purpose of measuring extreme poverty* globally, the well-known line of one dollar per person per day (in 1985 purchasing power parity dollars<sup>11</sup>) was proposed in 1990; it was set on the basis of the poorest countries' national poverty lines. As indicated in a World Bank report, this measure assesses the scale of poverty by the standards of the poorest countries, mainly those in South Asia and Sub-Saharan Africa (World Bank, 2001, 23). A new line, based on a wider sample of countries, was set at **1.25 dollars per person per day** (in 2005 purchasing power parity dollars) (Ravallion, Chen, & Sangruala, 2008). This is, at the same time, the line to which UN Millennium Development Goal 1<sup>12</sup> pertains.

The global extreme poverty incidence decreased from over 43% in 1990 to 20% in 2010, or from 1.9 to 1.2 billion people, mainly owing to poverty reduction in China and India<sup>13</sup>. In addition to this line, a higher one is used, set at \$2 PPP per person per day, as well as the \$2.5 PPP and \$5 PPP lines in European and Central Asian countries<sup>14</sup>.

The "one dollar a day" threshold also faces ample criticism, from the observations that this measure pertains only to developing countries and is not the right option for the measurement of poverty worldwide, but rather only in developing countries (Atkinson & Bourguignon, 1999), to the views that reliance on the consumer price index and purchasing power parity enables the inordinate influence of the prices of goods and services not used by the poor and, in particular, influence of the American consumption pattern (Pogge, 2008) (Gordon & Nandy, 2012, 71-73). The arbitrariness of the higher poverty lines, set at \$2 PPP, \$2.5 PPP and \$5 PPP, is also highlighted (Bradshaw & Mayhew, 2010, 29).

According to the most recent World Bank data, in the ECA region<sup>15</sup> in 2010, poverty below the \$2.5 PPP line stood at 4.1%, and below the \$5 PPP line – at 19.1%. In Serbia, the corresponding rates stood at 1.3% and 15.5%, respectively.

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<sup>11</sup> Instead of applying the exchange rate, consumption/income is converted into purchasing power parity dollars by means of the PPP (purchasing power parity) conversion factor, which shows the amount of the local currency needed to purchase the amount of goods and services that can be purchased in the USA for one dollar.

<sup>12</sup> <http://www.un.org/millenniumgoals/poverty.shtml>

<sup>13</sup> <http://povertydata.worldbank.org/poverty/home/>

<sup>14</sup> <http://povertydata.worldbank.org/poverty/region/ECA>

<sup>15</sup> According to the World Bank terminology, the region comprising Central and Eastern European countries, former Soviet Union countries and Turkey.

## Relative Poverty

Relative poverty entails the inability to attain a standard of living adequate from the perspective of the society in which an individual lives.

Highlighting the relative nature of the notion of poverty is no new development. Thus, for instance, Adam Smith clarified that by necessities he understood not only what was indispensable for subsistence, *but what was rendered necessary by the established rules of decency* (Smith, 1776). Milton Friedman also believes that "poverty is in part a relative matter, and even in these countries [developed], there are clearly many people living under conditions that the rest of us label as poverty" (Friedman, 1962, 190).

The precise definition of the concepts of relative poverty and deprivation is commonly attributed to Peter Townsend, who, in the late 1970s, began his book on poverty in the United Kingdom with the following: "***Poverty can be defined objectively and applied consistently only in terms of the concept of relative deprivation.*** ... Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or are at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities." (Townsend, 1979, 31)

In Europe, the relative poverty concept rose in importance when the fulfilment of the basic needs ceased to be a problem (Guio & Maquet, 2007, 196) and when the attainment of an adequate standard of living, which differed in different societies, was set as the main goal.

Relative poverty may be identified and measured in different ways. The concept is most commonly tied to *income poverty*. *This is regarded as an indirect approach, since it focuses on the assessment of the income available to an individual, rather than on his actual status* (Fusco, Guio, & Marlier, 2010, 135).

The most widely used relative (income) poverty indicator is at-risk-of-poverty rate.

***At-risk-of-poverty rate*** is the share of individuals with an equivalised disposable income (after social transfers) below 60% of the national median equivalised disposable income<sup>16</sup>. This proportion of the median income represents the at-risk-of-poverty line/threshold.

Equivalised income is computed by dividing household income by the number of equivalent adults living in that household. The total number of household members is converted into the number of equivalent adults by applying the OECD-modified equivalence scale, according to which the first adult is assigned the weight of 1, the remaining adults and children over the age of 14 – the weight of 0.5, and children under that age – 0.3. Thus, a household with four

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<sup>16</sup> According to [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:At-risk-of-poverty\\_rate](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:At-risk-of-poverty_rate) and the definitions in a document by the Government of the Republic of Serbia (Tim za socijalno uključivanje i smanjenje siromaštva i Republički zavod za statistiku, 2010).

members (two adults and two children under 14) will consist of 2.1 equivalent adults. The logic of equivalence scales is founded on the fact that household needs grow with each additional member but, owing to economies of scale, not in a proportional way<sup>17</sup>.

Hence, each individual is attributed an aliquot share of the common income of the household in which he lives according to the given (OECD) scale; this amount is then compared to the national median income in the given country (the middle value – half of all individuals have income higher than the median, and half – lower<sup>18</sup>). Individuals with less than 60% of the median income are *at risk of poverty*.

According to the Eurostat glossary, *"this indicator does not measure wealth or poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living"*.

Before the adoption of the Europe 2020 strategy, the fight against poverty and social exclusion was monitored through at-risk-of-poverty rate (Eurostat, 2013, 4). Risk of poverty is monitored by means of two additional indicators: at-risk-of-poverty rate before social transfers and persistent at-risk-of-poverty rate.

*At-risk-of-poverty rate before social transfers* is calculated in the same manner as at-risk-of-poverty rate, with the exception that household income does not include social transfers<sup>19</sup> (where pensions are counted as regular income, and not as social transfers). This indicator, in fact, shows the level of risk which would exist without social transfers.

*Persistent at-risk-of-poverty rate* shows the proportion of the individuals at risk of poverty in the current year and at least two out of the preceding three years. Its calculation requires panel data.

Criticism focuses on the indicators, rather than on the relative poverty concept as such. "While there is probably wide agreement that relative position matters to welfare (and hence welfare-based poverty measures), the challenge has been how to put this into practice in a credible way." "Neither the relative deprivation nor the social inclusion arguments tell us that the poverty line should be a constant proportion of the mean." (Ravallion, 2010, 14, 16)

*The most common objection to indicators, in particular at-risk-of-poverty rate, is that they, in fact, indicate inequality, rather than poverty.* "The measure of poverty which is highly sensitive to income distribution inequality and completely insensitive to the income level and dynamics of both the poor and the entire society is not a good measure" (Mijatović, 2009, 19). Hence, risk of poverty in richer societies may be equal to, or even higher than that in those less developed, and the number and proportion of the disadvantaged may continue to

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<sup>17</sup> The needs of a household with three members for housing, space, electric power etc. will not be three times as high as those of an individual. <http://www.oecd.org/eco/growth/OECD-Note-EquivalenceScales.pdf>

<sup>18</sup> The main advantage of the median is that it is not subject to the influence of extreme values, neither the highest nor the lowest.

<sup>19</sup> Social transfers are cash benefits to the population such as sick pay, unemployment benefits, financial social assistance, child allowances, birth grants, attendance allowances, disability benefits and the like.

grow despite economic development and rise in income for all strata (Ravallion, 2010, 17). And vice versa, risk of poverty may not decrease despite lower income. In times of crisis, earned income is usually the first to decline, which has an impact on income distribution and median income and leads to a lowered poverty threshold. In such situation, individuals who were immediately below the threshold may exceed it, despite the fact that their actual situation has, in fact, deteriorated. Under such conditions, according to the at-risk-of-poverty rate, the proportion of the population at risk will decrease (Eurostat, 2013, 7).

In the initial years of the crisis, according to the at-risk-of-poverty rate, "poverty" in certain EU Member States, in particular new ones, seemed to have decreased. Eurostat, therefore, proposed a new indicator, *at-risk-of-poverty rate anchored at a fixed moment in time*. The 2008 at-risk-of-poverty threshold was converted into an absolute amount and updated by the consumer price index to monitor the "real development of poverty" (Eurostat, 2013, 7-9). In line with the relative measurement concept, the threshold will not be anchored in 2008 permanently; instead, the idea is that, every few years, the point at which it is anchored should be replaced by a later one.

When poverty is measured by means of relative poverty lines, the same problems arise in the less developed parts of the world as well, since these data indicate inequality rather than poverty. "The effect of using a relative poverty line—instead of the \$1 a day poverty line—is that poverty is now much higher in regions with higher average consumption. It is also higher in regions with greater inequality" (World Bank, 2001, 24). It is, therefore, possible that more affluent societies record higher "poverty" measured against median income.

On the other hand, it should be noted that some researchers, in fact, believe that the fact that the issue of inequality has been raised in the discussions on poverty by using the relative poverty line represents a positive development (Garroway & de Laiglesia, 2012, 37).

*Some criticism concerns primarily income, as an inadequate indicator of poverty and standard of living.* Income is only an indirect indicator of the current economic status, which does not take into account many elements determining standard of living.

Income is not an adequate indicator in particular in countries characterised by *irregularity in the disbursement of wages, pensions and other social benefits, high seasonal income (in agriculture or tourism, for instance), high share of income in kind and widespread informal economy*, when households are not willing to reveal the "illegal" income sources (World Bank, 2000, 367-368).

In some countries, remittances from abroad are also relevant; these are often not reported as income, and reliance on income as an indicator of standard also fails to take into account other *gifts, loans, and even consumption based on earlier savings* (Bradshaw & Mayhew, 2010, 6) (Boarini & Mira d'Ercole, 2006, 10).

Consumption is hence, in particular in developing countries, commonly regarded as a more stable and therefore better indicator of standard of living than income (World Bank, 2001, 17). Empirical findings on the UK show that, even in the most developed countries, the poorer strata fail to declare their total income, which implies that consumption is a better indicator of their standard of living (Brewer & O'Dea, 2012, 4). Bradshaw and Mayhew point out that *"income data collected in surveys (though not the Nordic registers) is more or*



*less unreliable, understated, hidden, forgotten*", especially when respondents are self-employed and involved in the informal economy (Bradshaw & Mayhew, 2010, 10; 60).

It is particularly important to note that income as a measure of well-being does not take into account the provision of public services such as health care, education or housing (Atkinson, 2000, 2). Two households with equal income levels will achieve different standards of living, depending on whether such services are provided in a given country or must be paid (whether formally or informally). In other words, these differences can be accounted for only if standard of living is measured by consumption.

Beside consumption, certain material deprivation indicators, such as housing conditions, are believed to reflect a household's long-term economic status more accurately (Boarini & Mira d'Ercole, 2006, 10).

In addition, findings clearly show that *a significant number of individuals in developed countries who are poor by the said criteria are not at risk in terms of material deprivation, nor do they report not being able to make ends meet* (Bradshaw & Mayhew, 2010, 6). On the other hand, at-risk-of-poverty indicators underestimate poverty in new Member States, since the poverty threshold in those countries is very low in absolute terms, and the proportion of the population at risk is, consequently, relatively low. It is essentially unclear what standard of living (sufficient, insufficient) is warranted by an arbitrary poverty threshold of 60% of the median income (Adelman, Middleton, & Ashworth, 2003, 16) (Bradshaw & Mayhew, 2010, 6).

Finally, criticism also highlights that income is a one-dimensional indicator that reflects monetary poverty only.

Some of these problems, in fact, gave rise to the introduction of the material deprivation indicators and the *AROPE indicator*.

Since the adoption of the Europe 2020 strategy, the main indicator of vulnerability is *at-risk-of-poverty-or-social-exclusion (AROPE) rate*. This indicator shows the proportion of individuals who are at risk of poverty and/or severely materially deprived and/or living in a household with a low work intensity<sup>20</sup>. "One of the five headline targets of the Europe 2020 headline indicators is to reduce poverty by lifting at least 20 million people out of the at risk of poverty or social exclusion by 2020."<sup>21</sup> In some countries, such as Ireland, there is a view that, in their circumstances, it is more relevant to identify the share of the population disadvantaged on multiple grounds (Walker, 2011)<sup>22</sup>.

At-risk-of-poverty indicators and the AROPE rate are calculated on the basis of the *Survey on Income and Living Conditions (SILC)*.

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[pp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:At\\_risk\\_of\\_poverty\\_or\\_social\\_exclusion\\_\(AROPE\)](http://pp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:At_risk_of_poverty_or_social_exclusion_(AROPE))

<sup>21</sup>[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/People\\_at\\_risk\\_of\\_poverty\\_or\\_social\\_exclusion](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/People_at_risk_of_poverty_or_social_exclusion)

<sup>22</sup> As may be seen from Ireland's report for the Peer Review on national poverty targets.

According to the most recent Eurostat data, the at-risk-of-poverty rate in the EU stood at 17% in 2012, while in the new Member States it was even slightly lower<sup>23</sup>. In Serbia, the at-risk-of-poverty rate amounted to 24.6% in 2012 and was higher than in any EU Member State (Republički zavod za statistiku, 2013). In 2012, rates higher than 20% were recorded in Bulgaria, Romania and Croatia, as well as countries severely affected by the economic crisis – Greece and Spain.

The AROPE rate in the EU and in the new Member States stood at 24.8% and 30.7%, respectively<sup>24</sup>. In Serbia, the at-risk-of-poverty-or-social-exclusion (AROPE) rate stood at 42.1% (Republički zavod za statistiku, 2013), which is higher than in any EU Member State save Bulgaria and Romania.

## Material Deprivation

*Material deprivation entails lacking in what is considered necessary for a decent life in a given society.* This notion, essentially, entails an idea of relativity, as the perception of destitution depends on the development level and differs among societies (Townsend, 1979). Material deprivation indicates persistent poverty and is not a result of current financial hardship; it is, therefore, regarded as a complementary approach to identifying poverty, enabling an insight beyond what is inferred on the basis of income alone (Boarini & Mira d'Ercole, 2006).

The notion of material deprivation also bears a relation to the attempts to define poverty as a multidimensional phenomenon, whose measurement requires a **non-monetary outcome-oriented indicator**, which should facilitate better identification of the poor and better understanding of the actual meaning of poverty (Fusco, Guio, & Marlier, 2010). "[The standard of living] must be directly a matter of the life one leads rather than of the resources and means one has to lead a life" (Sen, 1985, 22).

One of the first attempts to design material deprivation indicators is attributed, in addition to the notion of relative poverty, to Townsend, who developed 60 indicators of material status and lifestyle in the UK and 11 forms of deprivation in the late 1970s. "In descending the income scale, it is hypothesized that, at a particular point for different types of family, a significantly large number of families reduce more than proportionately their participation in the community's style of living. ... These income points can be identified as a poverty line" (Townsend, 1979, 247). The research also notes that it is quite possible that, for different individual, cultural, religious and other reasons, many individuals and households will be ranked as disadvantaged on several grounds, but that multiple deprivation (for instance, five or six or more items that they do not have or activities in which they do not engage) certainly carries special weight (Townsend, 1979, 252).

According to the EU methodology, material deprivation is assessed on the basis of whether an individual is able to pay their rent, mortgage or utility bills regularly, to face unexpected expenses, and to afford certain durable consumer goods, a high-quality diet, a holiday and

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<sup>23</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_li02&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_li02&lang=en)

<sup>24</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_peps01&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_peps01&lang=en)

adequate heating. It should be noted that whether an individual actually owns those durable consumer goods or settles those financial liabilities or, for instance, goes on holiday, is not relevant. Whether he can afford it is the only relevant question; this is, therefore, a *subjective assessment*.

*Thus, in the EU, material deprivation is defined in terms of what is regarded as destitution in the European circumstances, rather than within specific societies.* Hence, this notion is also designated as "absolute" and, unlike the relative (income) poverty indicators, the material deprivation concept lends itself to comparing the levels of poverty among EU Member States (Guio & Maquet, 2007, 195). The question is, therefore, to what extent it enables a realistic assessment of poverty and disadvantage in the least developed EU Member States.

The list of nine items for the assessment of material deprivation in the EU comprises<sup>25</sup>:

1. arrears on mortgage or rent, utility bills, hire purchase instalments or other loan payments;
2. adequate heating of a dwelling;
3. facing unexpected expenses;
4. a meal with meat, chicken or fish (or vegetarian equivalent) every second day;
5. a one-week annual holiday;
6. a colour television set;
7. a washing machine;
8. a car;
9. a telephone.

*An individual is materially deprived if he cannot afford at least three items from the list above, and severely materially deprived if he cannot afford at least four. If he cannot afford five or more items, he is considered to be extremely materially deprived.*

Material deprivation indicators are material deprivation rate and depth. **Material deprivation rate** represents the share of the materially deprived population in the total population. Depth of **material deprivation** represents the mean number of items that the materially deprived portion of the population cannot afford. Severe material deprivation rate is one of the three components of the Europe 2020 headline indicator – at-risk-of-poverty-or-social-exclusion (AROE) rate<sup>26</sup>.

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<sup>25</sup>[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Material\\_deprivation\\_rate](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Material_deprivation_rate)

<sup>26</sup> The other two components are at-risk-of-poverty rate and the share of persons living in households with low work intensity

Material deprivation indicators were adopted in 2009 (European Commission, 2009), as complementary indicators of poverty and social exclusion, primarily in view of EU enlargement and the fact that the set of indicators applicable at the time did not adequately reflect the situation in the new Member States and, in particular, did not allow comparisons among different parts of the Community (Guio & Maquet, 2007, 196). Indicators were initially developed on the basis of expert analysis, and their validity was subsequently verified through the Eurobarometer survey on the perception of poverty and social exclusion (Guio, 2009, 4).

Material deprivation is also analysed by dimensions. The first is the economic strain dimension, pertaining to an individual's inability to settle certain financial liabilities and payments (the first five items of the list above). The second dimension pertains to an individual's inability to afford durable consumer goods (the last four items).

Deprivation may be analysed in the context of the housing dimension (housing deprivation), and is assessed on the basis of whether a dwelling is without a bathroom/toilet, whether it is waterproofed (damp walls, floor), or whether the dwelling is too dark. An additional dimension includes the environmental aspect, and deprivation is assessed in relation to noise, crime or pollution levels in the area in which an individual/household lives.

Although most material deprivation indicators are not a result of current financial hardship only, certain items, such as the (in)ability to afford a high-quality diet, are certainly tied more tightly to the current income.

The main limitations of the currently used indicators include few items and weak robustness and reliability of certain items underlying these indicators; therefore, they are expected to be changed in 2015, when a comprehensive revision of the Europe 2020 strategy headline targets and indicators is foreseen. On the basis of the research carried out, three of the existing nine items are expected to be removed, and seven new items are proposed. In addition, 18 items are proposed for the purpose of analysing material deprivation of children. A new version would entail separate items for individuals/children, and separate ones for households (Guio, Gordon, & Marlier, 2012) (Eurostat, 2013, 10).

More general criticism of material deprivation indicators usually highlights the distortion of data owing to differences in habits and under the influence of past preferences. Criticism also includes general objections to subjective assessments in surveys, in particular to the effect that the most vulnerable sometimes underestimate their deprivation level out of embarrassment or low aspirations (Boarini & Mira d'Ercole, 2006, 13). Although respondents are expected to declare whether they can afford specific items, in reality negative responses may simply result from the fact that those items are not a priority in the household budget and are not wanted by respondents (Bradshaw & Mayhew, 2010, 10). Unless questions are asked in the context of the ability to afford specific items, the responses may reflect lifestyle, rather than deprivation (Boarini & Mira d'Ercole, 2006, 13) (Bradshaw & Mayhew, 2010, 10).

Material deprivation indicators are calculated on the basis of the *Survey on Income and Living Conditions* (SILC). According to the most recent data, in 2012, the material deprivation rate stood at 19.7% in the EU and 34.9% in the new Member States<sup>27</sup>, and the severe material deprivation rate – at 9.9% and 19.7%, respectively<sup>28</sup>. In Serbia, according to the results of the *Survey on Income and Living Conditions*, the material deprivation rate stood at 44.3%, and the severe material deprivation rate – at 26.8% in 2013. Considerably higher values of both indicators were recorded in Bulgaria; in Romania, they are also higher, and in Hungary and Latvia they are at a level similar to that in Serbia. Such high material deprivation rates in certain less developed European countries indicate the need to define country-specific indicators that would truly reflect destitution in what is regarded necessary for decent living in those societies.

## Subjective Poverty

**Subjective poverty entails individual assessment of one's material status/poverty.** Perception-based data may provide relevant information on well-being that cannot be obtained by standard means and have multiple purposes. Thus obtained data are used to test objective poverty lines, to calibrate composite social well-being indices<sup>29</sup>, and also to derive a poverty line set at the income level at which a critical level of subjective welfare can be expected to be attained (Ravallion, 2011, 7-8). Essentially, subjective poverty data are considered to represent a complementary measure of well-being, important for the identification of social problems, policy evaluation and cost-benefit assessment (OECD, 2013, 36-44).

The subjective assessment concept came into intensive use in the 1960s as part of attempts to measure happiness and satisfaction with life. At the time, perception-based data were primarily used in economics to calibrate the welfare function, including the establishment of equivalence scales (Ravallion, 2011, 3). Van Praag, who was among the first to apply the subjective concept in economics and who defined the forerunner to the well-known question on the assessment of the minimum resources required for subsistence (the Leiden approach) already in the late 1960s, is of the view that "poverty is a subjective feeling of individuals" and that reliance on subjective data in the measurement of poverty for policy purposes is of utmost importance (Van Praag & Carbonell, 2005, 27).

The issues regarding the subjective poverty concept are substantial, but their identification and attempts to address them are increasingly in researchers' focus. The most serious problems are the absence of a clear attitude and inconsistency on the part of respondents, giving socially desirable responses, as well as differences in results due to the formulations of questions, order and formulation of the responses offered and the like (Bertrand & Mullainathan, 2001, 2-5) (OECD, 2013, 51-53).

In addition, responses vary depending on individual and household characteristics, as well as their real income. Research shows that, for instance, *the subjective feeling of poverty is*

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<sup>27</sup> <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

<sup>28</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_sip8&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_sip8&lang=en)

<sup>29</sup> Such as the Human Development Index and the Multidimensional Poverty Index.

*enhanced* in respondents who are ill or unwillingly unemployed, when respondents' aspirations and expectations exceed their current possibilities and when household income is on the decline (Ravallion, 2011, 14-18). High aspirations and excessively high expectations are present to a greater extent among the more affluent. In line with adaptive preferences, once they become accustomed to a higher standard of living, the more affluent start judging it "by higher criteria". Aspirations are heightened according to the same pattern; however, at higher income levels, they are fulfilled with more difficulty and frustration arises as a result (Boarini, Johansson, & Mira d'Ercole, 2006, 36).

Unlike them, under the conditions of long-term poverty, respondents *tend to overestimate their status* in line with lowered expectations, which is also attributed to adaptive preferences (Boarini, Johansson, & Mira d'Ercole, 2006, 36)(Guio, 2009, 3). Even more educated individuals overestimate their standard, probably in the expectation of future improvement (Ravallion, 2011, 21). The more affluent may be assumed to overestimate the level of minimum income necessary for subsistence.

Research also shows that subjective assessments differ when questions are asked orally and in writing, and in particular if children are present during the survey and respondents overestimate their standard of living on account of their presence (OECD, 2013, 53).

Finally, it should not be disregarded that individuals assess their material status against a reference group, for instance their neighbours (Ravallion, 2011, 22).

Part of the problems concern ethnic and cultural differences, which certainly affect the perception of poverty and welfare, thus substantially hampering the possibility of sound international comparisons (Guio, 2009, 6) (OECD, 2013, 53).

According to the analyses by the Massachusetts Institute of Technology researchers, subjective poverty data can be useful in econometric studies as an explanatory variable, but could not be used as a dependent variable, which is the case when they are used for measuring poverty (Bertrand & Mullainathan, 2001, 10). However, Ravallion, one of the World Bank's most prominent researchers into poverty, is of the view that part of the solution could be found in survey design, manner of asking questions, different formulation of the questions and provision of panel data (Ravallion, 2011, 18-28). Certain solutions are also offered by the OECD in its *Guidelines on Measuring Subjective Well-being* (OECD, 2013).

There are two approaches to measuring subjective poverty. One is the direct approach, where individuals *describe their material situation*, grading it from "good" to "very bad" In this approach, individuals with the same income and expenditures can reasonably be assumed to give different responses, which raises the issue of consistency.

The other approach is based on respondents' assessment of *the minimum income level they need to meet their essential needs*. In its original version, this method was designed by having households answer the question on the minimum income needed to meet the essential needs. Since the respondents' answers are positively correlated with their actual income and household size, for each household type it is possible to ascertain the income level at which their actual and stated needed income are equal. These levels are defined as household-type-specific poverty lines (Goedhart et al, 1977, 504). Another variant of this approach simply takes the average amount stated by all respondents (Gordon D., 2006, 52).

Difficulties have, however, been identified in the "minimum needed income" approach; these are particularly pronounced when a significant proportion of the needs is satisfied through consumption of goods and services produced by the household for its own use and they do not have a clear idea of the required monetary amounts (Lokshin, Umapathi, & Paternostro, 2006, 16). In addition, empirical research shows that, as the respondents' income rises, estimates of minimum needed income rise as well (Ravallion, 2008, 9).

For these reasons, the measurement method based on a series of questions on estimated adequacy of food consumption and expenditures on clothing and housing has been proposed in developing countries (Pradhan & Ravallion, 2000). Examples of several countries have shown that the application of this method yields very similar scales of "subjective" and "objective" poverty, and that differences appear in the profile and characteristics of the poor (Ravallion, 2011, 11). A methodology for the subjective assessment of poverty based on the perception of items necessary for a decent standard of living has been developed and applied in developed countries (Böhnke & Delhey, 1999) (Adelman, Middleton, & Ashworth, 2003). Material deprivation indicators also reflect consumers' subjective preferences and inclinations (Guio & Maquet, 2007, 197).

According to the *Household Budget Survey*, in Serbia in 2012, over 80% of the population estimated that their income did not suffice to meet their monthly needs (43.8% estimated that the income was wholly insufficient to meet the needs, and 36.5% – that it was mainly insufficient). Even in the most affluent decile, this view was held by over two thirds (Republički zavod za statistiku, 2013, 89, 91).

With regard to the subjective evaluation of the financial status, the most recent available data on Serbia, from the 2007 *Living Standard Measurement Survey*, show that the share of households that assessed their status as "bad" stood at approximately 15%. On the basis of the subjective assessment of the minimum amount required to meet the essential needs, about 13% of the households were below the poverty line (Krstić, 2008, 13).

The EU uses "inability to make ends meet" as the subjective poverty indicator. In the *Survey on Income and Living Conditions* (EUSILC), respondents are offered five responses for assessing their ability to make ends meet, on a scale from "very easily" to "with great difficulty". This indicator is not included among the items used for the assessment of material deprivation, owing to the overemphasis on the subjective component (Guio, 2009, 6).

In 2013, the share of households making ends meet with great difficulty stood at 11.1% in the EU, and at 17.5% in the new Member States<sup>30</sup>. The corresponding figure for Serbia was 33.8%. The highest values of this indicator in the EU were recorded in Bulgaria (32.8%) and Greece (35%).

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<sup>30</sup> <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

## Poverty by Administrative (Legal) Criteria

Poverty by administrative criteria means that, in a given country, the poor are those who are eligible for social assistance and other means-tested social benefits. Thus, in addition to reference budgets and the cost of basic needs method, poverty by administrative criteria is considered to be a measure of absolute poverty (Boarini & Mira d'Ercole, 2006, 12). The Ministry of Finance of Latvia has notified the European Commission that the number of social assistance beneficiaries in this country is a better reflection of the poverty situation than the at-risk-of-poverty rate (Bradshaw & Mayhew, 2010, 37).

In historic terms, in the Middle Ages, care for the destitute was left to the church, which used the distinction between deserved and undeserved poverty as the primary criterion for the provision of assistance, with an additional distinction between those fit and unfit for work (primarily children and the elderly). State involvement in the provision of support to the destitute first occurred in England, with the passage of the Act for the Relief of the Poor in 1601, whereby this duty was delegated to the local level, as well as numerous subsequent amendments, the most important of which are those passed in 1834. In addition to shifting the responsibility for the poor to the national level, an important provision of these amendments was that the amount of assistance could not exceed the lowest wage, so as not to disincentivise work. At the same time, relevant acts and programmes were adopted in Europe, the most comprehensive of these being the Hamburg scheme. Under this scheme, the criteria for awarding assistance and the poor population's needs were established on the basis of a survey of 3500 families, and assistance included employment, day care for children and education support (Gordon, 1988, 306).

Nowadays, in all more developed countries, and even in those less developed, there are means-tested schemes, which requires the administrative (legal) definition of poverty for the purposes of assessing eligibility. As these schemes are mainly defined in detail in the parliamentary procedure, these democratically adopted provisions could be considered to answer the question who is regarded as poor by a given society. "... Social assistance represents a level of income that each state has decided should be the minimum in their country" (Bradshaw & Mayhew, 2010, 35).

Post-war poverty studies in the UK, Finland, Sweden and Germany used the *criteria of social assistance schemes in defining poverty and low income*, with the inevitable consequence that the number of the poor changed with the administrative changes of the income ceiling and benefit amounts, rather than as a result of objective changes (Atkinson, 1995, 86).

Article 34 of the EU Charter of Fundamental Rights indicates that, as a form of fight against poverty and social inclusion, "the Union recognises and respects the right to social and housing assistance so as to ensure a decent existence for all those who lack sufficient resources"<sup>31</sup>. In line with their overall social protection systems, individual states have interpreted the idea of "insufficient resources" and "decent existence" in different ways and

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<sup>31</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:083:0389:0403:EN:PDF>



translated them into legal provisions. What is poverty and who are the poor by administrative criteria, where do the national legislatures draw the administrative poverty line and what additional eligibility criteria do they set?

*In almost all EU Member States, there is one basic national guaranteed minimum income scheme aimed at securing the minimum standard of living.* In many countries, several schemes may be identified; Ireland, for instance, has as many as 13 minimum income schemes (Bahle et al, 2011, 18). In setting assistance amounts, differences in household size and age structure are taken into consideration, and concrete assistance amounts supplement the individual's or family's income up to the guaranteed minimum income level.

*In most EU Member States, the income ceiling, and thus also the guaranteed minimum income level, is tied to national indicators of the minimum standard of living,* while in some it is also tied to the minimum wage, minimum pension or unemployment benefit (World Bank, 2013, 15).

Although, in the administrative interpretation of insufficient standard of living, most countries chose the income approach, i.e. defining the income ceiling below which one is considered poor, a smaller number of countries rely on the needs concept. Those countries cover only those costs regarded as necessary for a decent standard. Thus, the basic benefit in Austria covers food, clothing, hygiene, heating, lighting, needs relating to education and participation in social life (MISSOC secretariat, 2011, 9).

In processing applications for assistance, there is a wide range of receipts that are not counted as income for the purposes of assessing eligibility in some countries. These are usually certain social benefits, receipts from humanitarian organisations, scholarships and student loans, and in some countries even a part of income from part-time work (MISSOC secretariat, 2011, 16).

*The income ceiling could, in fact, be described as the administrative poverty line below which an individual is considered income poor by legal criteria.* In a research aimed at proposing an extreme (absolute) poverty measure in the EU, one considered option was to use this criterion as the poverty line, as it was already used by many countries as the basis for setting the national poverty thresholds (Bradshaw & Mayhew, 2010, 35-37). The option was, however, dismissed by the authors. It transpired that the number of the poor in the ten highest-developed EU Member States would be inordinately small; however, the primary concern was that the number of the poor would clearly depend on changes in the administrative line, rather than on objective criteria, and the overall implementation of the concept would be subject to manipulation. In addition, in a number of countries, the eligibility requirements and assistance amounts are not based on the minimum amount required for subsistence, and therefore do not represent the minimum income standard.

In assessing eligibility, in addition to income, potential beneficiaries are also subject to an asset test. *In other words, the poor are considered to comprise not only those without sufficient income, but also those without assets,* which is, to a certain extent, an indication of long-term poverty. Several countries' legislation expressly stipulates that all other sources of potential income must be exhausted before applying for state assistance (MISSOC secretariat, 2011, 16).

Although applicants' movable and immovable assets are checked in almost all countries, the dwelling in which the household lives is excluded in most countries, provided that it is adequate in size, that it does not yield income, i.e. that its sole purpose is modest living (MISSOC secretariat, 2011, 21).

Even after an income and assets test, an individual is not automatically eligible for a social assistance scheme. Additional (preliminary) requirements include citizenship or, more commonly, permanent residence, and in almost all states, eligibility for assistance is, additionally, conditional upon some form of client activation. Assistance is increased or made conditional upon the participation of clients fit for work in retraining or further training programmes or involvement in community service, or accompanied by strict requirements for the recipients to work. According to some views, "A key preoccupation for many countries is ensuring that minimum schemes do not lead to disincentives to take up work. Indeed, the overall impression is that many Member States prioritise this consideration over ensuring an adequate level of minimum income." (Frazer & Marlier, 2009, 38). Clearly, minimum income schemes are based on the absolute poverty concept. Assistance amounts do not reach the level needed to eliminate risk of poverty almost in any country (Bahle, Hubl, & Pfeifer, 2011, 217).

Minimum income schemes primarily alleviate the intensity and immediate consequences of the deepest poverty. Various empirical studies confirm that these schemes succeed in lifting the most vulnerable, out of extreme poverty (Frazer & Marlier, 2009, 33) (Nelson, 2013). "Insufficient" assistance amounts are partly a result of limited budget resources, and partly of efforts to maintain assistance amounts at a level that will not disincentivise employment and work.

In recent years, however, initiatives have emerged to formulate an EU directive that would raise administrative poverty lines to the level of the at-risk-of-poverty threshold (European Anti Poverty Network, 2010). Such recommendation was made by the European Parliament already in 2009, in its Resolution on the active inclusion of people excluded from the labour market<sup>32</sup>. Comments on these initiatives, amongst other things, highlight the fact that a directive would impose inordinate requirements in terms of distribution and allocation of additional budget funds on many countries, some of which, in fact, have not designed their social protection systems well. Some researchers are of the view that a directive that would impose such high minimum income standards would inevitably entail partial financing of these schemes from European funds. Additional funds needed at the EU level would be so high as to require doubling structural funds (Vandenbroucke et al, 2012, 39).

***The main means-tested scheme in Serbia is financial social assistance (FSA).*** In Serbia, as in most EU countries, assistance is awarded subject to an income and asset test, disbursed according to the principle of supplementing income up to the legally defined poverty threshold, targets the entire family/household and takes into consideration differences in household size and age structure.

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<sup>32</sup> <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P6-TA-2009-0371+0+DOC+PDF+V0//EN>

The poverty threshold, defined in the form of an income ceiling, is explicitly stated in the form of the FSA base, which is updated by the consumer price index on a biannual basis. For an individual, i.e. the right holder, the maximum assistance amount is equal to the base, for each additional adult household member it equals 0.5 of the base, and for each child – 0.3. Additionally, financial social assistance is increased by 20% for households without members fit for work, as well as for single-parent families.

In assessing eligibility, all earnings including those from undeclared activity (income assessed on the basis of the findings and judgement of social work centres) are counted as income, while social benefits such as child allowances, birth grants, attendance allowances, receipts under students' living standard schemes and the like are not taken into account.

***According to the data for 2012, the administrative income poverty line in Serbia stood at RSD 6885 per equivalent adult, and RSD 8262 for households without members fit for work.*** As certain social benefits do not count as income, the actual income may be higher if it comes from the said sources. This line is certainly considerably lower than the relative (income) poverty threshold, and also than the absolute poverty threshold. The gap is narrower when other social benefits, especially substantial ones, such as the birth grant, are taken into consideration.

In Serbia, as in the EU, by legal criteria, the poor are considered to comprise not only those without sufficient income, but also those with modest assets. Under the law, the asset ceiling includes adequate housing and movable assets, and all who own more than 0.5 ha of land, or 1 ha for households without members fit for work, are not eligible. Those with assets in excess of the ceiling have access to assistance, provided they consent to the registration of a mortgage on their property, in order that the state could recover the claim amounting to the FSA disbursed. Individuals who have entered into life care contracts are not eligible for assistance.

Among additional requirements and limitations, it should be highlighted that families in which a majority of members are fit for work may not receive assistance for more than nine months in a calendar year, and also that the law provides for client activation, which has not been implemented in practice so far.

### III RECOMMENDATIONS ON MONITORING POVERTY IN SERBIA

"What we measure affects what we do; and if our measurements are flawed, decisions may be distorted" (Stiglitz, Sen, & Fitoussi, 2009, 7).

To answer the question whether a given measure in the national context is relevant to further monitoring of poverty in Serbia, the key goals of measuring poverty should be set first, and then different measures should be compared from the aspect of the defined goals. Subjective poverty, which primarily plays the role of a complementary measure, and poverty by administrative criteria have not been taken into consideration, for obvious reasons.

*To identify poverty scale and profile* is the first and obvious goal of measuring poverty, but certainly not the only or even the most important one. Data are certainly important from the aspect of *designing poverty reduction policy*, both in the narrower sense of social policy, and in the wider sense of choosing the economic development strategy or adopting a specific economic policy that affects standard of living. Irrespective of the fact that assessment of the scale of poverty is important for any society, it is even more important to gain insight into *changes in the number and structure of the poor over time, including those changes resulting from economic and social policy reforms* (Ravallion, 1992).

#### Identifying Poverty Scale and Profile

*1. The scale of absolute poverty is still substantial in Serbia and it is important to ascertain how many individuals and households, according to this criterion, are not able to meet even the basic needs, especially since they are defined in very restrictive terms.*

- According to the data for 2011 and 2012, poverty incidence was still high in Serbia, at between 6.8% and 8.8%. This means that between approximately 500 and 642 thousand individuals survive without satisfying even the most basic needs in some domain, including those relating to nutrition.
- In line with the hierarchy of absolute and relative poverty proposed by Atkinson & Bourguignon in examining possible measures at the global level, it may be argued that, as long as there is a great number and a high share of individuals who are not able to meet even the minimum needs, the absolute poverty concept is relevant and even has priority (Atkinson & Bourguignon, 1999, 16-17).

- In addition, the assessment of poverty and standard of living in Serbia *by consumption* is still essential. Many international recommendations, including those made by Eurostat, indicate that, in addition to income, more measures, such as consumption, should be used in the assessment of standard of living (Eurostat, 2013, 9). This is also consistent with the Stiglitz-Sen-Fitoussi Commission recommendations (Stiglitz, Sen, & Fitoussi, 2009, 12-13).
- The European Commission has also commissioned a research into options for the measurement of extreme/absolute poverty, recognising the reasons that indicate the need for the assessment of vulnerability under this concept as well (Bradshaw & Mayhew, 2010).

*2. A possible alternative is to choose at-risk-of-poverty rate as the means of identifying the incidence of poverty; however, for several reasons, in the Serbian circumstances, it is not a good indicator, let alone sufficient.* In summary of the observations in the section on relevant poverty, the following can be highlighted:

- At-risk-of-poverty rate measures low income, rather than poverty. Thus, according to the Eurostat glossary, *"this indicator does not measure wealth or poverty, but low income* in comparison to other residents in that country, *which does not necessarily imply a low standard of living"*. Therefore, without disputing that at-risk-of-poverty rate may be valuable for analytical purposes, *it is not a poverty indicator*.
- In the Serbian circumstances, the inadequacy of this indicator is certainly partly a result of measurement by income. In a research into options for the measurement of absolute (extreme) poverty undertaken for the European Commission, it is stated that even in developed countries *"income data<sup>33</sup> ... is more or less unreliable, understated, hidden, forgotten"* (Bradshaw & Mayhew, 2010, 10).
- In addition, income is not an adequate indicator in countries with *irregular disbursement of wages, pensions and other social benefits, high seasonal income and share of in-kind income, and widespread informal economy* (World Bank, 2000, 367-368). Further, assessment by income fails to properly "capture" remittances from abroad, loans and consumption based on earlier savings (Bradshaw & Mayhew, 2010, 6) (Boarini & Mira d'Ercole, 2006, 10).
- Although none of these elements are now present in Serbia to the same extent as in 2001, when it was deliberated whether standard of living should be assessed on the basis of income or consumption (Matković, 2007, 17), they have most certainly not become immaterial. According to HBS data, in recent years, the value of goods produced for own consumption as the proportion of the total consumption of the poorest two deciles has stood at, or even exceeded, approximately 12%. Further, according to World Bank data, by the ratio of remittances to the GDP, Serbia and Bosnia and Herzegovina share the second and third ranking among European

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<sup>33</sup> Except in Nordic countries, which have income registers.

countries, after Moldova<sup>34</sup>. The share of informal economy is also high, at about 30% of the GDP, and the share of informal employment in total employment has ranged between 17% and 20% in recent years (Fond za razvoj ekonomske nauke, 2013, 19, 106). Under these conditions, the likelihood of respondents "understating, hiding or forgetting a part of their income" is higher than in other environments.

- Using at-risk-of-poverty indicators for the purpose of *comparisons among regions or between urban and non-urban areas* in Serbia may lead to the same problems that occur when comparing more and less developed countries. More specifically, risk on those grounds may be greater in the more developed and urban parts of Serbia, if income distribution is less balanced there. This, of course, does not present a problem if at-risk-of-poverty rate is regarded as an indicator of low income compared to the immediate environment, rather than of poverty. An additional problem arises from the fact that, according to the Eurostat methodology, *in-kind income from own production is not counted as income*, which may severely compromise comparisons in Serbia and lead to artificial differences in the standard of living and poverty.
- *The fact that risk of poverty does not adequately reflect the situation in new Member States* (Guio & Maquet, 2007, 196) offered an argument for the introduction of material deprivation indicators and the AROPE indicator (at-risk-of-poverty-or-social-exclusion rate). If risk of poverty does not reflect the situation in new EU Member States, it almost certainly does not adequately reflect vulnerability in Serbia either.

3. *Alternatively, material deprivation indicators can be used for the assessment of poverty scale and profile. However, not even these indicators can substitute the absolute poverty indicators according to the basic needs method.*

- *Material deprivation indicators show the level of deprivation by European standards.* Indicators were initially developed in 2009 on the basis of expert analysis, and their validity was subsequently verified through the Eurobarometer survey on the perception of poverty and social exclusion (Guio, 2009, 4). To use the international standard of "one dollar per day" suitable only for the least developed countries would be a futile exercise in Serbia since, by that standard, no one is poor. On the other hand, it is also questionable to what extent it would be adequate to assess the scale of poverty by European standards, on the basis of the European perception of destitution. In Bulgaria, according to the material deprivation rate, over 60% of the population is poor, in Romania – nearly 50%, and in Serbia, Hungary and Latvia – over 40%. The level of risk is, naturally, lower when analysed on the basis of the severe material deprivation rate, but is still quite high. Without disputing that these indicators are valuable for analytical purposes, in particular with regard to the possibility of comparing differences in the standard of living among different EU Member States, they are not adequate as the sole indicator of poverty in less developed countries.

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<sup>34</sup> Migration and Remittances Factbook 2011  
<http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1199807908806/Top10.pdf>

- *Additionally, these indicators entail an element of subjectivity*, the most disadvantaged can, thus, be expected to underestimate their deprivation level out of embarrassment or low aspirations (Boarini & Mira d'Ercole, 2006, 13). On the other hand, although respondents are expected to declare whether they can afford specific items, in reality negative responses may simply result from the fact that those items are not a priority in the household budget and are not wanted by respondents (Bradshaw & Mayhew, 2010, 10). Owing to an element of subjectivity, sudden changes in income levels are not necessarily reflected in material deprivation in the short term.
- Further, it should be noted that *material deprivation indicators are still under development* and are expected to be revised in 2015, owing to the small number of items and weak robustness (reliability) of certain items. Even if material deprivation indicators were ideal for a country such as Serbia, their contents should be allowed to stabilise before being accepted as the "sole" or most important indicators of poverty.

## Observing Changes – Monitoring the Development of Poverty over Time

1. Observing changes and monitoring the development of poverty are in many ways more important than assessing the number of the poor i.e. than the decision where to draw the poverty line (Ravallion, 1992, 1-4). *Comparable poverty data according to the basic needs method have been monitored in Serbia since 2006, on the basis of the Household Budget Survey*, and the methodology was used already in socialist times in former Yugoslavia. Hence, irrespective of other considerations, this continuity somewhat prioritises this method of measurement, or at least offers an argument in favour of further monitoring of poverty according to this methodology as well.
2. *At-risk-of-poverty rate has not proved to be an ideal indicator for monitoring changes in poverty*. As pointed out in the section on relative poverty, earned income may be the first to decline in times of crisis, which has an impact on income distribution and median income and leads to a lowered poverty threshold. Under such conditions, individuals who were immediately below the threshold may exceed it, despite the fact that their actual situation has, in fact, deteriorated (Eurostat, 2013, 7). Risk of poverty may thus decrease at the outset of a crisis, which indeed happened in our situation. According to the *Household Budget Survey* data, the at-risk-of-poverty rate decreased by 0.2 percentage points in 2009 (Republika Srbija, 2010, 87).
3. *Although certain material deprivation indicators may be a good indication of long-term poverty, the subjective component (preferences, habits) they inevitably entail gives rise to the question to what extent they change in the shorter term*. Perceptions do not change so fast, neither those concerning needs

nor those concerning the assessment of what an individual can afford. These indicators are, therefore, not ideal for monitoring the pace of changes in poverty. On the other hand, when income is on the decline, the subjective components may effect a disproportionate deterioration of material deprivation indicators.

## Policy Formulation and Evaluation

All the arguments presented above confirm that, also from the aspect of poverty reduction policy formulation, vulnerability must be analysed under the absolute poverty concept. "Absolute poverty can probably be eliminated with sufficient economic growth... Outcomes for relative poverty depend more on how income distribution changes" (Ravallion, 2010, 3). If, as the Eurostat glossary indicates, at-risk-of-poverty rate is not an indicator of poverty, but of potential vulnerability of the individuals who have lower incomes than a number of their compatriots, then it cannot be an adequate indicator for the formulation and evaluation of **poverty reduction policy**. This does not dispute the importance of reducing inequality and of the policies that may be formulated towards that goal.

As regards material deprivation indicators, given that they have been formulated for the European circumstances, and in view of the substantial proportion of the Serbian population regarded as vulnerable by this criterion, it is questionable to what extent they can be adequate for policy formulation and evaluation.



# CONCLUSIONS

Although the research conducted is not so comprehensive as to provide full answers to all questions, it unambiguously provides the basis for certain conclusions.

1. Absolute consumption poverty is still high in Serbia and, as long as this – by European standards extreme – form of poverty **exists**, it should continue to be monitored as one of the key poverty indicators.
2. It should be highlighted in particular that this indicator is **officially designated as the country-specific indicator** of financial poverty in Serbia (Tim za socijalno uključivanje i smanjenje siromaštva i Republički zavod za statistiku, 2010, 19).
3. The definition and monitoring of absolute poverty are also important from the aspect of **the formulation and evaluation of poverty reduction policies**, primarily those aimed at reducing poverty in terms of the inability to meet the minimum needs.
4. The assessment of poverty and the standard of living in Serbia **by consumption** remains essential, primarily in view of the scale of in-kind income from own consumption, prevalence of informal economy and importance of remittances from abroad for subsistence, none of which is easily captured by assessments based on income. This is also supported by many international recommendations.
5. There is no justification for abandoning the *Household Budget Survey* as an instrument for the assessment of standard of living, given that, according to the Eurostat definition, it is important for assessing standard of living in the European Union<sup>35</sup>.
6. The present study does not address many issues concerning the need to improve the Serbian *Household Budget Survey*. There is no doubt that data quality would be enhanced by at least increasing the sample size, as well as by occasionally including separate modules aimed at assessing the consumption of vulnerable groups such as the Roma living in informal settlements or financial social assistance beneficiaries.
7. An additional question is whether it would be meaningful to carry out the third wave<sup>36</sup> of the *Living Standard Measurement Survey* (LSMS), which could provide a deeper insight into poverty issues on a **larger sample** than the HBS and answer certain questions left unanswered by the *Household Budget Survey*. It is absolutely certain that, **owing to separate modules on health, education and employment**

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<sup>35</sup>[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Glossary:Household\\_budget\\_survey\\_\(HBS\)](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Household_budget_survey_(HBS))

<sup>36</sup> The first wave was conducted in 2002 and 2003, and the second – in 2007.

*status*, the HBS would provide other invaluable information in addition to more detailed data on consumption and a more precise picture of poverty – the burden of private health or education expenditures on the poor population's consumption, their labour market status and the like. Without these data, few conclusions can be drawn on the direct *causes* of poverty in Serbia. It would also be particularly advantageous to assess total private expenditures on education and health, which still cannot be obtained from other sources.

Finally, it is important to underline that the above argumentation does not propose to dismiss or modify European indicators such as risk of poverty or material deprivation. It is, however, of utmost importance to fully understand their meaning, as well as their limitations with respect to studying living conditions in Serbia.

Furthermore, monitoring more indicators of poverty and social exclusion is essential and is generally regarded as increasingly important. Thus, for instance, the Stiglitz-Sen-Fitoussi Commission notes that both income and consumption are crucial for assessing the standard of living, but that they will ultimately not suffice if the information on assets is missing (Stiglitz, Sen, & Fitoussi, 2009, p. 13). Within the project on the assessment of options for the measurement of extreme/absolute poverty in the European Union, it is also highlighted that several measures are required to identify the core of the poverty problem; it should be noted in particular that the idea of a budget standard for monitoring the most severe forms of poverty resurfaces within that framework (Bradshaw & Mayhew, 2010, pp. 11; 53-59).

It should certainly be borne in mind that, by the time of writing this paper, only the initial results of the *Survey on Income and Living Conditions (SILC)* were announced in Serbia. The wealth of survey data remains to be analysed in more depth in the coming months, and opportunities also arise for comparisons of poverty by several indicators, as well as on the basis of several sources, both by income and by consumption. These researches, combined with ongoing European efforts towards improving indicators, will certainly yield new ideas and possibilities for measuring poverty. Until then, and especially as long as more than half a million inhabitants of Serbia are not able to meet their basic needs, it is essential to monitor a country-specific indicator – absolute consumption poverty.

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