

**UNITED NATIONS  
ECONOMIC COMMISSION FOR EUROPE  
CONFERENCE OF EUROPEAN STATISTICIANS**

Seminar on poverty measurement  
12-13 July 2016, Geneva, Switzerland  
**Item 2: Guide on Poverty Measurement**

## **Chapter 1 Conceptual background**

### **GUIDE ON POVERTY MEASUREMENT**

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Draft 28 June 2016

# Chapter 1 Conceptual background

## The concepts of inequality, poverty and social exclusion

The concepts of inequality, poverty and social exclusion are not only complex but also closely interlinked. Inequalities are a natural product of diversity of the world in general and humanity in particular. Inequality of incomes is most obvious type of inequality, but one should focus on broader inequalities, as the former provides an inadequate view of other inequalities<sup>1</sup>. All inequalities are important, some more than others, and discussions in moral philosophy have offered a wide menu in answer to the question: equality of what? In some cases, inequalities leave people so much behind the mainstream society that the deprivation they experience pushes them beyond what is considered as the basic standard of mainstream society<sup>2</sup>. To take a comprehensive view of poverty, multiple and sometimes intersecting inequalities should be examined.

In practice, poverty is often operationalized in the form of income or consumption poverty, with poverty lines based on either biological considerations (i.e. the cost of minimum food basket plus allowance for non-food basic needs) or on the standards that are typical in a given society and time. One of the main sources of dissatisfaction with poverty measures that use an absolute line, kept constant in real terms, is that these measures do not take account of the concerns people face about relative deprivation, shame and social exclusion (Ravallion 2016).

Social effects on welfare have profound implications for global and regional poverty measurement, as it requires a defensible and common concept of individual welfare, with everyone's poverty status judged by a consistent welfare concept (to the extent feasible with the data available). Sen (1983) argued that a person's capabilities should be seen as the absolute standard but that "... an absolute approach in the space of capabilities translates into a relative approach in the space of commodities". Often people face not just one problem (e.g. lack of incomes), but a complex of interlinked deprivations (lack of education, meager employment opportunities, which in turn undermine income and pull down housing opportunities)—"*When you work, you have friends. As soon as you lose your job, you have no friends at all*"<sup>3</sup>.

While poverty, even multidimensional, is a relatively "stable" concept, social exclusion is more "dynamic", as it could be seen both as a process and as an outcome. As a process it pushes certain individuals to the margins of society and prevents their full participation in relevant social, economic, cultural, and political processes. As an outcome, it denotes the status and characteristics of the excluded individual. Social exclusion status has many dimensions – poverty, a lack of basic

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<sup>1</sup> Sen A. (1997) From Income Inequality to Economic Inequality. Southern Economic Journal. Vol. 64, No. 2 (Oct., 1997), pp. 383-401. DOI: [10.2307/1060857](https://doi.org/10.2307/1060857)

<sup>2</sup> Milanovic (1998) talking about poverty in transition noted that "the descent into poverty is the product of two forces: lower income and greater income inequality."

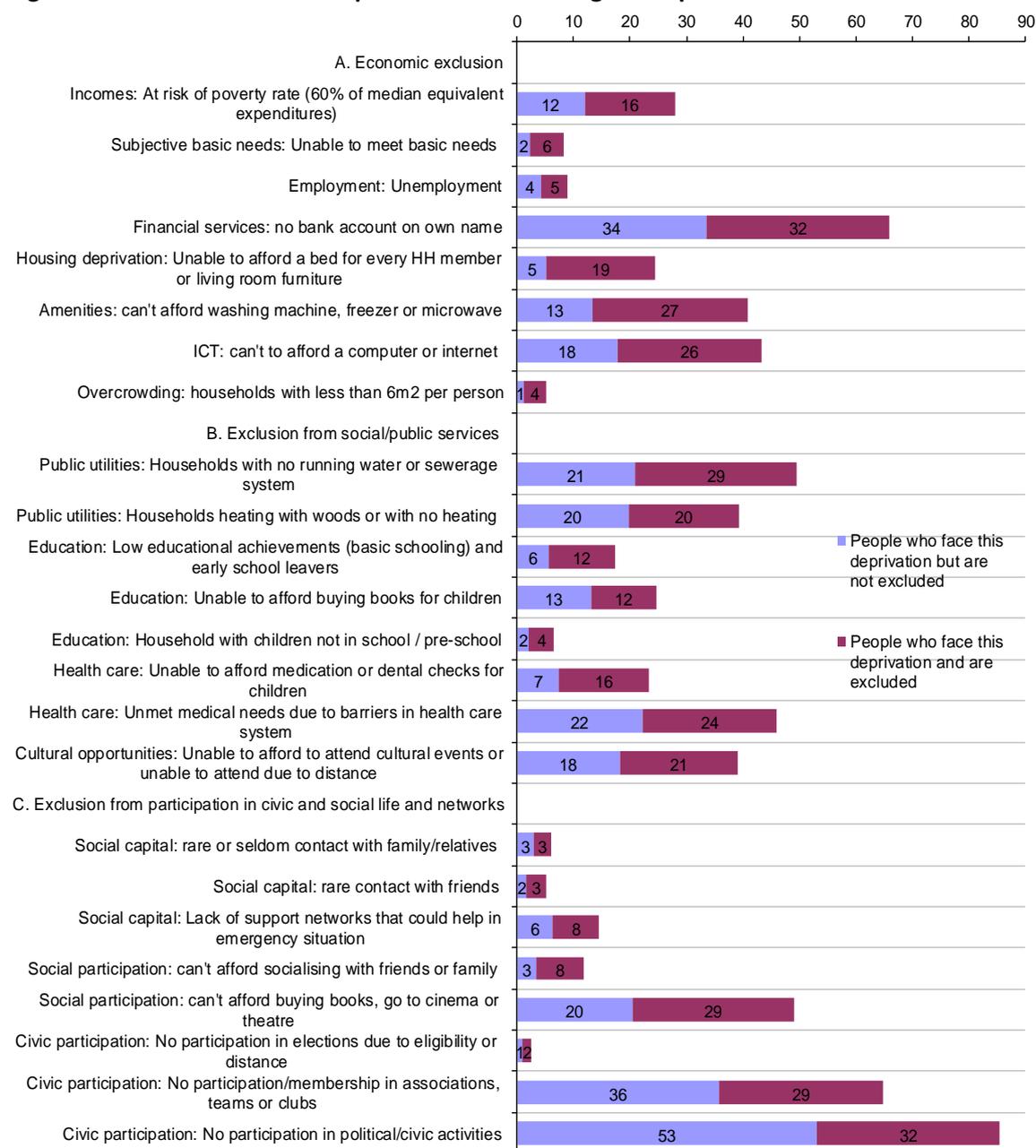
<sup>3</sup> UNDP (2011) Beyond transition: Towards inclusive societies. Europe and Central Asia Human Development Report <http://hdr.undp.org/en/content/beyond-transition>

competencies, limited employment and educational opportunities, as well as inadequate access to social and community networks and activities.

The concept of social exclusion – and approaches to individual vulnerability from a social exclusion perspective – evolved in connection with the notion of “social rights”, which has its origins in the idea of welfare states of Europe. In 1974, René Lenoir, the Secretary of State for Social Issues in France, defined ‘the excluded’ as people representing all social categories that were not included in the social insurance systems specific to the welfare state (Lenoir, 1974). The concept has been further adapted and rearticulated over time. Within a discourse of citizenship, social rights and social justice, the status of ‘being socially excluded’ is not merely understood as lack of access to goods and services but as lack of rights. If poverty is defined in relation to income or material deprivation, the status of social exclusion is defined in relation to social rights such as the right to work, the right to housing, the right to health services, or the right to education (Lister, 2004). For Sen (2000), social exclusion occurs when one does not have the freedom to undertake important activities that a person would have reason to choose.

The process of social exclusion is intrinsically linked to denial of freedom. People may be excluded from taking advantage of an opportunity because of a deliberate policy or practice in society (‘active exclusion’), or as a result of a complex web of social processes in which there are no deliberate attempts to exclude (passive exclusion). Social exclusion assigns a central role to relational connections and unequal power relationships (Steward et al., 2006). According to Silver (1995), social exclusion breaks the bond between society and the individual.

**Figure X. Social exclusion is the product of a wide range of deprivations**



**Source:** UNDP (2011) Beyond Transition: Towards Inclusive Societies. Regional Human Development Report.

<http://hdr.undp.org/en/content/beyond-transition>

## Evolution of poverty measurement

The understanding and relief of poverty has been a major human preoccupation for many centuries. Since the 1880s, three alternative conceptions of poverty have evolved as a basis for international and comparative work. They depend principally on the ideas of subsistence, basic needs and relative deprivation.

The notion of subsistence idea<sup>4</sup> has influenced scientific practice and international and national policies for over 100 years. Examples are the statistical measures adopted to describe social conditions, at first within individual countries but later with wide application by international agencies such as the UNDP, the World Bank and others.

The use of “subsistence” to define poverty has been criticized because it implies that human needs are mainly physical rather than also social needs. People are not simply organisms requiring physical energy; they are social beings expected to perform socially demanding roles as workers, citizens, parents, partners, neighbours and friends. Moreover, they are not simply consumers of physical goods but producers of those goods and also expected to act out different roles in their various social associations. They are dependent on collectively provided utilities and facilities. These needs apply universally and not merely in the rich industrial societies.

Physical needs have been included in the categorisation of “absolute” poverty, which is sometimes further qualified as “extreme” or “severe.”<sup>5</sup> These needs, however, are subject to change because of shifts in social activity and demand patterns. The need for material goods, their relevance to the society of the day, and even the goods themselves, are not, after all, fixed or unvarying. The amount, quality and cost of food depend on work, climate and social customs. Therefore, material needs turn out to be socially determined in different ways.

By the 1970s a second formulation—that of “basic needs”—began to exert wide influence, supported strongly by the ILO. Two elements were included. The first element is the minimum consumption needs of a family: adequate food, shelter and clothing, as well as certain household furniture and equipment. The second element are essential services provided by and for the community at large, such as safe water, sanitation, public transport and health care, education and cultural facilities. Furthermore, in rural areas, basic needs also include land, agricultural tools and access to farming. The “basic needs” concept is an extension of the subsistence concept. In addition to material needs for physical survival, it also includes facilities and services, such as health care, sanitation and education, as required by local communities and population as a whole.

Supporters of the “subsistence” concept favour its limited scope and clear implications for policy and political action. In the past as well as nowadays, restricting the meaning of poverty to material and physical needs seems easier than to include the non-fulfilment of social roles specific to each individual.

In the late 20th century, a third formulation of the meaning of poverty was developed: relative deprivation. “Relativity” as suggested above, applies to both income and other resources, including material and social conditions.

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<sup>4</sup> In Victorian England, for example, families were defined to be in poverty when their incomes were not “sufficient to obtain the minimum necessities for the maintenance of merely physical efficiency”. A family was treated as being in poverty if its income minus rent fell short of the poverty line. Although allowance was made in calculating the income level for clothing, fuel and some other items, this allowance was very small, and food accounted for much the greatest share of subsistence.

<sup>5</sup> “Absolute” poverty line refers to approach in establishing poverty line, while “extreme” and “severe” are qualifiers to refer when the bar is put low. Therefore, absolute poverty lines are not necessarily ‘extreme’. In practice, many countries use multiple absolute poverty lines, to identify the poor and the poorest (extreme poverty line).

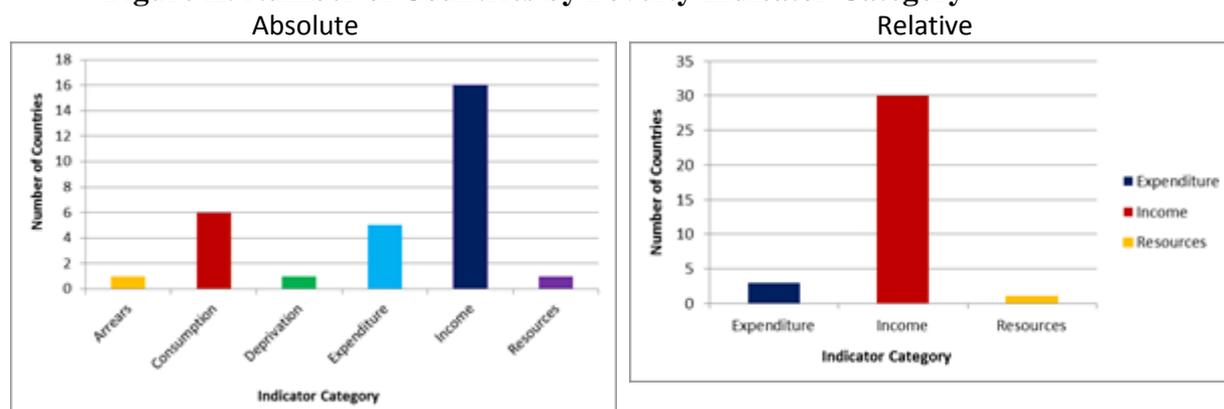
Today, societies are passing through such rapid change that a poverty standard devised in the past may be difficult to justify. People living in the present are not subject to the same laws, obligations and customs that applied to the previous era. Globalisation is connecting peoples and making them more aware of differences in their standards of living, while inequalities within and between countries are growing. There are, therefore, major objections to merely updating any historical benchmark of poverty on the basis of some index of prices.

Over many years, the “relativity” of poverty has come to be recognized, in part if not comprehensively. Adam Smith, for example, recognized the ways in which “necessities” were defined by custom in the early part of the 19th century, citing the labourer’s need to wear a linen shirt. This example shows that the relatively low disposable income is not enough condition to classify people as poor. It also illustrates the conceptual distinction between inequality at the lower tail of the distribution and poverty.

Poor people are not just the victims of a maldistribution of resources. They rather lack, or are denied, the necessary resources to fulfil social demands and observe the customs and laws of society. This led to the development of “relative deprivation” approach, under which a threshold in each dimension is envisaged, according prevailing norms in society, below which withdrawal or exclusion from active membership of society is common.

Figure X highlights that the majority of countries (88%) approach measuring relative poverty by referring to (disposable) income. In contrast, expenditure or resource measures are unusual. The specific indicator used by 28 countries is “risk of poverty at % of national median of equalized household income”. In terms of the percentage, most countries (18 out of 30) use the standard established by the European Union, namely 60%. In contrast, Canada, Denmark, Israel and Japan apply 50%.

**Figure X. Number of Countries by Poverty Indicator Category**



Source: Analysis of national practices UNECE survey, 2013

Relative measures are most frequently used in wealthier societies. One of the main sources of dissatisfaction with poverty measures that use an absolute line is that they do not take account of the concerns people face about relative deprivation, shame and social exclusion. For instance, European Union and Eurostat have made substantial moves toward capturing these non-monetary deprivations<sup>6</sup>. One of the five headline targets of the Europe 2020 headline indicators is to reduce

<sup>6</sup> [http://ec.europa.eu/eurostat/statistics-explained/index.php/People\\_at\\_risk\\_of\\_poverty\\_or\\_social\\_exclusion](http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion)

poverty by lifting at least 20 million people out of the risk of poverty or social exclusion by 2020. The headline indicator to monitor the EU 2020 Strategy poverty target is the AROPE indicator “at risk of poverty or social exclusion”, i.e. people who were at least in one of the following conditions:

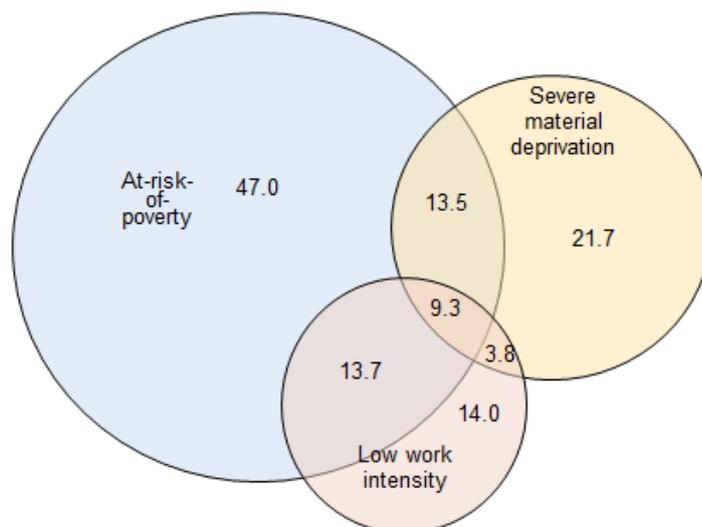
- at-risk-of-poverty after social transfers (income poverty, meaning that their equivalised disposable income was below their national at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income);
- severely materially deprived (people who cannot afford at least four of nine items deemed to be essentials<sup>7</sup>); or
- living in households with very low work intensity (defined as people from 0–59 years living in households where adults (those aged 18–59, but excluding student aged 18–24) worked less than 20 % of their total potential during the previous 12 months)

People are considered to be at-risk-of-poverty or social exclusion if they face at least one of these risks — although 33.2 % of those people at-risk-of-poverty or social exclusion within the EU-28 in 2014 faced a combination of two or even all three of these risks.

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<sup>7</sup> The nine following items:

1. having arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments;
2. being able to afford one week’s annual holiday away from home;
3. being able to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day;
4. being able to face unexpected financial expenses;
5. being able to buy a telephone (including mobile phone);
6. being able to buy a colour television;
7. being able to buy a washing machine;
8. being able to buy a car;
9. being able to afford heating to keep the house warm.



**Population:**  
 — neither at risk of poverty,  
 — nor severely materially deprived,  
 — nor living in a household with very low work intensity,  
 = 377.9 million

(\*) The sum of the data for the seven groups at risk of poverty or social exclusion differs slightly from the total (published elsewhere) due to rounding estimates.

Figure X. Number of persons at risk of poverty or social exclusion by type of risks, EU-28, 2013 (million)

Other elements of welfare are getting attention as well. For instance, the notion of “time poverty” has recently gained popularity, to describe groups of people who, whilst having a high disposable income through well-paid employment, have relatively little leisure time as a result. Joint analysis of income and time allows to explore in-depth issues that are vital, for instance for gender analysis of poverty. It covers a proportion of people who are missed by traditional income poverty measures—for example, those who have to work long hours to keep their families above the poverty line, or those, who cannot take job because of family care obligations, or those ‘time poor’ who could reduce their work hours without risking income poverty but keep on pushing because of stereotypes.<sup>8</sup> Long hours on the job are the main cause of time deficits for both men and women—but the effect on women is more drastic.

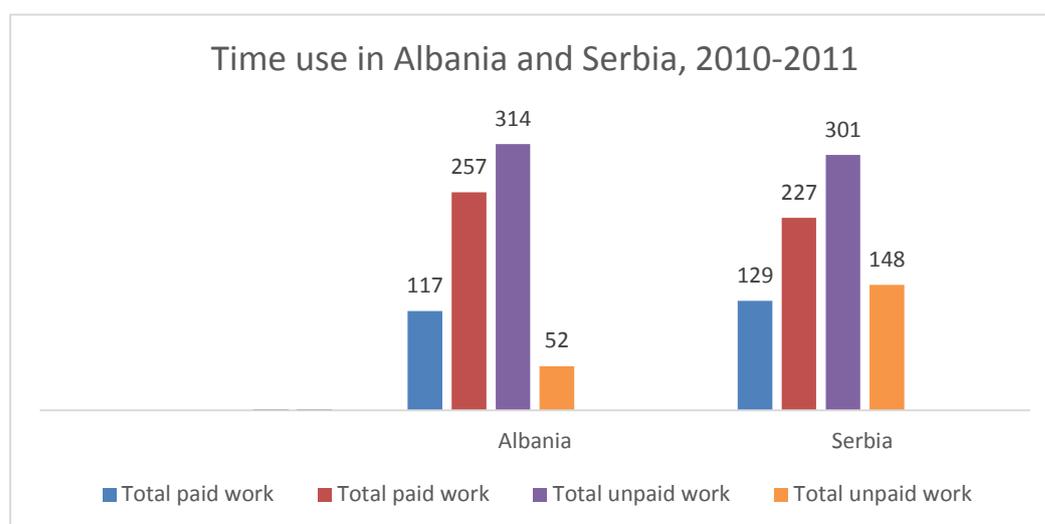
**Box: Country examples in time poverty**

In case of Turkey, among full-time workers, the time poverty rate of women was nearly twice that of men (70 percent versus 37 percent), and among part-time workers it was more than nine times as high (37 percent versus 4 percent). This suggests that the source of the

<sup>8</sup> “Time Deficit and Poverty: Measure of Time and Consumption Poverty for Turkey”, LEI, 2014. To estimate time deficits, begin with an accounting identity: the physically fixed total number of hours available to any individual (i.e., 24 hours in a day or 168 hours in a week) equals the sum of time spent on income-generation activities, household production, personal maintenance, non-substitutable household production, and everything else (e.g., volunteer work, watching TV, etc.). Next, define the committed time of the individual as the sum of (1) *required* weekly hours of personal maintenance and non-substitutable household production; (2) *required* weekly hours of household production; and, (3) the *actual* weekly hours the individual spends on income generation. An individual suffers from a time deficit if their committed time is greater than the number of hours in a week. These steps yielded information sufficient to estimate the time deficits at the individual level.

gender difference in time poverty does not lie mainly in differences in hours of paid employment but rather in the greater share of household production activities undertaken by women. In fact, it is estimated that about one million non-employed women were time poor because of the high share of household production activities they were required to fulfill. The study also found that a higher incidence of time poverty in consumption-poor as compared to non-poor employed persons (65 percent versus 37 percent). This ratio is even more pronounced with regard to women: for employed men: 42 percent of the consumption-poor were in time poverty, versus 29 percent of the consumption non-poor; and for employed women: 68 percent of the consumption-poor were in time poverty versus 48 percent of the consumption non-poor. Consumption-poor urban and rural women had the highest rates of time poverty. Since the majority of the rural, time-poor employed women work without pay on the family farm or enterprise, the impoverishing effects of time deficits may be harder on them than on wage workers.

In Albania and Serbia, for example, where attempts were made to measure the value of unpaid care work, women were shown to perform more than twice as much unpaid labor as men. In Albania, for example, women spent over 5 hours per day on unpaid labor versus just less than an hour for men. In Serbia this disproportion was lower but still large, with women spending on average some 5 hours of unpaid work compared to over 2 hours by men.



**Source:** Human Development Report 2015

As well as the time element in poverty, it is helpful to also consider the third primary component of economic well-being: wealth. Compared with income, wealth, a stock measure, is more stable over time, reflecting accumulated saving and investments, although it can drop dramatically in the case of crashes in investment or housing markets. Households can use wealth to consume more than their income, or they may consume less than their income, and thus save. Wealth allows individuals to smooth consumption over time and to protect them from unexpected changes to income. Households that are “asset rich and income poor” can be expected to have a higher material

standard of living than would be indicated by their income alone. While some wealth is held in assets that are not easily converted into money, its existence may allow people to borrow to finance expenditures, e.g. for house extensions, motor vehicle purchases, and so on. Chapter 2 discusses the issue of wealth and poverty in further details.

## Why to measure poverty and how we measure it today?

The 1991 Human Development Report refined the concept of human development in a simple sentence: ‘The real objective of development is to increase people’s choices’. The underlying concept is the ability to live long, healthy and creative lives. Additional choices include political freedom, guaranteed human rights and self-respect – what Adam Smith called the ability to mix with others without being ‘ashamed to appear in public’. From this standpoint poverty is the inability of getting choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or clinic to go to, not having the land on which to grow one’s food or a job to earn one’s living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implies living in marginal or fragile environments, without access to clean water or sanitation<sup>9</sup>.

This broad definition of poverty should be translated into some practical measurement, which in turn, should inform public discourse and policy actions. Poverty measurement therefore faces two sets of issues: (i) methodological issues (“get it right”); and (ii) public policy concerns (“get it useful”). This Guide addresses both sets of issues, **providing a coherent set of poverty indicators for the UNECE region**, which could be used for evidence based policy making. These policies could be adopted and implemented at different levels – global, regional, national and even sub-national. The extensive scope poses additional requirements to poverty indicators, as meaning and measurement of poverty at different levels could be quite different. Globally comparable poverty statistics inevitably raise the issue of different living standards and lifestyles. At the same time, it allows to compare efforts and establish best practices. Due to these reasons, the promotion of international comparability is of great importance. Moreover, with the adoption of the 2030 Agenda, it is imperative to develop guidelines and identify best practices in order to take measure of the progress made across the world to eradicate poverty.

There are different reasons to measure poverty. First, it provides an estimate of the magnitude of the problem and raises its visibility, i.e. **keep poor people on the sustainable policies agenda**. Second, it helps to **identify poor people and pockets of poverty and so to be able to target appropriate policy interventions**. This requires a disaggregation to identify population groups that face higher risk of poverty, based *inter alia* on personal characteristics, family structure, place of living, etc. It also requires dynamic measures in order to trace the phenomenon over time and identify those trapped in poverty for longer periods. Consequently, high quality poverty statistics are much needed to **monitor and evaluate outcomes, projects effectiveness, and policy interventions geared to poor people**.

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<sup>9</sup> UN ECOSOC. <http://www.un.org/press/en/1998/19980520.eco5759.html>

Poverty measurement has direct implications for policymaking as different perspective on poverty means different empirical conclusions. It starts with conceptual definition of what exactly is being measured—inequality at the lower end of the distribution, inability to achieve some absolute minimum standards of living, inability to “keep up with Jones”, or some broader type of social exclusion? When the conceptual question is answered, the definition of poverty should be operationalized in statistical terms. This seemingly technical issue can have serious (but often hidden) implications for policies. For instance, the use of different scales of equivalence produces different results for child versus elderly poverty, which in turn creates mixed signals for social assistance policies.

## Methodological choices

On the road toward poverty measurement one have to make a number of methodological choices. The first choice is what to measure—income, consumption, or broader capabilities? The most common approach is monetary poverty and uses monetary indicators, based on income or consumption, as a proxy for material living standards. These are the conventional poverty measures that use information on household income or expenditure estimates.

A number of researchers, however, have advocated the measurement of non-monetary aspects of poverty. For instance, the Multidimensional Poverty Index (MPI) developed at the University of Oxford uses 10 indicators to measure three critical dimensions of poverty at the individual level: education, health and material living standards. These indicators measure deprivations in health and educational outcomes as well as in access to key services such as water, sanitation and electricity. In the mid-2000s, according to the MPI, the number of people living in extreme poverty in the - Europe and Central Asia countries<sup>10</sup> was 12 million while 23 million lived on less than \$1.25 per day. Multidimensional poverty was relatively low in most of these countries, the main reason for which being the governments providing the population with subsidized essential services.

The spectrum of poverty approaches varies from purely monetary to non-monetary aspects; either of them with their further variations (see Table. *Different approaches to poverty measurement*). Often the choices of the measurement approaches are implicit<sup>11</sup>, and could have a profound impact on measurement and related policies.

**Table X. Different approaches to poverty measurement**

Uni-dimensional	Monetary	Income based	Absolute poverty lines	National thresholds specific for individual countries, in the national currency	1. Nationally specific income-based poverty rates
				Internationally comparable thresholds	2. Severely poor with income below 2.15 PPP\$
					3. “Just poor” with income below 4.30 PPP\$

<sup>10</sup> UNDP programming countries in mid-2000s.

<sup>11</sup> “So convenient a thing to be a reasonable creature, since it enables one to find or make a reason for every thing one has a mind to do.” — Benjamin Franklin

			Relative poverty lines	60% of the median income	4. Severely poor (below 40% of the median income)	
					5. "At risk of poverty" (below 60% of the median income)	
		Expenditure based	Absolute poverty lines	National thresholds specific for individual countries, in national currency	6. Nationally specific expenditure-based poverty rates	
				Internationally comparable thresholds	7. Severely poor with expenditures below 2.15 PPP\$	
			Relative poverty lines	Share of the median expenditure	8. "Just poor" with expenditures below 4.30 PPP\$	
					9. Severely poor (below 40% of the median expenditures)	
		Food energy intake (FEI)			10. "At risk of poverty" (below 60% of the median expenditures)	
					11. Nationally specific FEI-based poverty rates (varies by climate conditions, rural/urban distribution, type of occupation etc.)	
		Multidimensional	Basic needs			12. HPI1 and HPI2 (abolished)
			Social exclusion			13. Social exclusion index
Multidimensional poverty estimates – internationally comparable (following the methodology developed by OPHI and used for international comparisons and in the Global HDRs published by UNDP)			14. Multidimensional poverty index			
Nationally specific, following the methodology developed by OPHI			15. Severely poor			
			16. "Just" poor			

**Source:** Ivanov, A., Kagin, J. (2014). Roma poverty from a human development perspective. Roma Inclusion Working Papers. Istanbul: UNDP. <http://bit.ly/1N8x4C3>

Another important question is who is judging the living situation—analysts (as in the monetary and non-monetary cases), or people themselves (subjective poverty). The importance of person’s own subjective perceptions of his or her well-being (and wealth) is today widely recognised. Although, there are no internationally agreed measures on subjective poverty, statisticians provided examples of national determinants of subjective poverty and methods for its measurement.

Furthermore, seemingly technical choices could have profound impact on poverty measurement and policy making. One important example is the choice of equivalence scale with which to adjust household resources in order to take into account shared consumption, housing and specific

needs<sup>12</sup>. Measures of the incidence of poverty among children and the elderly are significantly affected by choice on equivalence scales.<sup>13</sup>.

Table X. Relative poverty risk of Children vs Elderly

Country	Year	theta=1	theta=0.75	theta=0.5
Albania	1996	3.5	3.5	1.6
Armenia	1998/99	1.3	1.0	0.7
Azerbaijan	1999	1.1	1.0	1.0
Belarus	1999	2.0	0.9	0.4
Bulgaria	1997	1.5	0.9	0.6
Croatia	1998	0.9	0.4	0.2
Czech Rep.	1996	40.3	21.3	1.1
Georgia	1996/97	1.5	0.9	0.7
Hungary	1997	7.4	2.9	1.0
Kazakhstan	1996	1.4	1.0	0.7
Kyrgyz Rep.	1997	1.2	1.1	0.9
Latvia	1997/98	2.7	1.6	0.8
Lithuania	1999	2.3	1.4	0.7

<sup>12</sup> Economies of scale arise in many ways—for example, by sharing certain expenditures such as expenditures on housing, utilities, cars, or newspapers. Apart from household size, the age or gender of household members may also influence the amount of income or consumption needed to attain a certain level of well-being. A large class of two parameter equivalence scales can be described by the formula Equivalent size =  $(adults + \alpha * children)^\theta$ . A simplified one-parameter version of this scale allows only household size to vary Equivalent size =  $(household\ size)^\theta$ . A higher  $\theta$  implies fewer economies of scale. Because there is no generally accepted way to estimate equivalence scales, WorldBank (2000) calculated poverty and inequality measures using three different values of  $\theta = 0.5, 0.75,$  and  $1.00$  for the poverty line set at 50 percent of median expenditure (or income). The main findings of report are based on  $\theta = 0.75$ , which seems a reasonable estimate for transition countries, in light of the fact that energy prices are subsidized and housing costs are not included in expenditure estimates—two major sources of economies of scale in OECD economies. OECD scale is close to  $\theta=0.5$ ; and  $\theta=1$  implies no economies of scale.

<sup>13</sup> Lanjouw, Peter; Milanovic, Branko; Paternostro, Stefano (1998) Poverty and the economic transition: how do changes in economies of scale affect poverty rates for different households?. Policy, Research working paper; no. WPS 2009. Washington, DC: World Bank.

<http://documents.worldbank.org/curated/en/1998/11/438641/poverty-economic-transition-changes-economies-scale-affect-poverty-rates-different-households-vol-1-4>

WorldBank (2000) Making transition work for everyone: poverty and inequality in Europe and Central Asia. <http://bit.ly/1WhZlcC>

Macedonia FYR	1996	1.7	1.4	0.9
Moldova	1997	1.6	1.0	0.7
Romania	1998	4.2	2.0	0.6
Russian Federation	1998	1.2	0.9	0.7
Slovenia	1997/1998	1.0	0.6	0.3
Tajikistan	1999	1.2	1.2	1.0
Turkmenistan	1998	1.8	1.7	1.3
Ukraine	1996	1.1	0.7	0.4

**Note:** Relative poverty risk of Children vs Elderly shows ratio of child (0-15) to elderly (65+) poverty risk, i.e. 1 means equal risk of poverty, 2 means children poverty risk is twice higher than elderly, while 0.5 means elderly poverty is twice higher. Theta is a parameter of simplified one-parameter equivalence scale Equivalent size = (household size)<sup>θ</sup>. OECD scale is close to  $\theta=0.5$ , while  $\theta=1$  implies no economies of scale, and  $\theta = 0.75$  is a reasonable estimate for transition countries by World Bank (2000).

**Source:** Own calculations based on World Bank (2000)<sup>14</sup>

## Measurement issues

### Non-coverage

Poverty statistics should in theory cover all of the population of interest. However, as with all social statistics, the practical limitations of data collection mean this is not always possible. For example, it is particularly difficult to reach –the people who live in institutions, illegal and semi-legal migrants, homeless, and Roma. Chapter 2 describes in details challenges related to capturing these groups. For these groups typical poverty instruments could not work, as the issues they face are not incorporated in traditional poverty measurement tools, and thus require special approach. For instance, children in institutions are provided with basic needs, food, clothes, shelter; however, they lack social skills, which is not captured by regular social surveys. In the Republic of Moldova, UNDP developed a special programme “Better opportunities for youth and women”<sup>15</sup>, which provides specific services to support the social, economic and professional reintegration of graduates of boarding schools – orphans or children without family care, mothers with children at risk, expectant mothers at risk. This programme provides shelter services (up to 12 months), with conditions similar to family one, psychological and social care, teaching independent life skills, activities for facilitating labour market access, financial and material support.

<sup>14</sup> World Bank (2000) “Making transition work for everyone: poverty and inequality in Europe and Central Asia”: <http://bit.ly/1WhZlC>

<sup>15</sup> <http://www.undp.md/projects/op16.shtml>

In case of Roma getting reliable and comparable with non-Roma poverty and deprivation data was a key for shaping Roma integration policies, including through the Decade of Roma Inclusion.

## Disaggregation

While national level indicators are useful for international comparisons and to highlight the specific problems of a country, the disaggregation is needed to present policymakers with a detailed picture of certain groups of the population - who are they and where do they live. The main disaggregation comprises elements like occupation, sex, and place of living. The individuals within a country are not all identical and based on disaggregated statistics specific policies could be tailored to each of the groups.

Spatial dimensions are the first candidate for poverty disaggregation. The countries and territories of Europe and Central Asia show a great variety of territorial structures of different nature and legacy. In some cases these are large areas like the "oblast" in Russia and Ukraine, with populations in the millions. In other cases, these are smaller provinces like "raions" in Republic of Moldova, or "marzes" in Armenia, with populations in the hundreds of thousands or less. On the lowest level are municipalities, with populations varying between hundreds and thousands of inhabitants (small rural settlements) on the one hand and up to hundreds of thousands (cities) on the other.

Poverty may affect certain population groups more than others because of their age, ethnics, geographical location, legal status or other characteristics. Most often used for disaggregation are the demographic characteristics (age, sex, education). Increasingly important is ethnic and behavioral characteristics, the latter including political attitudes, sexual orientation, consumer behavior etc. However, for the purpose of in-depth policy analysis even more important is the socio-economic characteristics, such as employment status, access to various services, possession of household items etc. Health status is another important aspect, both in terms of encountered health problems as well as in terms of usage of health services. The list can be extended almost indefinitely depending on the focus of the analysis and data availability.

Disaggregation by ethnical groups is one of the most challenging. In a simplified way, political and civic opinions about ethnic-disaggregated data collection are framed by two positions. On one hand, there is the non-interference with the personal integrity of an individual and not asking about one's ethnicity for the reason that ethnicity (or nationality) may be misused or that they are secondary to universal human qualities. On the other hand, both discrimination and unequal treatment are present in society and to rectify them (e.g. provide legal protection) statistical information is most needed. Therefore, the need for valid statistics is conditioned both by the country commitment to equal opportunity and by the necessity to monitor the effects of social policy<sup>16</sup>.

The intersection between spatial and individual characteristics provides additional opportunities for in-depth disaggregated analysis. When dealing with individual characteristics, it is important to bear in mind the distinction between "household" and "individual". The household is an aggregate reflection of the conditions shared by the individuals, which are members of the household. People

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<sup>16</sup> UNDP (2009) Ethnicity as a statistical indicator for the monitoring of living conditions and discrimination. Analytical report and recommendations for the Slovak Republic.  
<https://www.scribd.com/doc/151683783/Ethnicity-as-an-indicator-of-living-conditions-and-discrimination>

earn individually but generally spend within the household. In contrast, the access to services and infrastructures is usually measured at household level as it is in general shared by all household members. Furthermore, intra-household differences always exist, e.g. in terms of expenditure, consumption, effective usage of infrastructure, but they are difficult to track. For example, if a household has a computer, although all members of the household have access to it, it is reasonable to assume that a teenager would spend more time using it than a grandparent. How much more exactly? This question already requires specific information and targeted data collection efforts. Along with age there is also the gender perspective. In many countries, culturally-determined gender roles affect to a great extent the distribution of access, consumption, distribution of time for various activities, and workload within the household. It is therefore necessary to have disaggregated data both on household and individual levels.

## Dynamics of poverty

Poverty is not a static phenomenon, it is highly affected by family circumstances and overall country environment. When analyzing poverty trends it is important to ask who are the poor people—are they the same who were poor last year, or they just fallen in poverty, or their poverty is recurrent? In other words, the question is how to approach the longitudinal poverty measurement. For example, in the Netherlands in the 1980s and 1990s, high levels of economic growth and a significant increase in labour market participation did not reduce poverty. However, the high turnover rate at the lower end of the income distribution showed that, in general, poverty spells were short in duration while the same portion of people remained in poverty across the whole period. Apart from the magnitude (the poverty gap) and the duration (spell-length) of low income, attention should be paid to the extent to which poverty is recurrent<sup>17</sup>. The higher income mobility or income volatility during a certain time period and the shorter the spell-duration, the higher the prevalence of poverty in society: that is, the higher the proportion of people experiencing poverty at least once during the period.

In case of Republic of Moldova using data from 1997 to 2002<sup>18</sup>, it was found that despite the huge losses associated with the crisis, a decomposition of poverty in chronic and transient components shows that poverty in Republic of Moldova is largely chronic, accounting for as much of 90 percent of the average poverty level. That is, despite transitions among households in terms of rank, a very large fraction of the poor in any year are likely to remain poor in the next period. Using the set of panel households interviewed in 4 consecutive years, it turned out that about one-quarter of households were poor in every period. Only 14 percent of households were not poor in any of the four survey rounds. Exposure to extreme poverty is slightly lower but still quite high. About one in five households were not in extreme poverty in any of the four years. Thus, the vast majority of the population was exposed to poverty over the period 1997-2002, while at the same time, there was a sizeable core group of households that stayed poor throughout. Taking the baseline characteristics, the probability of being poor all four survey rounds is higher for households with many children and

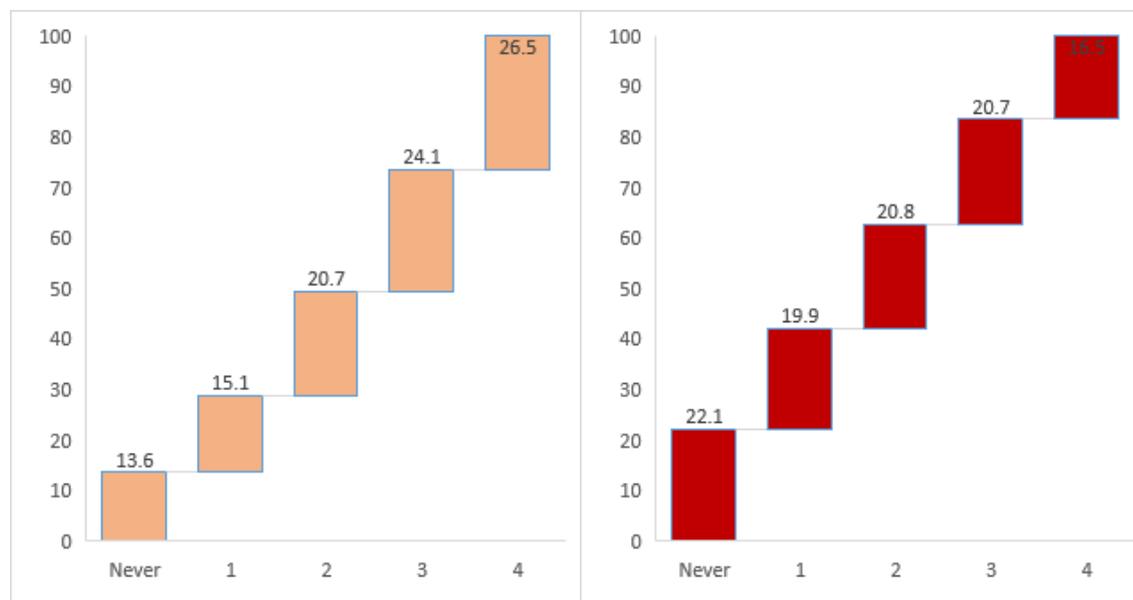
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<sup>17</sup> D. Fouarge, R. Layte. (2005) Welfare Regimes and Poverty Dynamics: The Duration and Recurrence of Poverty Spells in Europe. *Jnl Soc. Pol.*, 34, 3, 407–426. doi:10.1017/S0047279405008846

<sup>18</sup> Beegle, Kathleen G.. 2004. Living standards and poverty in Moldova. Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/2015/11/25486905/living-standards-poverty-moldova>

those whose household head has less than college education.

Figure X. The Persistence of Poverty in Republic of Moldova, 1997-2002



Knowing the length of time that a household has been poor is crucial for understanding the impact of poverty on individuals and households in both the short and long run. Although short spells of poverty are always unwelcome, they do not usually threaten subsistence or damage long-term life chances as individuals and households can reduce expenditure, run down savings or borrow. However, these tactics are unlikely to be sufficient in the long run. Only by using longitudinal data one can understand the processes behind cross-sectional statistics: the events leading individuals into and from poverty and the impact of this poverty on their living standards. Longitudinal poverty analysis could also indicate ways in and out poverty, which could inform policy making, for instance leading to adoption of better safety net or promotion of certain inclusion policies.

### Reporting on poverty

Further complications in measuring poverty result from the fact that the most common international databases that show income distribution data for the countries of the region —such as POVCALNET or SWIID— often present data that differ from what can be found on the public websites of the national statistical offices in the region.

**Table X—Gini coefficients for income distribution available on National Statistical Office web sites in UNDP programming countries**

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Albania*													
Armenia	45	43	40	36	37	37	34	36	36	37	37	37	37
Azerbaijan*													
Belarus					26	27	27	27	27	28	29	28	28
Georgia					45	46	45	46	46	46	43	42	41

Kazakhstan	33	32	31	30	31	31	29	27	28	29	28	28	28
Kosovo				30				30	29	28			
Kyrgyz Rep.	42	41	42	43	45	42	36	37	37	38	42	46	43
fYRoM									41	39	39	37	35
Moldova					37	37	37	37	35	34	34	33	32
Montenegro				26	24	26	25	26	24	26	27	26	
Serbia					33	32	30	30	33		38	39	38
Tajikistan*													
Turkey	44	42	40	38	43	41	41	42	40	40	40	40	39
Turkmenistan *				29	30	29	28	28	29	28	29	29	29
Ukraine			32	33	33	27	26	26	25	24	23	24	23
Uzbekistan*													

Source: National statistical office websites

\*provided by state statistical agencies upon request.