

The Meaning and Measurement of Poverty

Simon Maxwell

This series of Poverty Briefings aims to provide up-to-date insights on the issue of poverty, including the state of current understanding or opinion. Each paper covers new as well as old thinking on the issue, areas of debate, new approaches which are being tried, the options available, and the recent findings of research and experience.

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Simon Maxwell is the Director of ODI.

Direct Email: s.maxwell@odi.org.uk

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The picture in brief

International attention is focused more sharply on poverty reduction than for 20 years. The international target proposed by the Development Assistance Committee of the OECD has been widely adopted, namely to reduce by half by 2015 the proportion of people living in extreme poverty. But quite what this target might mean is obscured by the bewildering ambiguity with which the term 'poverty' is used, and by the many different indicators proposed to monitor poverty. Income poverty or human development? Sustainable livelihood or social inclusion? Current consumption or future security? Different concepts imply different interventions.

The concepts have developed rapidly over the last three decades. There are nine fault-lines in the current debate, for example on the importance of monetary variables, on objective or subjective measures, and on the link between material income and wider 'functioning' in society. Most agree that money income (or consumption) on its own is an imperfect measure of welfare, and also recognise the need to take account of variability over time. The idea of relative deprivation is widely accepted – at least in theory. There are different views, however, about the relative importance of non-monetary variables, like self-esteem, and about the weight that should be given to the views expressed by poor people themselves.

The conceptual debate is carried over to measurement. A small, craft industry has developed, especially at the international level, in measuring poverty and deprivation, often in response to the need to define targets at international conferences and measure progress against them. Different models of poverty imply different indicators. Advocates of the participatory paradigm, in particular, are wary of quantification and standardisation.

Some challenges for development agencies

- In their focus on international poverty reduction targets, agencies often want simple, universal measures, like the international poverty line of \$US 1 per day. This is a useful tool to raise awareness and generate political momentum, but agencies must avoid the risk of reductionist approaches.
- To capture the diversity and complexity of poverty within countries, agencies will need to support the collection of the widest range of data from conventional and participatory sources.
- Different indicators have different and complementary uses in the identification of poverty and planning. Objective income or consumption measures can be used to give a picture of the extent of poverty at national level and can be aggregated internationally. For analysis and detailed planning, more qualitative measures and participatory approaches will be most appropriate. These require decentralisation and local empowerment.
- The challenge is to achieve a trade-off between measurability – which requires standardisation – and local complexity. This challenge may be greatest at the level required for sector-wide planning, which is becoming the focus of planning for poverty reduction.
- Finally, measuring poverty is not the same as understanding why it occurs. Interventions need to tackle causes not symptoms.

I. Introduction

Is poverty simply about the level of income obtained by households or individuals? Is it about lack of access to social services? Or is it more correctly understood as the inability to participate in society, economically, socially, culturally or politically? The answer is that the term has been used in all these ways: **Box 1** provides a listing of current terminology.

The complexity of measurement mirrors the complexity of definition, and the complexity increases where participatory methods are used and people define their own indicators of poverty.

The proliferation of concepts and indicators would matter less if the same individuals were being identified by all measures. However, there is often limited correlation.

Box 1: Terms used to describe poverty

- Income or consumption poverty
- Human (under)development
- Social exclusion
- Ill-being
- (Lack of) capability and functioning
- Vulnerability
- Livelihood unsustainability
- Lack of basic needs
- Relative deprivation

II. A little bit of history

Poverty is blessed with a rich vocabulary, in all cultures and throughout history. From an analytical perspective, thinking about poverty can be traced back at least to the codification of poor laws in medieval England, through to the pioneering empirical studies, at the turn of the century, by Booth in London and by Rowntree in York. Rowntree's study, published in 1901, was the first to develop a poverty standard for individual families, based on estimates of nutritional and other requirements.

In the 1960s, the main focus was on the level of income, reflected in macro-economic indicators like Gross National Product per head. This was associated with an emphasis on growth, for example in the work of the Pearson Commission, Partners in Development (1969).

In the 1970s, poverty became prominent, notably as a result of Robert MacNamara's celebrated speech to the World Bank Board of Governors in Nairobi in 1973, and the subsequent publication of *Redistribution with Growth*. Two other factors played a part. First was emphasis on relative deprivation, inspired by work in the UK by Runciman and Townsend. Townsend, in particular, helped redefine poverty: not just as a failure to meet minimum nutrition or subsistence levels, but rather as a failure to keep up with the standards prevalent in a given society.

The second shift was to broaden the concept of income-poverty, to a wider set of 'basic needs', including those provided socially. Thus, following ILO's pioneering work in the mid-1970s, poverty came to be defined not just as lack of income, but also as lack of access to health, education and other services. The concept of basic needs inspired policies like integrated rural development. Its influence continues to be seen in current debates about human development.

New layers of complexity were added in the 1980s. The principal innovations were: (a) The incorporation of non-monetary aspects, particularly as a result of Robert Chambers' work on powerlessness and isolation. This helped to inspire greater attention to participation. (b) A new interest in vulnerability, and its counterpart, security, associated with better understanding of seasonality and of the impact of shocks, notably drought. This pointed to the importance of assets as buffers, and also to social relations (the moral economy, social capital). It led to new work on coping strategies. (c) A broadening of the concept of poverty to a wider construct, livelihood. This was adopted by the Brundtland Commission on Sustainability and the Environment, which popularised the term sustainable livelihood. (d) Theoretical work by Amartya Sen, who had earlier contributed the notion of food entitlement, or access, emphasised that income was only valuable in so far as it increased the 'capabilities' of individuals and thereby permitted 'functionings' in society. (e) Finally, the 1980s was characterised by a rapid increase in the study of gender. The debate moved from a focus on women alone (women in development (WID)), to wider gender relations (gender and development (GAD)). Policies followed to empower women and find ways to underpin autonomy, or agency.

The 1990s saw further development of the poverty concept. The idea of well-being came to act as a metaphor for absence of poverty, with concomitant emphasis on how poor people themselves view their situation. At the same time, inspired by Sen, UNDP developed the idea of human development: 'the denial of opportunities and choices... to lead a long, healthy, creative life and to enjoy a decent standard of living, freedom, dignity, self-esteem and the respect of others...'.

To complete this narrative, thinking about human development finds a counterpart in the current debate in rich countries about social exclusion. This started in France in the late 1970s, but has spread widely: for example, the UK set up a social exclusion unit in the Cabinet Office in 1997. The focus is on multiple deprivation (low income, poor housing, poor access to education and health), but also on the process by which multiple deprivation occurs. The key arenas for exclusion include democratic and legal systems, markets, welfare state provisions, and family and community: rights, resources and relationships are all important.

III. Fault lines in the poverty debate

The conceptual complexity can be understood as a series of fault lines in the debate about poverty. There are nine of these:

Individual or household measures. Early measurement of poverty (e.g. by Rowntree) was at the household level, and much still is. Other analysis disaggregates to the individual level, so as to capture intra-household factors and different types and causes of deprivation affecting men, women, children, old people, etc.

Private consumption only or private consumption plus publicly provided goods. Poverty can be defined in terms of private income or consumption (usually consumption rather than income, in order to allow for

consumption smoothing over time, e.g. by managing savings), or to include the value of goods and services provided publicly, the social wage

Monetary or monetary plus non-monetary components of poverty. So-called money-metric measures are often used, because they are either regarded as sufficient on their own or seen as an adequate proxy for poverty. However, there is a clear fault line between definitions of poverty which are restricted to income (or consumption) and those which incorporate such factors as autonomy, self-esteem or participation. In Maslow's hierarchy of needs, these were seen as higher needs, which would become more important as basic needs for food, shelter, housing and safety were met. However, many current definitions deliberately blur the distinction between higher and lower needs.

Snapshot or timeline. Many surveys and poverty assessments report the incidence of poverty at a point in time. However, there is a long history of thinking about poverty in terms of life cycle experience (e.g. Chayanov's pioneering work in the 1920s on the peasant household), seasonal stress, and shocks (illness, drought, war). In both North and South, there has been increasing attention to understanding movement in and out of poverty, what Jenkins calls 'bottom-end churning'. Panel surveys, which track a fixed group of individuals over time, provide data.

Actual or potential poverty. Some analysts include as poor those who are highly sensitive to shocks, or not resilient. Small-scale pastoralists exposed to the risk of drought are a common example: current income may be adequate, but vulnerability is high. Planning for these groups means understanding both short-term coping strategies, and also long-term adaptation to livelihood stress.

Stock or flow measures of poverty. The definition of poverty as income focuses on the flow of material goods and services. An alternative is to examine the stock of resources a household controls. This may be measured in terms of physical or monetary assets (land, jewellery, cash), or in terms of social capital (social contacts, networks, reciprocal relationships, community membership). Sen analysed the commodity bundles to which an individual was 'entitled': as Swift has emphasised, entitlements may derive not just from current income, but also from past investments, stores or social claims on others (including the State).

Input or output measures. Sen has reminded us that poverty measured as a shortfall in income essentially captures an input to an individual's capability and functioning rather than a direct measure of well-being. Writing about poverty has often assumed, wrongly, an automatic link between income and participation, or functioning, in the life of a community.

Absolute or relative poverty. The World Bank currently uses a figure of \$US1 per day (in 1985 purchasing power dollars) for absolute poverty. The alternative has been to define poverty as relative deprivation, for example as half mean income, or as exclusion from participation in society. Thus the European Union has decided that 'the poor shall be taken to mean persons, families and groups of persons whose resources (material, cultural, social) are so limited as

to exclude them from the minimum acceptable way of life in the member state in which they live'.

Objective or subjective perceptions of poverty. The use of participatory methods has greatly encouraged an epistemology of poverty which relies on local understanding and perceptions. For example, exposure to domestic violence may be seen as important in one community, dependency on traditional structures in another.

IV. Is there a right answer?

Is there a single right definition of poverty? The answer is certainly 'no', but current thinking does allow some simplification.

First, there is no philosophical disagreement with the statement that poverty needs to be understood first and foremost as a problem at the individual rather than the household level, though an understanding of an individual's position within the household is essential to understanding the dimensions as well as the causes of disadvantage.

Second, most observers would include income obtained from common property and state provided commodities, particularly social welfare payments, though not always health and education provision.

Third, there is again little dissent from the view that people move in and out of poverty, and that seasonal, cyclical or stochastic shocks are important. For example, the distinction between chronic and transitory food security is mirrored in writing about poverty.

Fourth, relative poverty and relative deprivation are accepted as relevant, at least in theory. In developing countries, most definitions of poverty still rely on calculation of the cost of a basket of basic needs, but distribution data are normally provided.

Beyond these areas of agreement, there are different views on whether assets, including social claims, should be counted in a poverty matrix, on the importance of vulnerability, and on the relative prioritisation of monetary and non-monetary variables. The most radical proponents of a participatory approach would deny the validity of standardised, so-called objective measures of poverty, whether based on income or wealth. Chambers, for example, has argued that these approaches are reductionist.

This can be problematic. Baulch has pointed out that there is an important trade-off between being able to identify the poor using local indicators, and being able to aggregate the results into meaningful, national or international figures: objective measures of poverty present numerous problems in terms of identifying the poor, but succeed in providing the aggregate statistics policy makers desire.

V. Indicators

There is nothing inherently wrong with setting targets and measuring progress towards them; nor with developing indicators useful for resource allocation. The literature talks about 'SMART' targets, which are stretching, measurable, agreed, recorded, and time-limited. However, indicators should also be cost-effective (or economic), relevant (or appropriate), simple, and updated frequently, say yearly: EASY as well as SMART.

However, different models of poverty imply different

Box 2: UNDP measures of poverty

Measure	Components
Human Development Index	Life expectancy at birth, adult literacy, educational enrolment, GDP per capita
Gender-related development index	As above, adjusted for gender differences
Gender empowerment measure	Seats in parliament held by women, female administrators and managers, female professional and technical workers, women's share of earned income
Human Poverty Index (developing countries) (HPI - 1)	People not expected to survive to 40, illiteracy, access to safe water, access to health services, underweight children
Human Poverty Index (developed countries) (HPI - 2)	People not expected to survive to 60, functional illiteracy, population below mean income, long term unemployment
Source: UNDP Human Development Report 1998	

indicators. Money metric models require information on income or consumption; vulnerability models use indicators of wealth and exposure to risk, as well as income; models concerned with capability and functioning present indicators of life expectancy or educational achievement; models of well-being or social exclusion will include measures like the degree of social support. It is frequent practice, however, to present a wider set of indicators than is immediately required. For example, World Bank poverty assessments, concentrating on money metric measures, will also provide evidence on health, education, physical isolation, and other so-called correlates of poverty.

Some indicators are inherently more quantifiable than others, and more decomposable, in the sense that they can be subjected to statistical manipulation. Thus, income and consumption poverty are conventionally measured using measures proposed by Foster, Greer and Thorbecke. These so-called F-G-T measures enable a calculation to be made both of the headcount, i.e. the number of people below the poverty line, and the poverty gap, or shortfall of the poor below the poverty line. The latter provides a measure of the resources required to eliminate poverty.

F-G-T calculations are usually based on representative sample data of income or consumption, and related to a poverty line. This in turn is established with reference to minimum consumption (in the case of absolute poverty). Defining minimum consumption is not easy, however: food is the usual numeraire, but required intake varies with age, gender, activity level, and environmental conditions. Additional problems arise in setting an international poverty line, like the current convention of using \$US 1 per day, in 1985 purchasing power parity (which adjusts for differences in prices between countries).

Other measures of poverty are more qualitative and/or more location-specific, and cannot so easily be aggregated.

For example, coping strategies are often analysed at the individual or household level within narrowly-defined livelihood systems.

When poverty is multi-dimensional, problems arise with the weighting of different components. Attempts have been made since the 1960s to identify indices which combine different elements. For example, a Physical Quality of Life Index was developed in the 1970s, combining information on life expectancy, infant mortality and literacy. Current work by UNDP on human development is heir to this tradition. Box 2 identifies the main current measures used by UNDP, and their components.

Composite indicators simplify presentation. However, decisions about which factors to include, how they should be weighted, and how the index should be constructed can substantially change the outcomes. Much debate has been generated about whether composite indicators add value to conventional measures (like GDP per capita or the headcount index).

Recently, the DAC has developed indicators to measure progress towards the achievement of the international development targets. These are reproduced for the poverty target in Box 3.

Box 3: DAC indicators of poverty reduction

- Incidence of Extreme Poverty: Population Below \$1 Per Day
 - Poverty Gap Ratio: Incidence Times Depth of Poverty
 - Inequality: Poorest Fifth's Share of National Consumption
 - Child Malnutrition: Prevalence of Underweight Under 5's
- Source: DAC <http://www.oecd.org/dac/Indicators/htm/list.htm> (3 February 1999)

As a practical strategy, poverty analysts are well-advised to accumulate a wide range of data, from conventional and non-conventional sources. This process is called triangulation.

VI. Conclusion

Defining and measuring poverty barely kicks off the game. Only by understanding causes can the main business begin of designing, implementing and evaluating interventions.

In designing poverty programmes, it is wise to respect the vision of poverty articulated by poor people themselves. In some cases, this may mean implementing measures to increase income. But in others, the priority may be to reduce variability of income, or strengthen women's autonomy by improving the legal system, or improve the service the poor receive at health centres. Variety of this kind does little to help generate measures of international progress. Does that matter?

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Overseas Development Institute, Portland House,
Stag Place, London SW1E 5DP
Tel: +44 (0) 171 393 1600 Fax: +44 (0) 171 393 1699
Email: publications@odi.org.uk