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DESA

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Preface

In the past 20 years, there has been steady progress in achieving socio-economic development, promoting wider support for democratic values and strengthening collaborative relationships among governments, social institutions and civil society worldwide. Yet, at the same time, inequality and exclusion not only persist, but are expanding in many parts of the world, both within and between countries. Many societies are facing negative social conditions, such as widening disparities and marginalization of certain groups and/or communities. To prevent the further increase of social tensions among their members, it is vital that societies be equipped with strategies and tools for adequately assessing the realities and addressing existing challenges in a more proactive, constructive and holistic way, so that they may become better prepared for new challenges and more resilient in confronting them and better able to adjust to emerging imbalances—and to adjust more quickly, less violently and more sustainably.

Fifteen years ago in Copenhagen at the 1995 World Summit for Social Development, it was affirmed that social integration was one of the key goals of social development and that the aim of social integration was to create a "society for all". The Summit recognized that the extent of social integration was an important determinant of, and was significantly affected by, poverty and unemployment.[1] Likewise, poverty eradication and employment creation were seen as key to achieving the goal of social integration. In the Programme of Action of the World Summit for Social Development (UN, 1995, chap. I, resolution 1, annex II), it was further noted that the failure of social integration would lead to social fragmentation and polarization; widening disparities and inequalities; and strains on individuals, families, communities and institutions as a result of the rapid pace of social change, economic transformation, migration and major dislocations of population, particularly in areas of armed conflict (para. 68).

Following the adoption by the Summit of the Copenhagen Declaration on Social Development (UN, 1995, chap. I, resolution 1, annex I) and the Programme of Action of the Summit, significant policy commitments were made to advancing social development goals. The UN Millennium Declaration,[2] adopted at the Millennium Summit on 8 September 2000, assigned especial significance to social inclusion and other objectives and goals set out in the Copenhagen Declaration and subsumed social integration within a synthesis that included peace, security, development and human rights.[3] The Millennium Development Goals (MDGs) presented poverty eradication as a major vehicle for advancing development. Following the 2005 World Summit, achieving full and productive employment as well as decent work for all was added as a new target under Goal 1. Social integration and social inclusion are also beginning to be priorities within many local- and regional-level initiatives.

Creating a society for all is a moral obligation—one that must reflect the commitments to upholding fundamental human rights and principles of equality and equity. There are also strong instrumental reasons for promoting social integration and inclusion. Deep disparities, based on unequal distribution of wealth and/or differences in people's backgrounds, reduce social mobility and ultimately exert a negative impact on growth, productivity and well-being of society as a whole. Promoting social integration and inclusion will create a society that is safer, more stable and more just, which is an essential condition for sustainable economic growth and development.

The significance of the concept of social integration and inclusion has been increasingly recognised in recent years. The ongoing global financial and economic crisis, especially, by threatening the progress achieved so far in social development and further aggravating social tensions in many societies, has made a growing number of

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[1] See the report of the Secretary-General on the review of further implementation of the World Summit for Social Development and the outcome of the twenty-fourth special session of the General Assembly (E/CN.5/2005/6), para. 165.

[2] See General Assembly (GA) Resolution 55/2.

[3] See Official Records of the GA, Sixtieth Session, Supplement No.1 (A/60/1), para. 103.

policymakers aware of the importance of social integration and inclusion. The necessity for timely interventions has been felt more than ever in the current environment. Therefore, moving beyond the concept and devising concrete and practical strategies to promote social integration and inclusion are of the utmost importance in order to ensure that the lives of the many who are disadvantaged in society - those traditionally excluded or marginalized, those living in poverty and those falling into poverty - are protected and further improved. Such policies and strategies need to be based on high-quality and regularly updated information including systemic analysis of the actual impact.

In an effort to explore practical strategies for promoting social integration and inclusion, the Department of Economic and Social Affairs of the UN Secretariat, in collaboration with the UN Educational, Scientific and Cultural Organization (UNESCO) and the UN Human Settlements Programme (UN-HABITAT) organized an Expert Group Meeting entitled "Creating an Inclusive Society: Practical Strategies to Promote Social Integration", in Paris from 10 to 13 September 2007. One of the objectives of this meeting was to explore a variety of existing approaches to capturing, analysing and measuring the multiple dimensions of social inclusion and other related phenomena and to identify common elements necessary for developing the indicators required to measure and monitor the progress of interventions aimed at fighting poverty and social exclusion and promoting social inclusion.

Taking account of the recommendations arising from the Meeting, DESA commissioned the present study. Prepared by two independent experts, it demonstrates the analytical and operational relevance of "measuring social inclusion" as a practical tool with which to assess the impact and monitor the progress of social inclusion interventions at the local, regional, national and global levels. While the study offers examples drawn from around the world, it focuses particularly on the experience of the European Union in constructing social indicators and in actually using them in the policy process; it also seeks to provide important insights and lessons relevant to a global application.

This study is meant to serve as a guiding framework for policymakers, researchers and practitioners interested in developing practical tools for evidence-based policymaking, impact assessment, monitoring and evaluation in the area of social inclusion. It is also meant to provide guidance on how to develop tools, taking into consideration the historical, cultural and contextual backgrounds of one's own society. The study builds on the work on social indicators that has already been undertaken by many people at local, national, regional and international levels. It is hoped that the study will help to inspire new ideas and to generate innovative approaches.

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Analysing and Measuring Social Inclusion in a Global Context

A. B. Atkinson and E. Marlier

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I. Introduction

The present study is concerned with social inclusion, seen here as the process by which societies combat poverty and social exclusion. In order for policies for social inclusion to be developed and implemented, the factors working against social inclusion, namely, poverty and social exclusion, have to be understood. The aim of this study is to demonstrate the analytical and operational relevance of the measurement of poverty and social exclusion, and to describe how such measures could be put in place. "Social exclusion" is defined here as the involuntary exclusion of individuals and groups from society's political, economic and societal processes, which prevents their full participation in the society in which they live. "Poverty" is defined as the lack of *economic* resources, and so defined, is an important cause of social exclusion in as much as the lack of those resources prevents participation. However, there are other important dimensions of social exclusion, which encompasses a broader (complex and multi-dimensional) set of concerns. Combating poverty and social exclusion through a process of social inclusion is intended to create a "society for all". The achievement of social inclusion requires that both poverty and social exclusion be addressed in a balanced way.

It is hoped that this study, which deals with general concepts and principles underlying the construction of social indicators, will be of value to international agencies, to national and subnational governments, to researchers, to members of civil society organizations, and to practitioners. Such indicators have come to play an important role worldwide since the first Human Development Report was published by the United Nations Development Programme (UNDP) in 1990 (UNDP, 1990) and their utilization received political backing within the framework of the *Millennium Development Goals* (MDGs; see annex).

The study seeks to gauge the possible scope and usefulness of indicators in the field of social inclusion. At the same time, it does not identify a single set of indicators: the choice of indicators depends on the country context and on the purpose for which the indicators are to be employed.

The global perspective adapted here does not imply that there should be a single global set of indicators for all purposes. The diversity of circumstances across the globe means that the application of such a perspective will be an ambitious undertaking. The sources of concern about poverty and social exclusion are various and have different intellectual origins. Countries identify different fault lines in their societies. While the study tries to provide examples from around the world, it draws particularly on the European Union (EU) experience in the construction of social indicators and in their actual use in the policy process (Atkinson *and others*, 2002; Marlier *and others*, 2007). The EU path has been a distinctive one, reflecting the history and culture of the countries involved. At the same time, the EU experience is that of multi-country cooperation, and, as such, may offer valuable lessons for other countries. The fight against poverty and social exclusion is a common challenge, and there is scope for mutual learning, despite the differences in circumstances and in levels of living. In particular, the negotiation of a common set of social indicators in the EU, which should allow countries and the EU as a whole to measure progress towards achieving the common EU social objectives, has required that the points of agreement and disagreement be made explicit.

One of the main aims of this study is to spell out the key issues that need to be debated and resolved and it is hoped that in this regard the study will provide concrete answers to various "follow-up actions" suggested by the international Expert Group Meeting entitled "Creating an Inclusive Society: Practical Strategies to Promote Social Integration".[6]

[6] The Expert Group met in Paris from 10 to 13 September 2007. The conclusions of the Meeting, including the recommendations put forward by the Expert Group, are available from http://www.un.org/esa/socdev/sib/egm07.html.

This study focuses on *measurement* and reflects on the conviction that quantification is an essential step in the analysis of poverty and social exclusion. At the same time, quantitative indicators need to be accompanied by qualitative evidence, which is important for at least two reasons. First, it helps in the interpretation of the numbers and provides a starting point for the understanding of the underlying mechanisms. One cannot look just at the statistical tables: one has also to read the text. Second, there are significant elements of human experience that cannot be readily reduced to a simple scale.

II. Why do we measure?

In the Programme of Action of the World Summit for Social Development (UN, 1995, chap. I, resolution 1, annex II), held in Copenhagen in 1995, inclusive society was defined as "'a society for all', in which every individual, each with rights and responsibilities, has an active role to play" (para. 66).

Achieving such an inclusive society is a goal with universal appeal. An inclusive society is one that rises above differences of race, gender, class, generation and geography to ensure equality of opportunity regardless of origin, and one that subordinates military and economic power to civil authority. In an inclusive society, social interaction is governed by an agreed set of social institutions. The capability of all citizens to determine how those institutions function is indeed a hallmark of an inclusive society. An inclusive society is also one that, when confronted with new challenges, such as climate change, gives everyone a say and everyone a responsibility.

The goal of social inclusion is not an abstraction; its achievement is vital in today's political climate. Exclusion from the exercise of political and economic power fuels armed rebellion and undermines peaceful transition under democracy. In a less extreme form, social exclusion lies behind urban rioting and the disaffection of young people. In many countries, there are various powerless groups (including ethnic communities, minorities, etc.) that suffer poverty and social exclusion; there are regions that have been left behind by economic progress; and there are barriers to social mobility. In all countries, full gender equality remains to be achieved.

There is therefore a high degree of political salience in the issue of social inclusion. Achieving greater social inclusion is a political imperative, which has in turn made imperative the need to *measure* the progress of societies towards the reduction of poverty and social exclusion, through the use of *indicators*. Measurement of poverty and social exclusion is necessary for three main reasons:

- To establish in a concrete form the extent of poverty and social exclusion
- To determine the direction of change over time
- To assess, as a practical tool, the impact of measures undertaken to promote social inclusion

Creation of statistical measures will allow a country to assess its current performance according to an explicit set of criteria, to determine whether progress is being made in reducing poverty and social exclusion, and to compare the effectiveness of different interventions. But measures are not purely national: a key role is played by international comparisons as well as by what could be termed *contextualized benchmarking*. (This issue is examined briefly in section IV.A entitled "A principles-based approach", which discusses on the importance of properly "contextualizing" the interpretation of indicators when conducting international comparisons.) League tables of social indicators can be misused, but they provide useful insight into the determinants of poverty and social exclusion and can serve as a spur to political action.

At the global level, the United Nations, the World Bank and other international bodies are interested in measures of poverty and social exclusion for the purpose of:

- Comparing in a (reasonably) harmonized way the extent of poverty and social exclusion across countries
- Determining progress being made in reducing poverty and social exclusion across countries and in the world as a whole
- Progressively improving international comparative analysis and mutual learning among countries.

The *Human Development Index (HDI)* and related indices published by UNDP (see, for example, UNDP, 2007) have amply demonstrated the political salience and value of such tools for comparison. The need for quantitative social

indicators has been highlighted by the adoption of specific international goals, such as the commitments of the World Summit for Social Development and the Millennium Development Goals (see annex). The proclamation of these goals, and the creation of the necessary consensus, was aided by the evidence of the extent of poverty and social exclusion, as measured, for example, by the number of people living on less than US$ 1 a day.[7] The monitoring of progress towards the achievement of these goals requires good measures of change over time.

In the EU, the role of social indicators has been illustrated at the national and supranational levels as well as at the subnational level. One little discussed feature of this economic and political organization is that the integration of its 27 member countries has required the different EU Member States to progressively make more explicit their commonly agreed and shared objectives. The formation of the EU has led governments to agree on yardsticks to assess performance. The "Lisbon Agenda" agreed in 2000 by EU Heads of State and Government identified the EU primary goals as *growth* and *employment*, coupled with greater *social cohesion*. To these three pillars, an environmental dimension was added a year later in the form of a strategy for *sustainable development* in which all four pillars should mutually reinforce each other.[8] In the social domain, EU leaders decided that "the means of spreading best practice and achieving greater convergence towards the main EU goals" would be the so-called *Open Method of Coordination* (OMC) (conclusions of the European Council at its meeting held in Lisbon in March 2000). The OMC is a mutual feedback process of planning, targeting, monitoring, examination, comparison and adjustment of *countries*' policies (at national and, if appropriate, subnational levels):

- Carried out on the basis of *common* objectives and guidelines agreed for the EU as a whole
- Involving the European Commission (as the independent EU body) as well as all EU member States and key stakeholders (social partners, non-governmental organizations, academic etc.)

The Social OMC, also referred to as the EU *Social Protection and Social Inclusion Process*, is now applied to social inclusion (covering both poverty and social exclusion), pensions, and health care and long-term care.

Although the EU experience relates to a particular set of (rich) countries, its relevance is in fact wider. In particular, the enlargement of the EU in 2004 brought into membership States whose incomes were significantly—and in some cases very significantly—below those of existing members. This meant that a number of issues arose in respect of the definition of poverty that would apply in a global exercise, including the measurement of poverty in absolute rather than relative terms, the use of consumption rather than income as the basis for calculating the "financial" indicators, the equivalence scales to be used for taking account of the different size and composition of households (for instance, when calculating poverty rates) and self-consumption (that is, the valuing of goods for own consumption), etc. There are also lessons to be learned about the OMC *process*. This study by no means suggests that the OMC approach should be applied worldwide, but it does argue that this approach could be very useful as a source of inspiration for a more ambitious global benchmarking exercise, in as much as the OMC demonstrates concretely how coordination among 27 countries, together with agreed common objectives and monitoring procedures as well as truly comparative analysis and international benchmarking, can play a central role in the field of social policy.

The set of commonly agreed and defined social indicators adopted by EU countries and the European Commission as key tools for implementing and supporting this *peer review exercise* include the *at-risk-of-poverty* criterion

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[7] Since 2000, the international poverty line has been set at US$ 1.08 a day, measured in terms of 1993 purchasing power parity (PPP). The PPP adjustment converts amounts expressed in national currency to figures based on an artificial common currency that equalizes the purchasing power of different national currencies. At the rate used, US$ 1 should have the same purchasing power in domestic economy as US$ 1 has in the United States of America. The PPP adjustment is based on the findings on price relativities of the International Comparison Programme.

[8] In 2006, the EU Sustainable Development Strategy was fundamentally revised (see EU Council of Ministers, 2006; European Commission 2005c, 2005d, 2005e).

of 60 per cent of total household median equivalized net disposable income of the country in which the person lives.[9] The design of these EU social indicators drew on a history of social science research dating back 40 years. In the United States of America, this was exemplified by the official publication *Toward a Social Report* (United States Department of Health, Education, and Welfare, 1969). For Europe, reference should be made to Delors (1971). In Scandinavia, the desire to move beyond purely monetary indicators of well-being led to the formulation of a broader concept of social welfare (see Johansson, 1973; Erikson and Uusitalo, 1987). More recently, work was undertaken on *The Social Quality of Europe* as part of an initiative launched during the Netherlands Presidency (see Beck, van der Maesen and Walker, 1997; and on the conceptual basis for social reporting through the EuReporting project, coordinated by the Centre for Survey Research and Methodology (ZUMA), in Mannheim, Germany (see, for example, Berger-Schmitt (2000)).

It should be noted that, in the present study, the terms "social cohesion", "social integration" and "social capital", each of which has to be used with care and would require extensive discussion, in general have not been used. Berger-Schmitt and Noll (2000), for example, provide a clear account of the relationship of these concepts with that of social exclusion. Social cohesion, defined by the Inter-American Development Bank (2006, p. 2) as "the set of factors that foster a basic equilibrium among individuals in a society, as reflected in their degree of integration in economic, social, political and cultural terms", is evidently a desirable objective, but it may or may not emerge from the elimination of poverty and social exclusion. Feudal societies may have been in equilibrium, but they were certainly exclusive. Measures to foster social inclusion may or may not increase the capacity of people to live together in harmony. Social inclusion, then, does not equal social integration. Social capital, described by the World Bank as "the glue holding society together"[10], is a means to an end rather than an intrinsic objective. Even though it would definitely be useful if the potential synergies and potential tensions between these concepts could be examined on a wider canvas, for the purpose of this study, poverty and social exclusion alone provide sufficient material for consideration.

Indeed, as will become clear in this study, the measurement of poverty and social exclusion is a task of considerable difficulty. Measurement requires a degree of precision in respect of the underlying concept (see section III below): the translation of society's broad intentions into measurable attributes represents a considerable step. The operationalization of those attributes means that the available statistical sources and their limitations have to be investigated. Further, securing comparability is a big challenge. One needs measures that are (reasonably) comparable over time and (reasonably) comparable across countries.

The difficulties of measurement make it evident that close links have to be maintained between the design of social indicators and the questions that they are intended to answer. Measures must be designed for use in a particular context, not as all-purpose indicators. To give a simple example: a particular indicator may understate the extent of social exclusion, but by a stable amount each year; it may therefore be rejected as a basis for assessing the degree of social exclusion, but may be perfectly adequate for assessing changes over time. Whether or not the imperfect indicator can be used depends on its purpose. This study is concerned with the design of measures that are *fit for purpose*. By the same token, different measures may be needed for different purposes and in different contexts, as has already been illustrated by the difference between the Millennium Development Goal on poverty, framed in terms of an *absolute* $1 a day, and the EU definition of the risk of poverty, expressed in terms of *relative* incomes.

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[9] For more information on the OMC, the EU social indicators and the ways to address some of the key challenges facing the EU Social Inclusion Process, see Marlier *and others* (2007); and European Commission 2004a, 2004b, 2005a, 2005b, 2005f, 2006a, 2006b, 2006c, 2006d, 2006e, 2007, 2008a, 2009. These and many other OMC-related documents can be downloaded from the web-site of the European Commission's Directorate-General "Employment, Social Affairs and Equal Opportunities" (http://ec.europa.eu/social/main.jsp?catId=750&langId=en and http://ec.europa.eu/social/main.jsp?catId=753&langId=en). See also: European Parliament (2005); Frazer and Marlier (2008); and Marlier *and others* (forthcoming).

[10] See http://www.worldbank.org/html/prddr/trans/augsepoct00/boxpage31.htm.

It should be stressed at the outset that "indicators" are precisely that. Potentially they have great value in pointing to significant social problems and, taken together, a portfolio of indicators allow conclusions to be drawn about social progress. However, indicators cannot be expected to provide a complete representation of the state of a society: they offer simply an *indication*, whose nature will depend on the choices made with regard to definitions and data. Different indicators highlight different features of social problems; they can help enlarge our understanding of the phenomenon of poverty and social exclusion, but do not provide immediate explanations. The term "social exclusion" evokes notions of "agency".[11] Through what mechanisms, and as a result of whose actions, are people excluded? Is an unemployed person "unlucky" because the call centre in which he or she was employed happened to work for a bank that failed or is his or her unemployment the result of systematic discrimination by employers against people from scheduled castes? How far are people responsible for their own situation? These are important questions, and agency is a key element in studying social exclusion (see Atkinson, 1998b), however, these considerations take us outside the compass of this study.

[11] The notion of agency has been examined by Sen (1985b; 1992) in his work on social justice.

III. What do we measure?

The analysis of social exclusion emerged out of a long-standing concern with the measurement of poverty. For centuries, people have been concerned with those who are destitute, with churches, charities and, later, Governments making provision for the relief of poverty. Quantitative information about the extent of poverty, or the lack of economic resources, began to be assembled in Great Britain in the eighteenth century (Sir F M Eden, *The State of the Poor* (1797)), was developed by Booth (1892-1897) and assumed its modern form in the 1899 research of Rowntree (1901), who carried out household surveys designed to measure the proportion of the population living in financial poverty. It was this kind of evidence, obtained in the United States of America in the 1960s (Orshansky, 1965), that led to the launching by President Johnson of the war on poverty.

A. From poverty to social exclusion

Contemporary concerns with well-being have highlighted the fact that lack of economic resources is not the only determinant of destitution: we cannot consider resources without considering the social context. In this regard, the few references cited above reveal that the definition of poverty is increasingly being framed in terms of capacity to *participate* in the society in which a person lives. One's lack of financial resources is judged in relation to those of the people among whom one lives. Poverty is in this way directly linked to social inclusion. Indeed, in the UK, Rowntree (1922, p. xv) had commented the rising prosperity had "greatly raised the standard of living among the workers…But it did more: it encouraged them to envisage themselves as an integral part of the national life". More recently, the notion of participation underlay the approach adopted by Townsend (1979) in his analysis of poverty in the United Kingdom. It also underlay the definition of poverty of the EU Council of Ministers (1985), according to which, for instance, "the poor" are taken to be "persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State in which they live". As noted above, this definition was operationalized as from 2000 through the adoption of a *poverty risk* criterion of 60 per cent of the median income of the country in which the person lives, which forms the basis for several social indicators currently employed by the EU.

The achievement of social inclusion goes beyond the elimination of poverty: it requires that the broader issue of social exclusion be addressed. It is this wider, multidimensional approach that has been emphasized in the Continental European literature on social exclusion. According to Silver (1995, p. 63), "the coining of the term is generally attributed to René Lenoir (*Les Exclus*, 1974), who…estimated that the 'excluded' made up one-tenth of the French population". The issue of exclusion was particularly focused on the inability to participate in the privileged section of the labour market, with the associated benefits of social protection. The theme of labour-market "outsiders" and "insiders" has a wider resonance, and in many countries the labour market is seen as pivotal. As stressed by the European Commission (1992, p. 8) – but clearly of worldwide validity – our concern has to be with "the multidimensional nature of the mechanisms whereby individuals and groups are excluded from taking part in the social exchanges, from the component practices and rights of social integration". Alongside economic resources and employment, one needs to take account, inter alia, of health, education, affordable access to other public services such as justice, housing, civil rights, security, well-being, information and communications, mobility, social and political participation, leisure and culture. This leads to the creation of a portfolio of social indicators that is necessarily multidimensional, covering a range of fields.

At the world level, a multidimensional approach to social inclusion has long underlain efforts to promote development. The foreword to the first *Human Development Report* (UNDP, 1990) set out the position clearly back in 1990 (see box I). Five years later, the Copenhagen Declaration on Social Development (UN, 1995, chap. I, resolution 1, annex I) and the Programme Action of the World Summit for Social Development (ibid, annex II) explicitly put people at the centre of development and highlighted the various manifestations of poverty (see also box I). The *World Development Report* 2000/2001 (World Bank, 2001) was entitled Attacking Poverty, but in his foreword to the *Report* (p. v), the then President of the World Bank, James Wolfensohn, referred to "the now

established view of poverty as encompassing not only low income and consumption but also low achievement in education, health, nutrition, and other areas of human development". The *Report* itself opened by referring to "poverty's many dimensions" and stressed that these go beyond the factors of hunger, lack of shelter, ill health, illiteracy and lack of education, very important though those factors are. The poor "are often treated badly by the institutions of state and society and excluded from voice and power in those institutions" (ibid., p. 15).

Box I: First Human Development Report and 1995 World Summit for Social Development

"The purpose of development is to offer people more options. One of their options is access to income – not as an end in itself but as a means to acquiring human well-being. But there are other options as well, including long life, knowledge, political freedom, personal security, community participation and guaranteed human rights. People cannot be reduced to a single dimension as economic creatures" (UNDP, 1990, p. iii).

"Poverty has various manifestations, including 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 environment; and social discrimination and exclusion. It is also characterized by a lack of participation in decision-making and in civil, social and cultural life" (United Nations, 1995, para.19).

The approach adopted in this study is multidimensional, with a broad compass of concerns. As explained earlier, the term "social exclusion" is used here to encompass those concerns. There are many respects in which people may be prevented from (full) participation in society. As noted at the outset, this study is concerned with involuntary exclusion. Where the rich choose to cut themselves off from the rest of society (for example, by living in gated communities), such a choice may reduce the degree of social integration, but for the purposes of this study, it does not represent social exclusion.

B. Key issues of definition: subjective and objective indicators

The indicators used are in many cases "objective" in the sense that the status of individuals or households can be verified by documentary evidence and is not based on a subjective judgement by the respondent. There is, however, a risk that the sole reliance on objective indicators could be perceived as reducing the legitimacy of the exercise. Exclusion is a personal experience, and the views of those suffering poverty and social exclusion should not be disregarded. Some of the broader indicators of social exclusion, such as lack of political voice, may contain elements that, although inherently subjective, may prove very useful for the analysis of certain aspects of poverty and social exclusion.

There are three distinct situations in which social indicators could incorporate subjective elements. The first occurs when the standard or target is set on the basis of citizens' responses to survey questions, as in, for example, the Leyden approach used in the Netherlands (see Van Praag, Hagenaars and van Weeren (1982)), where persons are asked about the minimum income they need for their own household in order to make ends meet (or to reach some other target, such as not being poor). The responses to this question are then aggregated across households of a specified type in order to establish a poverty line that can then be applied to the incomes of all households of that type to count the poor.[12] Or, people could be asked to specify the minimum standards of

[12] In order to eliminate excessively high estimates from wealthy households, the approach adopted is often to take account only of answers from respondents who are keeping the balance on a "budgetary tightrope", that is, respondents on the verge of experiencing subsistence insecurity. Other studies have made use of the responses from all households.

housing that they consider acceptable in their society. An indicator based on those responses would then measure housing deprivation by applying the same standard across the community.

A second subjective approach entails asking people "what level of spending is needed to keep a family such as yours out of poverty" and whether their own income is above or below that level. In this case, their poverty status is determined by their own subjective standard. This approach was adopted, for example, in Great Britain by Gordon *and others* (2000, p. 30), who distinguished between "absolute", "general" and "overall" poverty. Respondents were asked whether their income was "a lot below", "a little below", "about the same", "a little above" or "a lot above". In this approach, a housing indicator would be computed from the respondents' assessments of their housing conditions on the basis of a specified set of criteria.

A third application of subjectivity occurs when people are asked to provide a subjective evaluation of their own situation, that is, to express how they feel about "making ends meet"; the indicator is based directly on their responses—in other words, it is not mediated through questions geared towards the definition of a poverty line. In the case of housing, people would be asked to assess their own housing circumstances. It should be stressed that the third approach entails a utilization of subjectivity different from that used in the first two approaches, as there is no derivation of an overall poverty line or housing standard common to all households. Both the second and third subjective approaches suggest that the situations of different persons are evaluated according to different standards, which raises important issues of equity in a policy context.

In addition to subjective measures of how people feel about "making ends meet", there also exist, as evidenced in a well-established section of the psychology literature, subjective measurements of life satisfaction or "happiness". The concept of happiness has been receiving increasing attention from economists in particular in recent years (see, for example, Clark, Frijters and Shields (2008); Frey and Stutzer (2002); Layard (2005); Ryan and Deci (2001); Van Praag and Ferrer-i-Carbonnel (2004)). In 2006, the Organization for Economic Cooperation and Development (OECD) published a study of alternative measures of well-being (see Boarini, Johansson and d'Ercole (2006)), which refers to, among other variables, survey-based data on happiness and life satisfaction. Data for some rich countries (notably the United States of America), which have been available for 50 years or more, reveal two striking features of overall life satisfaction measures. The first is that, within countries, there is a positive relationship between subjective satisfaction or happiness and measures of socio-economic status such as income, education and social class. The second, on the other hand, is that average satisfaction levels have not generally risen over time despite increasing average income (gross domestic product (GDP) per capita). In considering the evidence on happiness, two important factors need to be taken into account. The first is that happiness cannot be equated with well-being: it may be a component in a measure of well-being but it represents only one dimension. The second is that expressions of satisfaction reflect not only the person's objective situation but also the interaction between that situation and expectations. Since, as noted above, expectations may adapt (to an unknown extent) in response to the realities of one's life situation, satisfaction scores may reveal as much about expectations as about the external reality of the person's circumstances. Hagerty *and others* (2001) note that expressions of high levels of subjective well-being can be found in environmental conditions that are in fact life-threatening. Subjective satisfaction measures clearly have value as "indicators" of a gap between expectations and realities, and are relevant to the issues of trust discussed in section V below, but the precise significance of such a gap is often difficult to interpret.[13]

[13] In 2003 and 2007, comparative data on work-life balance, deprivation, life satisfaction, happiness, sense of belonging, social networks, participation in civil society covering all 27 EU countries as well as Croatia and Turkey were collected on behalf of the European Foundation for the Improvement of Living and Working Conditions.
Information and various analytical reports on the 2003 *European Quality of Life Surveys* are available from:
http://www.eurofound.europa.eu/areas/qualityoflife/eqls/2003/eqlsfindings.htm.
information on the 2007 European Quality of Life Survey, http://www.eurofound.europa.eu/areas/qualityoflife/eqls/2007/index.htm.

The examples of income (or expenditure) and housing have been used above to illustrate the way in which subjective assessments can enter into the measurement of poverty and social exclusion, but these assessments can be applied to other dimensions, such as health, physical and mental insecurity, discrimination, and environmental amenity. In the case of health status, one could measure the capacity to carry out certain activities, where that capacity is determined by the response to questions about normal expectations (the first approach described above). These, too, may change over time. For example, work on the factory floor now requires less physical effort than half a century ago. Alternatively, people could be asked to assess their health according to a given set of criteria (second approach) or they could make a direct evaluation of their health status (third approach), in which case exclusion would be measured in terms of the proportions reporting themselves as being in a less-than-good state of health or as having a chronic health problem. These three approaches to the health dimension would all involve elements of subjectivity, in contrast with an approach utilizing objective indicators such as life expectancy, perinatal mortality, low birth weight, access to healthcare facilities, and the incidence of industrial diseases.

C. Key issues of definition: relative versus absolute

Concern for social inclusion leads naturally to a search for indicators that are defined relative to a particular society at a particular time. Such an indicator is the EU at-risk-of-poverty line defined as 60 per cent of median income in the Member State concerned. There is, however, much debate about "absolute" versus "relative" criteria. In rich countries, it is sometimes argued that there is no sense in talking about a relative poverty standard that is, in the words of the British Conservative minister Lord Joseph, above the level of living of a medieval knight. Conversely, in a relatively egalitarian poor country, few people may be below 60 per cent of median income, but this would fail to take into account the fact that the majority of the population have very low levels of living. On this view, a poverty standard must be fixed in terms of a basket of goods (and services) and uprated over time only in line with changing prices. Of course, even this would not strictly constitute an absolute poverty line, in that there is a degree of arbitrariness about the setting of the original basket, as demonstrated by the fact that when employed in practice baskets tend to be updated over time to also reflect changing consumption patterns, if only at irregular intervals. One must move to other domains, such as the rate of perinatal mortality or the rate of premature mortality, to encounter pure absolute indicators.

The controversy surrounding the absolute/relative distinction reflects the fact that it impinges on two central definitional issues: the specification of the *reference society*, and the specification of the variable(s) of *ultimate concern*. As these issues are tricky, it is not surprising that different positions are taken. As regards with the reference society, one has no difficulty in saying that a boy is excluded if he is unable to join his peer group at school because he has to weed the family plot, or that gender-biased exclusion exists if girls have to stay at home and weed, while their brothers go to school, or that rural children are excluded if they have no school while schooling is provided for their urban counterparts. In each case, there is a clear, if implicit, reference group, *and* the reference group constitutes a majority, or is a dominant group in a particular country (or region). Suppose, however, that the majority of children engage in weeding. They may still be said to be socially excluded if one shifts to a wider cross-country or global reference group: people in country X are said to be excluded because they do not complete the primary education that would be expected in other (richer) countries.

The $1-a-day line is relativized by adjustments with respect to what $1 will buy in different economies (see above), but there is a more basic issue of the role of economic resources. If, as in the literature on household production, one sees goods and services as an input into household activities, then it is the level of activities, not goods, that is our ultimate concern.[14] For example, an activity might be "being available for work in the labour market" or "being able to benefit fully from public education". The goods and services needed to participate

[14] This is close to the capability approach developed by Sen (1985a; 1999) and Alkire (2002).

in these activities depend on the society in which one lives. What is needed in Porto Alegre may be different from what is needed in Washington, D.C., or Bombay. As Sen explains, there are "varying commodity requirements of meeting the same absolute need" (1984, p. 336). While the activity is defined in "absolute" terms, the input requirements in terms of goods and services depend on the particular society. "Being available for work" requires meeting certain standards of clothing, access to transport to get to work, childcare, etc. The standards for adequate clothing at the time of Adam Smith are no longer applicable in the twenty-first century. In some countries today, a job seeker may need a mobile phone. "Going to school", similarly, requires different resources in different countries. Attending school may mean travelling much greater distances in the African countryside than in the urban United States. What is more, the input requirements depend on the level of social provision. State-provided childcare reduces the money income required, as does public transport. The absolute/relative distinction has therefore different implications for "ultimate" and "intermediate" variables. The point has been made here in terms of income, but it also applies, for instance, in the area of education. If education is seen as an ultimate goal, then one can focus on the intrinsic desirability of different levels of attainment; if education is seen as a means of competing in the labour market, then a relative criterion may indeed be appropriate.

D. Key issues of definition: consumption versus income

The human development index is constructed on the basis of gross domestic product (GDP) per capita; however, the concept underlying this national income aggregate is rather removed from the experience of households. Indeed, there has been much discussion on the divergent growth rates of national income and household income in the case of India (see, for example, Deaton (2005)). If one concentrates on measures at the level of the household, there remains an important distinction to be made between consumption and income. As noted earlier, the EU poverty risk indicator is based on disposable income. There is a *prime facie* case for such a measure, in that income represents the resources available to the person, whereas levels of consumption are in part a matter of choice. One should not classify misers as poor. The scope for choice may, however, be less in poor countries, and "it is frequently argued that consumption is better suited than income as an indicator of living standards, at least in many developing countries" (Duclos and Araar, 2006, p. 21). (The concern here is with the decision *in principle*, not with respect to the availability of data.)

In weighing this choice, several arguments need to be distinguished. The first is that one should focus on the consumption of specific goods, such as food and shelter. The indicator would then become an indicator of food intake or of housing standards. This prompts the question: "why should we focus on the actual consumer choice, rather than on the general lack of resources?". The answer is that this presumes the existence of functioning markets. Years ago, Srinivasan (1977, pp. 18-19) noted that the failure of the poor to fulfil their basic needs "reflects not only the unequal distribution of real purchasing power, but also market imperfections and failures". Markets suffer from variations in quality, from variations in price and from quantity constraints.

Duclos and Araar (2006, p. 22) cite the example of Ecuador, where some households receive free water, whereas other, often poorer households have to purchase their water from private vendors. This fact would be missed by measuring just income. At the same time, it would not be captured by an indicator based on spending, which brings up a second important point, namely, that consumption and expenditure are not identical, nor do they necessarily move together. In a sense, this is obvious, once we allow for home production. A family that has had a good harvest may sell less food on the market and spend less on market goods but may consume more of its own food. However, even where all purchases are made on the market, consumption may fall short of expenditure when goods are being stored, or stocks are being run down (see section III.E below on "Stock and flow indicators").

A third consideration is that the argument to date has been based on the assumption, explicit in the quotation from Duclos and Araar (2006), that our concern is with living standards. There does exist, however, a different conception in accordance with which poverty is perceived in terms of the right to a minimum level of resources (which might include separate goods where these are rationed). Such a minimum rights approach, which can

be traced back to theories of justice, would entail different judgements about a particular situation. For example, based on a standard-of-living approach, it could be justifiable to grant a lower nutritional allowance for women than for men (which was indeed the case based on the first United States official poverty line (United States Social Security Administration (2007)). On a minimum rights approach, this would not be justified if rights are equal for all.

E. Key issues of definition: stock and flow indicators

Indicators may measure stocks or flows, and it is important to keep these categories distinct. An example is provided by education, where one may be interested in the qualifications of those reaching adulthood and entering the labour force (a flow measure) or in the qualifications of all those in the existing labour force (a stock measure). The flow measure, in this case, is one of the determinants of the changes in the stock (the other is the qualification level of those leaving the stock). Flow measures may be more variable over time, reflecting the experience of individual school cohorts. At the same time they are more responsive to change: it may take a decade for the effects of changed educational policies to be observed in the stock measure. In the same way, life expectancy calculated using current mortality rates may be seen as an indicator of the health of the current population; it does not, however, indicate the expected lifetime of a person just born, since it does not take account of future improvements (or worsening) in mortality.

In the case of economic resources, the difference between stock and flow may be viewed as the difference between a stock of assets and a flow of income. This is not just an accounting distinction. The two measures perform different functions. The flow of income typically finances current consumption, whereas the stock of assets, if there is any, provides security against future risk. As the World Bank (2001, p. 135) makes clear: "Poverty means more than inadequate consumption, education and health. As the voices of the poor cry out, it also means dreading the future. (The inadequacy of their assets) restricts their ability to deal with a crisis when it strikes" with their increasing exposure to fluctuations in world trade to the dangers of climate change. These risks to the poor are set to intensify, thus, while income (or consumption) is the main variable considered when measuring poverty, we may still want to consider a separate indicator based on the lack of wealth; it might take the form of an index of "precariousness" or "vulnerability"(measured, for example, by the absence of liquid funds on which a person could draw in the case of emergency) or an index of indebtedness in cases where the person owes money or is in arrears on payment for utilities or rent or mortgage payments).

F. Key issues of definition: static and dynamic

Certain indicators are based on a person's or household's current status: a person may be unemployed at the current date, or the household's income may be below the poverty line at the interview date. This has traditionally been the main concern of social indicators. Increasingly, however, there has been an interest in dynamic indicators. As pointed out by Bradbury, Jenkins and Micklewright (2001, cover), a child poverty rate of 10 per cent "could mean that every tenth child is always poor, or that all children are in poverty for 1 month in 10. Knowing where reality lies between these extremes is vital".

Indicators may be dynamic in several senses. One sense reflects a concern with changes over time, or lack of change, for an individual. We may be concerned that a person was unemployed, or in poverty, both at date *t* and at date *t+1*. As this example brings out, the introduction of dynamic considerations complicates measurement. We have to distinguish between a situation where the person was unemployed continuously from the interview in year *t* to the interview in year *t+1* and one where he had a job in-between which lasted less than a year. In other words, we are extending the period of observation, and the employment history can be summarized in many different ways. An indicator of how many people have been persistently unemployed is different from an indicator of whether a person has been unemployed at any time in the past *x* years (see, for instance, Marlier (1999)). Longitudinal (panel) surveys have an important role to play in understanding and monitoring how the situation of individual persons or households changes over time, as they allow identifying the individual factors,

processes and life stages associated with these changes. These advantages have a price, however: panel are costly and subject to suffer from attrition and administering them is a complex undertaking.

Social indicators may be forward-looking. People are excluded not just because they are currently without a job or an income but also because they have few prospects for the future. Social exclusion is not only a matter of *ex post* trajectories but also of *ex ante* expectations. Communities, for example, may feel marginalized because they see themselves as permanently excluded from the mainstream of society. In this case, one seeks to measure current variables that are predictors of future developments. An indicator such as low school attainment, or truancy, may be important not only in its own right but also because it measures what might increase the risk of poverty and social exclusion in later life.

G. Key issues of definition: individuals, households and groups

A natural starting point for construction of a social indicator for a country is consideration of the position of its individual citizens. If our concern is with health status, then we may sample households but may also wish to know about the health of all individual members, ranging from the newborn to the great-grandmother. For some purposes, however, we may wish to examine the position of a wider unit than the individual. It would not make sense to consider the baby's income without regard to that of her parents *and others*. Once we aggregate, however, a range of possible definitions opens up for the unit of analysis, making use of criteria such as the following:

a) Common dwelling, with a *household* comprising those residents in a dwelling who share some degree of common housekeeping but are not necessarily related by family ties

b) Common spending, where the *spending unit* is defined as those taking spending decisions to a significant degree in common, but who may be people who have no family relationship

c) Blood or marital relationship, where members of the *family unit* are related by marriage or cohabitation or by a blood relationship

d) Dependence, where the unit is defined to include a single person or couple plus any dependants (children and/or adults), this constituting the *inner family*

These entities all broaden the unit beyond the individual, but there may be a wish to go further and consider wider groupings, including the extended family. In such cases, there may well be some commonality in the standards of living of its members. The grandmother may live around the corner but may eat all her meals with the family; the son may be a student with a room in the city but may bring his laundry home each weekend; the breadwinner may be away, working in the city, but may send regular remittances. We may wish to consider wider kinship groupings, characterized, perhaps, by less regular sharing of resources but important support networks. The standard of living of a person cannot be judged independently of these networks.

In considering groups, we should distinguish between their relevance to assessing individual standards of living and their use as analytical categories. A recurrent item in the agenda of policymakers is the issue of the exclusion of specific groups, such as the disabled, the elderly, youth, migrants and ethnic minorities. The subject of groups living in particular geographical areas is examined in section III.H below entitled "Territorial indicators". In measuring the risk of poverty and social exclusion, it is important to know how far these groups are disproportionately represented, which is a different matter from treating the group as a whole when assessing the extent of individual deprivation. The circumstances of one disabled person do not depend on those of another disabled person with whom they are not in contact.

The implications of different choices of unit depend on the variable in question. In the case of financial poverty, the use of a wider definition tends to involve a reduction in the measured poverty rate, since more income-sharing is assumed to be taking place. The student son may be below the poverty line if considered as a unit on

his own, but when his income is added to that of his parents, the total may be enough to keep all of them out of poverty. The choice between different units involves assumptions about factual matters, such as the extent of support offered by other family members, including the extended family. The great-grandmother would probably share the household's standard of living, but a group of students living together could not be treated as a unit. This involves value judgements about the extent to which people should be dependent. A policy change that discouraged people in their twenties from leaving home might reduce measured (income) poverty but would not necessarily be regarded as effecting social improvement. The choice as far as worldwide indicators are concerned may also be influenced by the differences across countries in household composition. It should also be recognized that there may be an interest in individual status interpreted within a household context. For example, we may wish to establish the number of individuals who are unemployed *and* who are living in a household with no one in paid work. This entails in effect utilizing a combination of individual and household characteristics, and places particular demands on data collection.

The fact that we may wish to consider the position of a household as a whole does not imply that we should then count the number of households, weighting each household as 1, regardless of the number of members. The method of weighting is distinct from the choice of the unit of analysis. If we are considering a variable that is defined at the household level, such as poor housing, then we have to deal with the issue of whether to count households or individuals. Does a couple and two children in bad housing count once or four times? The fundamental concern when measuring social inclusion is with the position of citizens, and this entails counting persons. The circumstances of the households in which people live are clearly major determinants of the level of well-being of individuals, and households may be socially excluded as a whole. Hence, individuals should not be considered in isolation, but each person should count as one. Weighting households by the number of people leads to certain problems when measuring poverty; in general, however, this is the procedure that ought to be recommended.

H. Territorial indicators

Indicators may have an important territorial dimension. We are likely to be interested in how poverty rates differ across regions, or whether low education is a feature of some localities but not of others. One major distinction is that between rural and urban areas. We want to know how far poverty is "clustered" in particular neighbourhoods. Can a pupil's educational success be predicted from the zip code?

The degree of clustering takes on particular significance where policy has been targeted geographically. The use of such geographically targeted schemes in Latin America and the Caribbean has been surveyed by Baker and Grosh (1994) (see also Barca *and others* (2004) and Dutrey (2007)). For example, the school lunch programmes in Chile, Costa Rica and Jamaica were targeted geographically by school, while free milk was distributed in Peru and day care was provided in the Bolivarian Republic of Venezuela by neighbourhood. Area-based anti-exclusion policies are grounded in sets of hypotheses about the location of exclusion, which would entail the collection of area-based data; for the same reason, however, the collection of household-based data is necessary in order to evaluate the hypotheses on which such policies are based.

Geography may be significant in a different way. Whereas poverty and low education are characteristics of individual households, there are other types of indicator which, it may be hypothesized, relate to a population rather than to the individual. Disadvantages may be localized in a community but may not characterize the particular individuals who live therein. Life expectancy, for example, may depend, at least in part, on the local environment, so that a person moving to another area could thereby modify his or her life expectancy.

One important reason why territorial indicators need to be considered is that a number of countries, such as Brazil, have decentralized significant elements of social policy and devolved them upon regional, provincial or local governments. These governments may set their own targets and may adopt their own performance indicators. There may, for instance, be different poverty lines by region (see for example, Verma *and others*, (2005)).

I. Gender mainstreaming

Eliminating inequalities and promoting equality between women and men are prominent items in the UN agenda. A gender perspective should therefore be integrated into every stage of the policy process (design, implementation, targeting and monitoring, and evaluation), with a view to promoting equality between women and men. This approach is referred to as "gender mainstreaming" (see Atkinson and Meulders, 2004). As rightly emphasized by the EU Manual for gender mainstreaming, employment, social inclusion and social protection policies (European Commission, 2008b, p.27), "gender mainstreaming is *not* a goal in itself but a means to achieving equality"; and "it is *not* concerned only with women, but with the relationship between women and men for the benefit of both".

It is clearly important to capture gender differences with respect to the social indicators already defined (see box II). For example, how many of the more than 1 billion people living on less than $1 a day are women? It is often assumed that poverty is equally shared, or at least the calculation comes out this way, given an assumption of equal sharing of resources within the household. The proportion of women among the poor depends on the gender composition of households. If women are disadvantaged in their access to resources, then households with more female members (such as lone mothers and widows) will be at greater risk of poverty. (See box II.) It is clear that all indicators of social inclusion should, where possible and where meaningful, be disaggregated by gender. As explained by the European Commission (1998):

> Differences (may) cause apparently neutral policies to impact differently on women and men and reinforce existing inequalities and vulnerabilities arising from other structural differences, such as race/ethnicity, class, age, disability, etc. Therefore, it is important that statistics and data are broken down by sex (men-women-total).

Comparisons can be made across countries of the male/female differences in social indicator values (see also below, the discussion in section VI.D entitled "Tools for policy analysis").

Box II: Global and micro-level gender measurements

At a world level, the UNDP constructs and publishes a composite Gender-Related Development Index, which measures the average achievement in the three basic dimensions captured in the human development index: a long and healthy life, knowledge and a decent standard of living. The gender-related index is adjusted to account for inequalities between men and women (see, for instance, UNDP (2007); Booth (2002) and Van der Molen and Novikova (2005).).

At a micro-level, the study of the village Palanpur in India (Lanjouw and Stern, eds. (1998)) has shown the vulnerability of widows where there is no adult son (p. 339). According to the Beijing Platform for Action, in the decade 1985-1995, the number of women living in poverty has increased disproportionately to the number of men (UN, 1996, chap. I, resolution 1, annex II, para. 48).

The issue of gender is important in terms not only of disaggregation but also of the definition of indicators. Choices made with regard to definitions may not be neutral with regard to gender. The first important illustration is provided where focusing on the household as a unit in the context of poverty measurement. In our present state of knowledge, we have, typically, when considering consumption or income, to treat the household as a sharing unit; however, this conceals significant inequalities between women and men in control over resources. In this way, we may seriously understate the extent to which poverty is feminized. Similarly, we cannot consider land titles and land access purely in household terms. We have to examine the implications for wives and daughters, since in many societies there is an important gender dimension to land rights (Razavi, 2003). Where there

are multiple claims and joint titles, land rights may be not only hierarchically ordered but also gendered, with women having "weaker" rights to land use. (See also below, section VI.D.)

The second important illustration of how the indicators chosen may fail to be gender-neutral is provided by indicators that concentrate on market activities. While women may engage in significant market activity, they carry out a disproportionate amount of domestic labour and are more likely to be found in the informal sector. Along the same lines, in the case of the EU social indicators, the focus in defining joblessness is on paid employment, rather than on a wider concept of productive contribution; this is not a gender-neutral approach.

Comparison of indicators for men and women is an important means by which evidence can be assembled regarding gender bias in the allocation of resources, access to services, and opportunities. However, we must also be conscious of those who do not appear in the statistics. As emphasized by Sen (1999, p. 20), "the terrible phenomenon of 'missing women' (resulting from unusually higher age-specific mortality rates of women in some societies…) has to be analysed with demographic, medical and social information, rather than in terms of incomes, which sometimes tell us rather little about the phenomenon of gender inequality".

J. Children mainstreaming

Investment in children is a widely shared priority, which has, to some degree, been reflected in the construction of indicators of poverty and social exclusion. Thus, the indicators of social inclusion incorporated into the EU open method of coordination are broken down by age groups, including children. The high relative poverty rates for children observed in a majority of EU countries in early 2000, when the OMC was launched, have heightened concern about child poverty. Back in 1999, Tony Blair, when Prime Minister of the United Kingdom, had set the objective for his Government of abolishing child poverty by 2020. In the same way, one can ask how many of the more than 1 billion people living on less than $1 a day are children?

These concerns have led to calls for what has been termed as *children mainstreaming* (Marlier *and others*, 2007). Use of this term does not imply that children should necessarily have priority over, say, the elderly: it is in fact essential that, where possible and where meaningful, all the indicators of social inclusion be provided not only for children but also for other broad age groups (youth, the middle-aged and the elderly). Rather, like gender mainstreaming, child mainstreaming needs to be approached from a different perspective. The approach should be not simply to disaggregate by age but to ask "what indicators would best serve the needs of children?". There is, for example, a good case to be made for considering measures of child health, child development or, more broadly "child well-being". Indeed, Millennium Development Goal 4 entails reducing under-five mortality by two thirds between 1990 and 2015. For Australia, Saunders and Naidoo (2008) contrast the two approaches:

> "There are two ways in which to identify how social exclusion affects children. The first involves using indicators that are generally applicable and examining their incidence among families with children. The second involves focusing on that subset of indicators that relate more specifically to exclusion among children. We have adopted the latter approach here…it is possible (indeed likely) that parents and their children experience different forms of social exclusion (p. 7)."

In considering child-focused indicators, it is important to recognize that there may be differences between the interests of children and the interests of the parents who often make choices on their behalf. An obvious example is that of parents, requiring that children work on the family farm or in the family firm, whereas the children's interests would be better served by their continuing in school. There may be a trade-off between the aim of averting family poverty and that of ensuring the child's social inclusion (and his or her intergenerational mobility). The two sets of considerations have to be decoupled. That there exists such a choice-versus-interests dichotomy is one reason why children have been singled out here for special consideration.

In the EU, work in this regard has been taken forward by the Task-Force on Child Poverty and Child Well-Being, whose report was published in 2008 (Social Protection Committee, 2008). As noted in that report:

> In 2005, 19 million children lived under the poverty threshold in the EU-27, meaning that 19 per cent of children were at risk of poverty, against 16 per cent for the total population…In most EU countries, children are at greater risk of poverty than the rest of the population…In almost half of the EU countries, the risk of poverty for children is above 20 per cent.

The ambitious recommendations put forward in the report, with a view to better monitoring and assessing child poverty and well-being at EU as well as at national and subnational levels, were all endorsed by the European Commission and the 27 Member States.[15] (See also Engsted-Maquet and Guio (2008); Frazer and Marlier (2007); Frazer (2009); Guio and Museux (2006); Hoelscher (2004); Whiteford and Adema (2007).)

[15] In line with a point made above, namely that it is important to be aware of the differences that may exist between the interests of children and those of their parents, one of the Task-Force recommendations reads as follows:
There is increasing realization of the potential interest of interviewing directly children on their own experience and perceptions of poverty and well-being. However, a number of methodological, legal and ethical issues need to be addressed to ensure that such information can indeed be collected throughout the EU. National know-how and good practices in this area should be gathered on the basis of which Member States could then best explore the possibility of implementing these surveys among children at (sub-) national level.
Giving attention to the views of children themselves is an important element in a children's rights approach; however, this aspect remains very underdeveloped.

IV. How do we measure?

The British pioneer in the area of statistical poverty measurement, Sir Arthur Bowley, stated that "there is, perhaps, no better test of the progress of a nation than that which shows what proportion are in poverty; and for watching the progress the exact standard selected as critical is not of great importance" (Bowley, 1923, p. 214). On the one hand, one can concur with the first part of this statement, even though we need to ensure that it is a wider multidimensional approach to measuring social exclusion that is adopted. On the other hand, one can only disagree strongly with the second part: the choice of indicator *is* of considerable importance. In particular, as explained in section II above, the design of the indicators depends on the question to be answered. This applies both to the individual indicators and to the structure of a set of indicators.

A. A principles-based approach

The design of indicators is crucial because of their political salience. For this reason, it is essential that the design be based on a set of principles that are of greater generality than the current policy concerns. It is this approach that was already advocated by Atkinson *and others* (2002) and that guided the adoption of the social indicators to be used in the context of the EU Social Protection and Social Inclusion Process. Some principles concern each individual indicator, whereas others concern the portfolio as a whole. The present section begins with a discussion of the principles that apply to single indicators.

The first principle is that *an indicator should identify the essence of the problem and have an agreed normative interpretation*. Translation of policy goals into quantitative measures inevitably means that we have to focus on certain aspects of the problem to the exclusion of others, but this should be carried out in such a way as to encapsulate the central concern and not be misleading. The indicator should be recognized as meaningful by users of all kinds and it must be acceptable to the general public. This implies that the general principles of the method used must be understandable. For this reason, it is important to adopt a participatory approach to the construction of performance indicators, involving the civil society and, in particular, those at risk of poverty and social exclusion and the organizations that represent their views. Local ownership may contribute to promoting social inclusion. Overall, the indicators must have intuitive validity and should produce results that seem "reasonable" to citizens. A poverty indicator for the United States that showed over half the population to be poor would be regarded as having come up with a grossly inflated figure. Moreover, the indicators should be selected so as to yield a clear, normative interpretation. The indicators serving as the basis for the Millennium Development Goals are used because there is a political commitment to achieving specific goals; this is there is general agreement that a movement in a particular direction represents an improvement. Such agreement would not necessarily hold for all social indicators–fertility, for example, where countries may be in favour of either higher or lower levels of fertility, or may be neutral with regard to this issue.

The second principle is that *an indicator should be robust and statistically validated*. An indicator should be measurable in a way that commands general support. The data employed should be regarded as statistically reliable and should not be subject to arbitrary adjustments. Where data are derived from sample surveys, the conduct of these surveys should comply with the best practices and highest standards of survey research methodology (see section IV.C entitled "Data for the construction of indicators"). The methods adopted should minimize errors caused by ambiguous questions, misleading definitions, bias due to non-response, and interviewer or coder mistakes. Indicators should, as far as possible, be validated by reference to other evidence. Indicators derived at a world level should be cross-checked against information available at the level of individual countries. Any indicator will necessarily involve some error but it should not be systematically biased. It must also be statistically reliable over time in the sense that results must not be liable to unpredictable or inexplicable fluctuations. Measures should be avoided that are subject to *political manipulation*, such as those that involve arbitrary cut-offs, by which a country's score can be artificially improved through focusing policy on those close to the cut-off, or those that are based on an arbitrarily defined basket of goods and services. Throughout the analysis, we have to bear in mind that the circumstances of those suffering

poverty or social exclusion (for example, those at the bottom of the income distribution, the unemployed, those living in institutions and the homeless) are among the most difficult to measure statistically (see below).

The third principle is that *an indicator should be interpretable in an international context*. The establishment of this principle is motivated by considerations of comparability, and also reflects the demands that such considerations impose at the global level. Even among countries at a similar level of development, full comparability is an ideal that cannot normally be attained, since, even where data are harmonized across countries, variations in institutional and social structure mean that there may be differences in the interpretation of the data. The aim should be to reach an acceptable standard of comparability. When we consider countries at very different levels of development, different approaches to construction of indicators may be justified. For example, the EU 60 per cent-of-median income standard can coexist with the $1-a-day MDG. Figures for the UK based on the former standard and for China on the basis of the latter cannot be compared, but we can make sense of the two sets of figures (and particularly, of changes over time). Two factors seem particularly important. The first is development at the statistical level. Where needed and where possible, countries should be encouraged to develop their statistical information to improve the degree of comparability; and consideration of the quality and design of social indicators should influence the plans for improved or new statistical instruments. The second important factor is the choice of indicators. Some indicators are more sensitive than others to differences in the social structure across countries. For example, a poverty indicator should be equitable with respect to countries with differing size of rural populations and hence differing degree of production for home consumption. Imputed rent on owner-occupied housing (that is the rent that owners save by owning their own house or apartment) is another example. Differences in the extent of owner-occupation across countries mean that its omission has a differential effect.

We should avoid indicators that are oversensitive to these structural differences or raise specific problems of interpretation for particular countries. Even for those indicators that comply satisfactorily with this third principle, it is essential always to keep in mind the need for what has been referred to above as *contextualized benchmarking*. Indeed, specific policies and their impacts measured through indicators can be properly understood only in the context of the broad institutional setting in which they operate. For example, measures of labour market participation or unemployment may have different meanings in different labour-markets depending, inter alia, on the national and/or subnational labour-market regulations and collective bargaining arrangements. A "system-wide analysis" is required for proper international benchmarking. (On the importance of "contextualizing" the analysis, see for instance, Sakellaropoulos and Berghman (2004) and Vandenbroucke (2002))

The fourth principle is that *an indicator should reflect the direction of change and be susceptible to revision as improved methods become available*. In many cases, the *level* measured by social indicators serves to highlight the importance of the problem, but in terms of policy it is changes over time that are crucial. In the case of the Millennium Development Goals, the $1-a-day benchmark set the scale of the challenge, but it is *changes over time* that are being closely monitored (see, for example, the *Global Monitoring Report* (World Bank, 2008). The timescale is, of course, longer than that in the macroeconomic field, where politicians have become accustomed to receiving extremely current information. In the field of poverty and social exclusion, the changes we are seeking may take a decade or longer to occur (the MDG horizon for poverty reduction is the period from 1990 to 2015).

Revision not only of data but also of the underlying concepts is equally important where advances are to be made in understanding and where there are changes in policy concerns. Ideally, it should be possible to chain the indicators before and after revision. A good example of the need for revision is provided by the new estimates of purchasing power parity (PPP) adjustments that are being produced by the International Comparison Program ("see below, section IV.D on "Broadening the field"). As has been noted by the United Nations (2007, p. 7): "these new measures of the relative cost of living among countries will require a revision to the international poverty line and may change our understanding of the extent and distribution of global poverty".

The fifth principle is that the measurement of *an indicator should not impose too large a burden on countries, on enterprises, nor on citizens*. The design of social indicators should, wherever possible, make use of information already available. Where new information is needed, then it should be obtained, as far as feasible, using existing instruments, for example, by adding questions to existing surveys or by making use of administrative data and data from registers (see below, section VI entitled "Capacity-building").

B. Principles applied to whole portfolio of indicators

The present section examines the *principles* to be applied to the composition of the whole portfolio of indicators, the term "portfolio" referring here to a set of indicators. This will be followed by consideration of the case to be made for combining indicators into a single composite index such as the UNDP human development index. It should be stressed that the focus here is on *principles*; the actual portfolio may be seriously constrained by data availability.

The first principle is that *the portfolio of indicators should be balanced across the different dimensions*. No set of indicators can be exhaustive, and there are costs incurred, in terms of lost transparency, as a result of having too extensive a range of indicators. From the standpoint of international comparisons, or the measurement of progress over time, utilization of too large a set of indicators can pose the risk of a loss of credibility (if countries can simply pick and choose). A selection therefore has to be made and this selection should ensure that all main areas of concern are covered and should take account of differences across countries in terms of the importance they attach to different areas. Some countries may be particularly concerned about precariousness in the labour market; others may attach national-level importance to the reduction of child poverty. It is important that the portfolio of indicators command general support as a balanced representation of concerns about poverty and social exclusion.

The second principle is that *the indicators should be mutually consistent and that the weight of single indicators in the portfolio should be proportionate*. Mutual consistency is an evident requirement. The term "proportionate" reflects the fact that the interpretation of the set of indicators is greatly facilitated when the individual components have degrees of importance that, while not necessarily being exactly equal, are not grossly different. It would be hard to make sense of a set of indicators that lumped together measures of central importance, such as national poverty rates, with indicators which would generally be regarded to be of a more specialised or more local interest.

The final principle is that *the portfolio of indicators should be as transparent and accessible as possible to citizens*. At present, there is much public confusion about the form and purposes of social indicators. It is therefore important that indicators should be easy to read and understand. This applies to the individual indicators and to the set as a whole. We have also to be aware of the temptation to aggregate indicators. Journalists writing about trends will tend to count plus and minuses. These considerations may well affect the range of indicators and the total number included. Too large a number of indicators would mean that the exercise had lost both transparency and credibility. Dissemination of the results of the application of indicators, and of accurate information about their methods of construction and possible limitations (*metadata*), is therefore an important task. In this process, a key role is to be played by non-governmental organizations and by the scientific community.

The choice of the above principles is open to debate, but making their content explicit should aid the development of social indicators. The next challenge is to implement them in practice.

C. Data for the construction of social indicators

The construction of social indicators necessarily entails a compromise between the theoretical definition and what is possible empirically. Data may simply not be available or may not be of adequate quality, or the data that are available may not be sufficiently comparable across countries (or even within countries) or across time. The

collection of data may be too expensive, or may impose too great a burden on persons or enterprises, or may face constraints in terms of public acceptability.

In many respects, the availability of data is much greater today than in the past. As was highlighted by Deaton (1997, chap. 1), this has been a worldwide development. The first household surveys may have been conducted in Europe, but one of the first large-scale scientific surveys was carried out in Bengal in 1941 by Mahalanobis (1946) to estimate the size of the jute crop. Since then there has been a great improvement in the coverage of sample surveys, very largely owing to the efforts of the UN and other international organizations. In its World Development Report 2000/2001, the World Bank (2001, p. 20) noted that "85 per cent of the developing world's population lives in countries with at least two household income or expenditure surveys". Without such surveys, it would be impossible, to make any estimate, for example, of the number of people living on less than $1-a-day. The World Health Organization (WHO) publishes statistics on health inequities covering a large number of developing countries (see, for example, WHO (2007)) showing the variation by place of residence and wealth level in under-five mortality and stunting.

At the same time, we have to recognize the considerable distance that has yet to be travelled. At the Second Roundtable on Managing for Development Results held at Marrakech, Morocco, on 4 and 5 February 2004, agreement was reached on a global plan for statistics (*Marrakech Action Plan for Statistics*). The actions envisaged included the preparation of national strategies for the development of statistics, an international household survey network, and increased financing for statistical capacity-building. Two years later, at the second meeting of the Forum on African Statistical Development following a review of progress, it was concluded that significant data gaps remained (see box III).[16]

Box III: An accelerated data programme for Africa, which builds on the "Marrakech Action Plan for Statistics"

In a report presented at the second meeting of the Forum on African Statistical Development, held in Addis Ababa on 9 and 10 February 2006, the World Bank (2006, p. 1) emphasized that "only 62 per cent of the population of low-income countries in Africa resides in a country that has conducted a nation-wide poverty survey between 2000 and 2004" and that only 53 per cent "live in a country that has conducted a census since 1995, compared with 99 per cent of European residents".

The report drew attention to the cost of data collection, estimated at $1 per person for a population census and $950,000 for a living standards measurement survey.

Availability is one issue; a second issue is quality of data sources. In considering this, it is important, first, to underline that our concern here is with the entire population. This needs to be emphasized, since a number of statistical sources leave out important groups. Surveys are often limited to the household population. This leaves out those living in institutions, such as students and the military, and those living in hostels, shelters or reception centres. It leaves out the elderly living in residential accommodation and children taken into care by public authorities, as well as those living on the streets. Surveys may also exclude, by their design, other groups, such as non-nationals, or those living on boats or in caravans. Whatever the limits imposed by data collection,

[16] The *Marrakech Action Plan for Statistics* is part of the "Managing for Development Results" (MfDR) strategy, which "focuses on using performance information to improve decision-making. MfDR involves using practical tools for strategic planning, risk management, progress monitoring and outcome evaluation" (http://www.mfdr.org/).
The *Marrakech Action Plan for Statistics* is available from: http://www.mfdr.org/documents/MarrakechActionPlanforStatistics.pdf.

it is imperative, when considering poverty and social exclusion, not to lose sight of these groups, which may require specific data-collection tools and techniques.

Second, we have to consider the sample survey methods. The design of the fieldwork, the expertise and supervision of the interviewers, the length and adequacy of the questionnaire, and the processing of the data can all affect the quality of the measurement or the representativeness of the sample. Results of different surveys may diverge simply because of sample fluctuations. Sampling allows one merely to draw conclusions about a characteristic of the population with a certain degree of (un)reliability. This must be taken into account and it is always advisable to provide sampling errors for key estimates from sample surveys.

The accuracy and reliability of sample-based estimates depend primarily on the sample size and the efficiency of the design. There are elements, moreover, in the conduct of surveys that especially affect the measurement of poverty and social exclusion. These include the degree of non-response. Almost inevitably, a number of interviewees will refuse to participate in the survey, or they may be either unreachable or untraceable. This implies fewer available cases, and therefore less efficient sample-based estimates, but more important is the possible underrepresentation of precisely those groups of citizens who are particularly at risk of poverty and social exclusion. To the extent that non-response is selective, in other words, that its occurrence within a specific category is more than proportional, there will be biased estimates of the scale of the problem. This shortcoming is particularly apparent in panel surveys, as with each wave there is inevitably some attrition. In the case of India, Deaton (2005) has argued that the lower response of rich households causes survey-based estimates of poverty to be overstated, and presented evidence suggesting that the response rate declines more rapidly with income.

It is invariably the case in surveys that a number of respondents fail to answer certain questions. Cases where respondents either refuse or are unable to answer certain questions that apply to them are referred to as exhibiting item non-response. Questions that respondents experience as sensitive or difficult to answer tend to generate greater item non-response. This is often the case with questions about income. Item non-response reduces the number of cases that can be included in the analysis.

Again, non-response may be greater among the groups most at risk of poverty and exclusion; for example, those in the informal sector or in remote areas. If item non-response is selective, it can give rise to biased estimates. If item non-response is systematically greater within specific population segments (for example, large households, the self-employed, high-income households, etc.), it may result in the collection of biased income and poverty figures. For this reason, it is usual in surveys to correct by means of imputation procedures for item non-response. In such imputation procedures, a respondent showing non-response on a variable is attributed a value on the basis of the responses of (similar) respondents who have responded to that item. There are various imputation procedures of varying quality. The greater the number of cases of item non-response, the more important the quality of the imputation procedure.

A further problem is that survey results may be disproportionately affected by outliers: for example, very high or low (negative) values for income or other variables. These outliers may arise simply on account of sampling variability, but they may also suggest shortcomings in respect of the data. An independent worker, for instance, may record a large loss in a particular period, but this may reflect a particular accounting practice. Large incomes or large losses may be purely transitory. For these reasons, it is a common practice to apply top-coding or bottom-coding to income and other data. With top-coding, all incomes above $X are entered as $X; with bottom-coding, the same procedure is utilized in reverse at the bottom of the distribution. However, bottom-coding may conceal what is happening among the members of the group of most interest (see, for example, Van Kerm (2007)).

In using sample surveys as the basis for producing social indicators, it is important to be aware that "even where 'good' survey data do exist, serious and often quite subtle issues of comparability and measurement still abound" (Strauss and Thomas, 1996, p. 30). It is important to keep these issues in mind when conducting (national or

international) analysis; in this regard, small differences between countries, or over time in one country, in the levels of the indicators should not be given too much emphasis. In this context, it is worth emphasising the importance of collecting and publishing quality documentation (*metadata*), which can greatly facilitate the correct interpretation of survey results.

In considering the data for construction of social indicators, we need to be sure that the data sources allow us to distinguish among subgroups of the population relevant to policy analysis. As noted above, a recurrent item on the agenda of policymakers is the poverty and social exclusion of specific groups, such as the disabled, the elderly, youth, migrants and ethnic minorities. We need, for instance, to know whether the disabled are at greater risk of poverty, and what proportion they constitute of the total population at risk of poverty. How far is poverty concentrated within certain ethnic groups? For example, the Asian Development Bank (2007, section 5) reports that between 1993 and 2004 "households belonging to scheduled castes and scheduled tribes have seen their per capita expenditures grow more slowly than those of other households". (Scheduled castes are at the bottom rung in the Hindu caste system; scheduled tribes are outside the caste system.) In order to make such comparisons, the sample sizes have to be sufficiently large.

D. Broadening the field

There are further features of data collection relevant to the construction of social indicators that may take us beyond the range of data currently employed. One entails the salience of contextual data. An important trend in the study of social inclusion is to consider people in their context. We may wish to interpret a person's situation in the light of the community in which he or she lives. A person who is unemployed in a town in which unemployment is very rare is in a different position from that of a person whose neighbours are all unemployed. There would be considerable value, for example, in associating the national surveys with studies of particular cities, matched across countries. Such studies might collect not only quantitative but also qualitative information. As noted by the Expert Group Meeting on "Creating an Inclusive Society: Practical Strategies to Promote Social Integration" (see Introduction):

> Because social inclusion…is a multidimensional concept/phenomenon, there is a need for a multi-method approach to understand it, and measure it. This requires a combination of qualitative and quantitative methods, drawing from a range of disciplines. Qualitative methods are important for unpacking the processes behind the figures/numbers. A multi-method approach would help overcome the universal/national/subnational tension in exploring a complex phenomenon such as social inclusion.

(See also the above discussion on the need for *contextualized* international benchmarking.)

Second, as already noted, we need to pay particular attention to the position of people who are not part of the household population, for example, those living in institutions, those in the armed forces or in prison, and those who are homeless. This is a heterogeneous group, but it includes some of those most at risk of poverty and social exclusion. As statistics based on household surveys miss this group, we need to consider ways in which its members can be covered. This will require a significant investment, but is of great importance.

These concerns point to the need for data additional to those from household surveys. We may wish to relate the person's situation to the employment context, by linking data on households and those on employers. Such linking is becoming increasingly possible as new techniques are developed for handling very large data sets. Reference should be made here to national and subnational register systems. In a number of countries, especially the Nordic ones, there exist registers providing a great deal of information which can be assembled from the records of administration of income taxation, social security records, records of employment services and local government, etc. Register sources have the advantages of relatively low cost and of a reduced

burden on respondents. In the present context, a further important advantage of register data is that of speed. The need for timeliness is one of the major constraints on the choice of social indicators. The use of register sources may be hindered by major legal problems as well as difficulties in terms of public acceptability, but those sources potentially offer a way forward. Furthermore, it should be remembered that new technologies offer the possibility of new safeguards as well as new data linkages. At the same time, we should note that even for those countries using register information extensively, household surveys will be required in order that qualitative information may be obtained.

V. How do we make it happen?

Considerable progress has been made in developing the principles underlying the construction of social indicators, in refining the individual measures, and in establishing the data requirements. But how can these indicators be made a reality? How do we make it happen? Putting into effect indicators of poverty and social exclusion is a challenge.

A. Mobilizing all the key actors through a participatory approach

Support and advocacy for building more socially inclusive societies must reach beyond public authorities. In order to generate this support, countries and communities should consider building *partnerships* involving all the key actors, in accordance with national and community arrangements and traditions. Such partnerships should promote complementary strategies for change, addressing the broad range of policies concerned – economic, social (including education, housing, health…) and environmental. These strategies should be reflected in clear national and community policies and objectives and should be taken into account by public authorities.

A participatory approach, at the subnational, national and international levels, can significantly contribute to disseminating knowledge and to ensuring greater transparency and awareness of the objectives of social inclusion: it is a necessary condition for making the process credible and meaningful, both politically and popularly (see, for example, Bennett and Roche (2000)). It is therefore crucial that *all* aspects of the subnational, national and international) work on social inclusion be as open as possible to the active participation of the regional and local public authorities, the different non-governmental actors and bodies involved in the fight against poverty and social exclusion, including social partners, non-governmental and grassroots organizations (at subnational, national and international levels), and the poor and socially excluded people themselves. Structuring and supporting such participation have to be a key component of national and community strategies. At the same time, this is not easy to achieve. In its report prepared for the twenty-fourth special session of the UN General Assembly entitled "World Summit for Social Development and beyond: achieving social development for all in a globalizing world", held in Geneva, Switzerland from 26 June to 1 July 2000, the UN Research Institute for Social Development (2000, p. ii) noted that:

> Although most donors and multilateral agencies now stress the importance of working with and through civil society organizations, political and institutional constraints at international, national and local levels often limit the effectiveness of civil society both in advocacy and in service delivery. International development and financial institutions have not fundamentally changed their governance structures to permit greater participation by civil society.

It is important that a participatory approach also be adopted for the construction of performance indicators. Overall, the indicators must have intuitive validity and produce results that seem "reasonable" to citizens. As emphasized earlier, an important dimension of social exclusion is concerned with the lack of voice, power and representation. It would be ironic if the adoption of social indicators of poverty and social exclusion were to add to the sense of powerlessness. In this respect, social inclusion policy can build on the experience in other fields (see box IV). At the same time, experience with participatory approaches has also highlighted how difficult it is to alter the balance of power.

Careful thought has therefore to be given regarding how participation can be made effective. For example, policymakers can undertake consultations on the determination of the poverty line and its interpretation. In New Zealand, for instance, there has been such consultation with the Maori and Pacific island peoples (Waldegrave and Stephens, 2000). In Tanzania, the National Strategy for Growth and the Reduction of Poverty (Mkukuta) has set three clusters of goals based on extensive consultation with a wide range of stakeholders. Progress towards these goals is being monitored by, among other instruments, a "Views of the people" survey (Tanzania, Ministry

of Planning, Economy and Empowerment, 2007). In applying a particular poverty threshold in an international study, one could ask what this implies in terms of the actual standard of living achievable in each country. Thus, in the case of the EU poverty risk criterion, the question to be answered would be, what can a family subsisting on 60 per cent of the median income, adjusted for its household size in each country, actually consume? Contextual quantitative information on household budget expenditures could be provided to help understand the living standard achievable at the at-risk-of-poverty threshold in each member State. (It would also help investigate the potential problem with purchasing power adjustments already mentioned above.) Moreover, this could valuably be supplemented by qualitative information on how people "at risk" actually live.

Box IV: The participatory approach: learning from experiences in other fields

The subject of forest management may seem far removed from social inclusion policy, but there are lessons to be learned about the role of community involvement, as, for example, in Mexico (see Bray *and others*, 2003). Closer to the concerns of social inclusion are the experiences in community participation in China in rural development projects (see Plummer and Taylor, 2004). Similarly, in China, there has been a reconsideration of the role of the local community as a unit in urban governance (Shin, 2008).
The management of health programmes is another area relevant in this regard. In Uganda, for instance, the Health Sector Strategic Plan is concerned with "mobilizing community empowerment, participation in the management and monitoring of health facilities" (Atieno and Shem, 2007, p. 188).

A good example in this regard is provided by the study *This is How We Live: Listening to the Poorest Families* (International Movement ATD Fourth World, 1995), which describes the lives of the Hirt family in Germany, Doña Matilda in Guatemala, the Jones-Robinson family in the United States, the Santituk family in Bangkok and street children in Burkina Faso. Such an approach would make more meaningful the otherwise arcane statistical procedures on which the poverty risk indicator is based and it would constitute a good means through which Governments could engage those experiencing poverty and social exclusion. (In the case of the EU, relevant in this regard are, for instance, the European Round Tables on Poverty and Social Exclusion and the European Meetings of People Experiencing Poverty organized annually in the context of the EU Social Protection and Social Inclusion Process (Marlier *and others*, 2007))

B. Creating trust

Social indicators can play an important political role: they can influence the allocation of funds or can be perceived as having such an influence. It is therefore important that there be a high level of confidence in their validity, and that they be not perceived as subject to political manipulation (see above, section IV.A entitled "A principles-based approach"). In many countries, there has been a long history of mistrust of official statistics. Controversy has surrounded, for example, the construction of consumer price indices or unemployment figures. When designing social indicators, care must be taken to ensure that the results are trusted by the public and civil society.

This is an issue that, in part, involves the institutional structure. The independence of the statistical agencies – like that of the judiciary - is an important requirement for the functioning of democratic societies. Ensuring independence is not a straightforward matter, as the agencies depend on the Government for resources, and there has to be accountability. One route taken by some countries is to make central statistical offices answerable to parliament rather than to ministers. Another route involves the formulation of codes of practice, covering such matters as quality assessment and publication of statistics. A role can be played by international agencies in supporting central statistical offices and in providing external criteria by which their work can be validated. However, much depends on civil society.

In part, this is a question of the design of social indicators. In defining the components of indicators, consideration must be given to the perceived reliability of the underlying data. Moreover, confidence in quantitative indicators may be enhanced if they are accompanied by qualitative evidence, which facilitates interpretation of the numbers and provides some reassurance that they correspond to reality on the ground. Furthermore, quantitative indicators can be designed to respond more closely to the concerns of individuals. A good example is provided by the gap that appears to exist between macroeconomic measures of income growth and the changes in living standards perceived by households. In the case of India, for instance, in the 1990s, growth in per capita household expenditure recorded in the National Sample Survey was much lower than the growth in per capita GDP recorded in the national accounts (see Asian Development Bank, 2007, box 5.1). In this regard, the use of survey questions about subjective perceptions can add to our understanding and, possibly, help raise confidence in the accounting measures. For objective indicators too, a broadening of the scope beyond purely financial poverty serves to bring the social indicators closer to everyday experience. People may relate more directly to indicators of poor housing or poor sanitation than to measures of total income.

C. Clear-cut social inclusion objectives, with related quantitative targets and strategies

It is important that countries adopt an *objective-driven* approach to the fight against poverty and social exclusion. They ought to concentrate on a carefully selected *shortlist* of key national policy objectives, expressed in terms of social outcomes and - if appropriate - framed according to the relevant common objectives agreed internationally (for example, the Millennium Development Goals or, in the case of the EU, the common objectives adopted for the Social Protection and Social Inclusion Process). These objectives should be an outcome of the *diagnosis* of the causes of poverty and social exclusion in the country concerned.

In this highly focused framework, social inclusion strategies should then consider solely those policy measures aimed at realizing the shortlisted national priorities, while keeping in mind the need to address all the relevant policy domains in deciding on the measures to be implemented, as well as the importance of implementing gender mainstreaming and children mainstreaming (see above, sections III.I and III.J). The selection of policy measures should be based systematically on ex ante impact assessments. Countries would therefore need to develop their own social inclusion monitoring framework, responding to their national specificities, and including targets and indicators built on the basis of reliable and timely data. This national framework should allow clear-cut links with the overall worldwide framework (along the lines suggested by figure I). To achieve this, countries would also need to build the required statistical and analytical capacity (see section VI below entitled "Capacity-building").

Once these policy measures are adopted, *headline* outcome targets should be set. The number of such targets would have to be small to ensure their political impact, and they would need to incorporate concrete statements of purpose and to contribute to awareness-raising. Headline targets should be complemented, as appropriate, by more *detailed* targets covering very specific aspects, and by *intermediate* targets within the time span of the measures (so as to allow for progress to be assessed and to serve policy planning purposes); they could also usefully be linked to relevant input targets. All of the outcome targets (and possible related input targets) should be linked to concrete indicators for monitoring progress towards achieving them; some (though not necessarily all) targets should ideally be framed in terms of the commonly agreed indicators. For this to be possible, the strategies put in place by countries will need to be broad. As much as possible, they should follow a multidimensional approach cutting across and integrating a range of policy domains, calling for *joined-up government* (at and among the different policy levels[17]) as well as the *active* participation of all the relevant actors (see above, section V.A entitled "Mobilizing all the key actors through a participatory approach"). There has to be widespread "ownership" of the social inclusion strategies.

This clearly represents a challenging task for countries, not least because it requires that they combine a multidimensional with a focused approach, in order to create a number of truly *integrated strategies*. To achieve the

[17] The importance of coordinating, where appropriate, national, regional and local social inclusion strategies (and possible related targets) needs to be emphasized.

task, they have to carry out, using the internationally agreed common objectives as their analytical framework (if relevant), a thorough multidimensional analysis of the national situation with regard to poverty and social exclusion across all important areas. On the basis of this analysis, they should then select a shortlist of three or four key national policy objectives for the period concerned (for example, 2010-2013). Finally, for each key national objective, they will have to develop an integrated strategy, looking explicitly at how each main policy domain can best contribute to addressing that objective and how the different policy areas can mutually reinforce each other. Academic research can play an important role, particularly in the diagnosis of the causes of poverty and social exclusion and in the analysis of the impact of policies on social outcomes.

In the context of the EU open method of coordination, the European Commission and the Member States have reflected on the characteristics to be met by quantitative targets for them to be useful. They have agreed to the following list, which can provide helpful guidance for the worldwide exercise suggested in this study. A quantitative target needs to be:

- **Ambitious** but **achievable**: achieving the target should represent significant progress but should also be realistic
- **Relevant**: achieving the target should contribute significantly to meeting a key objective
- **Intelligible**: the target should be understandable and should make sense to the average person
- **Quantified and measurable**: the target should be specific and the data needed to measure whether it is being achieved should be available
- **Time-specific**: the period of time over which it is intended that the target is to be achieved should be specified

D. Mainstreaming social inclusion and the related need for systematic social impact assessment

The key question that is briefly addressed here is how progress can be made towards better anchoring the social inclusion goals in all relevant domestic policies. In the previous sections, a number of the key elements – diagnosis, policy evaluation, definition of outcome indicators and outcome targets – were identified; here, suggestions are made as to how they can be used to help implement effective national and subnational strategies designed to combat poverty and social exclusion.

For countries to ensure stronger governance regarding social inclusion issues, they need to not only mobilize all the actors concerned (see above, section V.A), but also *mainstream* social inclusion goals at all levels of governance – local, regional, national and (when relevant and possible) international. Given the multidimensional nature of poverty and social exclusion, it is essential that all relevant policies (employment, economic, fiscal, budgetary, social, health, cultural, education and training, environmental, agricultural, urban planning, etc.) and all the key actors concerned contribute to the efforts to create greater social inclusion.[18]

In order that a real interaction among these various policy areas may be achieved, *mainstreaming of social inclusion* in policymaking has to be implemented through the establishment of a scheme of systematic policy assessments (both ex ante and ex post assessment). To this end, the impact on social inclusion of all relevant specific policies should be systematically monitored, so as to identify possible ways of adjusting such policies to strengthen their contribution to promoting social inclusion.

[18] On the issue of mainstreaming social inclusion, see Combat Poverty Agency (2006) and O'Kelly (2007).

In short, social inclusion objectives should be better integrated with general policy design, implementation and budgetary decision-making. Instruments such as poverty proofing and social impact assessment have a major role to play in this context.

VI. Capacity-building

A. Developing statistical capacity

In considering the development of measures of poverty and social exclusion, consideration has to be given not only to the data themselves but to statistical capacity-building more generally. The construction of social indicators, and their maintenance on a regular basis, depends on the presence of a highly qualified staff of statisticians and computer specialists in each country. Past experience has shown that data weaknesses arise when there are problems of communication between data producers and data users. Apparent differences in results can often be traced to differences in procedures and definitions, and attainment of a high level of comparability depends on close cooperation, which in turn depends on the available manpower in national and subnational statistical agencies and other government departments in charge. There is also a need for adequate resources, human and material, to be made available to the central body assembling the data, as well as for wider diffusion of quantitative skills in the research community (academic, private research institutions, enterprises). In short, it is essential to emphasize that the building of statistical capacity is a crucial investment.

The above discussion of data sources has highlighted the role of sample surveys, but the statistics needed for calculating social indicators may be generated from different sources, including population and housing censuses, administrative records, employer records, etc. This implies that there is a need for a statistical system that draws together, analyses and validates the data derived from these different statistical sources, which, often, entails significant work in the area of reconciliation. Here, national statistical offices play a central role, in conjunction with international agencies. There is often the need to engage different government departments, including those of local and regional governments.

Directly linked to the issue of statistical (and analytical) capacity building is that of *data access arrangements*. The process through which data may be widely used by researchers, which requires, in particular, reasonable pricing conditions as well as appropriate documentation on survey and data processing, constitutes an important route of data assessment and identification of problems. Such a process serves to raise the visibility and public acceptance of the data source. In this way, the data are incorporated in the workings of the scientific community.

B. Using indicators

How can the social indicators be used in the process of policy formation? Four main ways can be identified. These may be best understood by the aid of the schema set out in figure I, which starts from national objectives, although we should recognize from the start that there may be different levels of government within the nation State. Different regions may have different priorities. The objectives of national Governments are likely to overlap to a considerable extent, even in cases where there is no formal concertation. Where there are groupings of States, as in regional trade blocs, those States may have explicit common goals. Further, there are world objectives such as the Millennium Development Goals.

The definition of the social indicators follows from the objectives, but how can they be used in the development of policy to achieve those objectives? The first type of use of the indicators is forensic. By applying the indicators to internationally comparable data (left-hand side of figure I), we can learn about the differential performances of different countries. There are, of course, dangers in reading too much into "league tables", as discussed below in section VII.B entitled "Presentation of indicators", but they provide an initial point of enquiry. If a country, or a group of countries, has systematically had greater success in raising school attendance, then this pattern should be investigated. The UN or the World Bank can learn from the differing experience of different countries. To go further, and to draw conclusions about the policies applied, we need, of course, to carry out a comparative policy analysis, as discussed in the next section.

The results of such a comparative analysis of performance, carried out at an international level, provide a valuable cross-reference for *national assessments* of performance, and this provides a second role for indicators. The

establishment of commonly agreed indicators may lead countries to initiate the measurement of their national performance, possibly using national data sources, in which case there may be issues of reconciling the results obtained from different sources. If indicators produced by the United Nations, the UN Development Programme (UNDP) or other UN organizations, show poverty as rising in a country when national statistics show a fall, political problems will undoubtedly arise. The experience of the EU shows that these problems are real—and will lead to debate about the choice of definitions—but that they can be resolved.

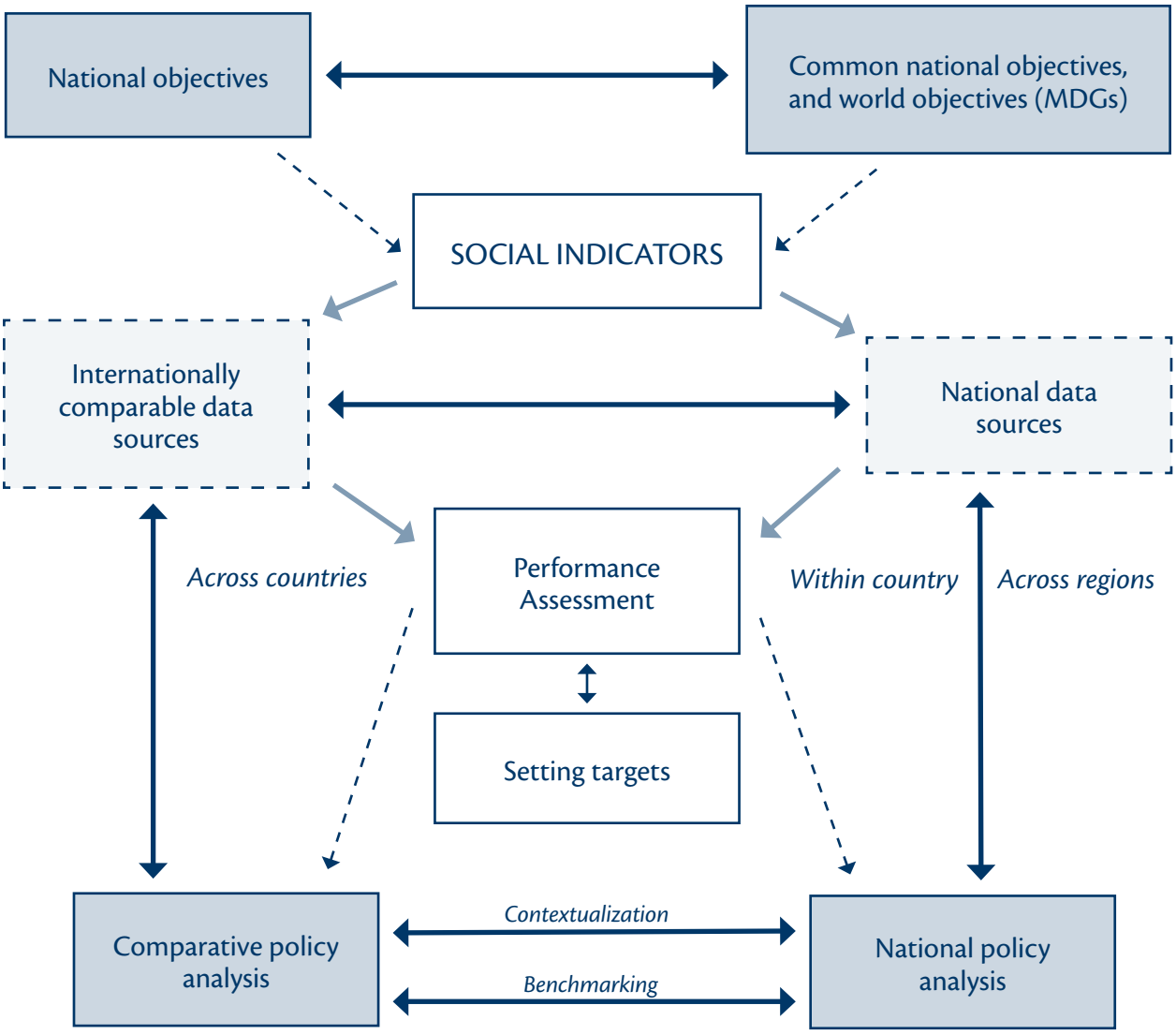

Figure I: An integrated social inclusion monitoring framework

Social indicators may also be used by regional and lower-level governments. This course of action may also lead to political conflict, particularly where resource allocation (for example, sharing of tax revenues) is affected by the measurements. However, it may also lead to an increased degree of *joined up government*. Policies to combat poverty and social exclusion are often the responsibility of multiple levels of government, and there may not be clearly converging lines of sight between those who set national objectives and those who deliver

the policy on the ground. Here lies a third role for social indicators, as possible contributors to policy coordination. Achievement of policy objectives requires that different levels of government work within a common framework. The same applies to coordination across government. Delivery of improved health depends on the efforts of a number of different government ministries. There is overlap between education and health. Policies designed to integrate young people into the labour market will affect the work, inter alia, of the education and employment ministries.

The final area of application of indicators is that of the explicit setting of targets. In some cases, as with the Millennium Development Goals, the targets come first. This can also be the case at the national level, with national anti-poverty strategies for example. In other cases, however, Governments have moved more cautiously and begun with indicators. The EU in its Lisbon Strategy incorporated both approaches, setting targets for employment and indicators for social inclusion. Yet, indicators can clearly pave the way for the setting of targets (see above section V.C entitled "Clear-cut social inclusion objectives, with related quantitative targets and strategies").

C. Strengthening policy analysis

The indicators of poverty and social exclusion described thus far are, in general, outcome indicators aimed at measuring the extent of progress towards achieving the common objectives of promoting social inclusion. It must be recognized that the outcomes measured by the indicators depend partially on exogenous factors, such as demographic developments, social tensions and violence, but are also influenced by the policies adopted by Governments, at all levels, and by international organizations. To bring about a substantial improvement in the reported indicators requires long-term structural policy efforts. The indicators therefore need to be integrated into the development of a policy strategy; policy and outcomes need to be linked. Among other advantages, such a linkage will help countries learn from each other's experiences and discover what "works". It will thus facilitate policy learning.

Several types of issues may need to be looked at when the link between policy and outcomes is being considered: (a) mapping the relation between country policies and the indicators of poverty and social exclusion, (b) projecting the future impact on countries of existing and announced policies and (c) examining the impact of global policies. In so doing, it is important to examine the totality of policies that impact on individuals, families and communities. There will inevitably be policy variables that cannot readily be incorporated, but the aim should be to ensure that the results are as comprehensive as possible.

In examining the impact of policy, we need first to establish a *baseline*. This refers both to the initial point of departure and to the counterfactuals, namely, what would have happened in the absence of the policy. If we are asking how far a social inclusion policy can be expected to reduce, say, the proportion of families living at risk of poverty, then it is not always easy to list the precise measures that constitute the "policy change" from the baseline. The same applies to the timing. Policies are announced in advance of their enactment, and may be "reannounced" in the period before they come into force. It may not be easy to relate policy announcements to their starting dates; yet, this is clearly relevant to determining their impact in terms of outcomes. Moreover, the policy baseline has to be dynamic. As has been made clear by Callan (2005), in cases where wages and prices are rising, a neutral tax-benefit policy may be defined as one that indexes benefit levels, tax thresholds and tax bands in line with rising incomes. This then represents the benchmark against which policy change is to be assessed. The dynamic nature of the calculation is particularly important given the delay in the release of data on outcomes.

The next difficulty concerns the counterfactual with respect to the outcomes. A Government may have set in train measures that will reduce the risk of poverty by 2 percentage points, but the underlying trend may be upward. If, in the absence of the new measures, we could have expected the at-risk-of-poverty rate to have risen by 2 percentage points, then the policy will succeed only in holding the line. This would not be detected simply by tracking changes in the outcome indicator. In other cases, the underlying trend may be favourable. For instance,

in the 2006-2008 National Action Plan on social inclusion that it submitted to the European Commission, Cyprus (2004, annex, p. 7) noted that developments in the area of employment since 1997 "will have positively influenced matters - in the direction of lower risk of poverty".

It is obviously important to look at the total range of policies that impact on the problems of poverty and social exclusion. Full coverage is necessary because of the interrelatedness of different policies noted above. Measures to improve access to jobs for single parents, for example, may raise their employment rate, but the impact on their income will depend on the interaction with social transfers, housing benefits, educational grants, etc. The income of the family will depend on other Government policies, such as those on the minimum wage, housing benefits, and the availability of childcare.

Carrying out the policy analysis on a comparative basis can be a vehicle for mutual learning. In the EU, the *peer review* process is designed to encourage just such learning as part of the Social Protection and Social Inclusion Process. National specificities, and indeed differences within countries, with regard to policymaking institutions mean that it would be difficult to apply one country's policies directly to another. One cannot simply "lift" a particular policy structure or intervention from one country and apply it in another, since the broader institutional context in which it is set may be critical to understanding why it is effective (see the discussion above on *contextualized benchmarking*). At the same time, countries can learn from each other. To begin with, one would expect them to identify the dimensions of poverty and social exclusion in which their performance is relatively less satisfactory, and to concentrate on those dimensions. One can then ask why performance is relatively less good. In part, the reasons can be found within the country, particularly where there are identifiable internal geographical differences; in part, they may (also) be identified by looking outside.

Finally, it should be noted that in the previous sections the focus was on the question how policies affect outcomes:

Policies ⟶ Indicators?

However, it is also important to reverse the process and ask what changes in policy are necessary to achieve a specified reduction in the problems identified by different social indicators?

Policies? ⟵ Indicators

D. Tools for policy analysis

Faced with the challenge of determining what policies are needed to achieve our goals, how can we, as policy analysts, respond? The present section describes two types of analysis widely used at a country level to examine the impact of policy on financial circumstances: model families analysis and microsimulation models. They are discussed separately but it is best to view them as complementary, which implies that the way forward may best be found through an integrated modelling framework (Sutherland, 2005).

An individual, when presented with a policy proposal, is likely to contemplate how he or she, and his or her immediate family, are affected. Suppose that the Government proposes an employment subsidy for workers who have children and are earning less than a specified amount, with a tapered withdrawal for a range of earnings above this amount. The person will ask, am I eligible? If so, how much will I receive and how will this affect my decisions about choice of job? (For example, the new proposal may affect whether or not I go to work in the city.) And if I am not eligible, then can I change my behaviour to qualify?

The same questions, writ large, concern the policy analyst. The Government minister will no doubt want to know the impact of the proposal on "model" individuals, chosen as being representative of the population. Suppose

that we consider the impact on child poverty. The minister will want to see calculations for representative families with children who are currently below the poverty line. How much will they benefit? Will the proposal be sufficiently generous to lift them above the poverty threshold? These concerns are not limited to ministers. All those involved in policy debate are interested in "what if" analysis. Ensuring wider accessibility of policy analysis is an important objective. In this context, it is worth mentioning the project launched by the World Institute for Development Economics Research of the UN University (UNU-WIDER) on "Designing Africa's poverty strategies: creating the capacity for policy simulation". This project provides user-friendly access to microsimulation models (the second type of approach considered in this section; see below) at present covering five African countries. (See box V.)

Box V: Ensuring wide and user-friendly accessibility of policy analysis tools: the UNU-WIDER project on "Designing Africa's poverty strategies: creating the capacity for policy simulation"

The UNU-WIDER project on "Designing Africa's poverty strategies: creating the capacity for policy simulation" provides user-friendly access to national microsimulation models. The objective of this project is "to use economic modelling techniques to design pro-poor policies". As of the present, it has been implemented in five African countries: Botswana, Cameroon, Nigeria, South Africa and Uganda. (see http://models.wider.unu.edu/africa_web/index.php?lang=en).

For example, the website devoted to Botswana's model indicates: "Government's direct and indirect tax policies along with its welfare programmes are important means to help gradually realize the above objectives, especially to reduce income inequality and poverty". This site provides access to a microsimulation model of Botswana households. It has been developed to enable researchers and policymakers to design counterfactual reforms of value-added tax and welfare policies in Botswana and to quantitatively assess their budgetary, distributional, and poverty impacts. Additional policy modules that can help design effective anti-poverty policies will be added to the site in the future (see http://models.wider.unu.edu/africa_web/bw_intro.php)."

The model families approach basically involves calculating the financial consequences of fiscal and social policies for a set of hypothetical families or households. The calculations allow one to view the effect of policy variations, and to examine the effects of changes in household circumstances, such as an increase in gross income (and hence to calculate marginal tax rates). This technique starts with definitions of specific family types, making assumptions about the number of persons in the household, their age, their marital status, their status in the labour market, their gross earnings, their housing situation, etc.

For these family types, the amount of taxes and social insurance contributions is computed, as well as the amount of fiscal and social benefits, given existing welfare State arrangements. In this way, the net disposable income for each family type can be determined. The analysis may be conducted in terms that allow one or more variables to vary continuously, such as gross income, the results then being presented as functions of income (for example, in the form of a graph depicting net disposable income as a function of gross income). Model families results thus reveal the level of social protection provided to households in various situations. The policy parameters may be the same for each household, or they may vary, for example, by geographical location (see below).

The usefulness of the model families approach for comparative research on social policy is evident from the frequent use of this technique (see, for example, Bradshaw *and others*, 1993). The Organization for Economic Cooperation and Development (OECD) has been using the method for many years for several purposes, such as calculating tax burdens (OECD, 2003), replacement rates for the short-term and the long-term unemployed (OECD, 2004), and support for families (OECD, 2005). In the words of OECD colleagues, "The results from the

tax benefit models allow policy makers to see in detail how their policies might affect one family. This can be a powerful tool, in that aggregation can sometimes erase details important to the individual" (personal communication to the authors). By calculating net disposable incomes and by comparing them to income poverty lines and to minimum and average wages, model families results can give a clear indication of the level of (minimum) income protection, and also the financial incentive to take up work associated with a package of fiscal and social measures (see Harding *and others*, 2005). They are therefore related to the main objectives of social protection: minimum income protection, maintenance of the acquired standard of living and promotion of social participation, in particular labour-market participation.

One strength of this approach is that model families calculations can bring together different elements of government policy. The calculations of net disposable incomes take into account gross benefits and wages, income taxes, social contributions and local taxes, as well as child benefits and housing benefits. In other words, family models compute the financial consequences of a *package* of social protection measures, taking into account the interaction among various fiscal and social protection measures. Taking a broad view of policy instruments is especially important in comparative analysis, because what households have to pay for out of their after-tax income varies markedly across countries. There are significant cross-country differences in the cost of housing, health care, childcare, etc. Several studies indicate, for instance, that results differ significantly according to the treatment of housing costs (see, for example, Kuivalainen (2003)). In their international comparison of child benefit packages, Bradshaw and Finch (2002) calculated – by means of the model families approach – net disposable incomes not only after taxes and social contributions but also after the benefits and costs for housing, health care, education and childcare.

In undertaking these calculations, a number of key assumptions have to be made, which need to be borne in mind when considering the results. First, the *eligibility* rules can exclude certain categories from income protection. Working-age people refusing a job or training, for example, sometimes receive a reduced benefit or are suspended.

Second, family models assume that all families claim and receive the benefits for which they are eligible. In other words, family models do not take into account the *administrative operation* of social protection measures and related *non-take-up rates*. Several studies indicate that non-take-up rates for social assistance benefits can amount to 20 per cent and more (see Hernanz, Malherbert and Pellizzari (2004); van Oorschot (1995)). Experience with means-tested benefits has shown that a significant proportion of those entitled to those benefits may not claim their entitlement. The evidence reviewed by Hernanz, Malherbert and Pellizzari (2004, p. 4) suggested "that low take-up of welfare benefits occurs across both countries and programmes. Estimates typically span a range of between 40 per cent and 80 per cent in the case of social assistance and housing programmes, and between 60 per cent and 80 per cent for unemployment compensation". Non-claiming can reflect lack of information or it may reflect compliance costs, notably time; in some situations, receipt of means-tested benefits may be perceived as stigmatizing.

Third, in several countries, benefit levels are not set by the national Government but differ across the regions or even municipalities. There are several options for dealing with cross-regional variations in social assistance benefits and/or housing benefits. Benefit levels: (a) can be based on the national average, (b) they can be based on a representative case or (c) they can be non-simulated. Finally, there are important benefits, notably those from collective services, which are typically omitted altogether. (These may also be expected to vary geographically.)

Such considerations underline the twin challenges of this approach: the selection of hypothetical family types and their aggregation to reach overall conclusions. Model families studies do not always make explicit their criteria for choosing family types. This can generate concern that they are tailored to the policy interventions under investigation, with the attendant risk that the analysis will neglect other vulnerable groups. In a comparison across countries, there is the possibility that the choice of hypothetical family types will be biased inadvertently

in the direction of families that are more represented in one country than in another. Countries differ, for instance, in the share of families with one, two and three children and the share of lone parents. So far two main methods have been used to synthesize the results of model families simulations so as to produce an aggregate result. The first is that of equal weighting: for example, Kuivalainen (2003) and Nelson (2003) calculated the average benefit level for all model family types. As there appears to be little rationale for equal weights per se, it seems preferable to use survey or administrative data to weight the different types. This then raises the issue of the choice of basis. The ranking of countries in terms of the school meal programmes, for example, may change significantly when weights for, say, South Africa rather than weights derived from, say, Brazilian data, are used. If the model families findings were highly correlated across types of household, then there would not be so much of a problem. However, this is not the case. Even within a single branch, such as social assistance, countries occupy substantially different positions, depending on the type of household.

These qualifications should be borne firmly in mind when using model families analysis. Nevertheless, this approach is clearly illuminating. Moreover, one major reason why the model families approach is frequently used in comparative research on social policy is that these models are relatively *easy to develop and to maintain*. Such models entail only some carefully chosen fiscal and social regulations for a limited set of family types. The model families approach requires a minimum of empirical data (for example, average earnings or average rent). Therefore, it is fairly simple to keep model families results up-to-date and to construct time series. This is of particular significance when one considers their use by campaigning groups, often short of resources, and journalists. This last advantage is not shared by the second approach considered in this section: microsimulation modelling.

Let us now consider the potential contribution of tax-benefit microsimulation models designed to investigate the impact of changes in taxes and benefits on disposable household income for a representative sample of the population. In contrast with the model families approach, this model starts from information about actual households: actual earnings, investment income and private transfers. Obtaining this information is not necessarily straightforward, and microsimulation is much more resource-heavy than the model families approach. Starting from the observed situation, microsimulation models the effect of changes in policy. From knowledge of the policies, and administrative practice, it can calculate how the disposable income of a given household would be changed by a policy proposal. Take, for example, an employment subsidy, as described above. The microsimulation model allows for the identification of the families eligible for this benefit and for the calculation of the amount of the benefit to which they would be entitled. As with the model families analysis, the calculations can take account of the interactions between different elements of the tax and transfer systems. Not only can such a model calculate the level of fiscal and social costs and benefits for each individual, it can also provide information on the *coverage* of a certain measure. These models have come to be used very widely internationally. For further discussion of this type of microsimulation model, see inter alia, Atkinson and Sutherland (1988); Bourguignon and Spadaro (2006); Harding (1996); Harding and Gupta (2007); Immervoll *and others* (2005); Legendre, Lorgnet and Thibault (2003); and Verbist (2005).

As a microsimulation model operates on a representative sample of the population, it is not necessary to make all of the *assumptions* required to define model families. The number of household members, their demographic and socio-economic characteristics, etc., are provided by the source data. No assumptions have to be made regarding regional and local variations, provided the respondent's place of residence is available from the data. Actual benefit receipt provides some evidence about take-up. At the aggregate level, the source includes the weights for the different persons and households, so that one does not have to confront the weighting issue described above. Moreover, the use of actual survey or administrative data forces the analyst to confront the diversity of household circumstances, which may be missed if we start by enumerating model families in the abstract. An important example is that of multi-family households. There may be people living in the household other than the family for whom the model calculation is made.

Tax-benefit models have typically been built up for developed countries, but the techniques are now being applied to developing countries, as exemplified by the aforementioned series of models that were built for five African coun-

Box VI: Microsimulation models in South Africa and Latin America building on the EU model EUROMOD

South Africa: SAMOD, a project aimed at developing a static microsimulation model of the South Africa's tax-benefit system, started from the framework provided by the EU tax-benefit model EUROMOD. It takes data on individuals and calculates the entitlements of individuals and households to social benefits along with the household's tax liability. By aggregating these data to form a representative picture of the whole population, it allows for a modelling of the effect that different policy reforms would have both on national revenue and expenditure and on individual household budgets, and thus of the impact on poverty and inequality. A first working model of SAMOD was successfully developed using the EUROMOD platform and the South African Income and Expenditure Survey for 2000. The model is now being refined and options for updating it are being explored.

The Centre for the Analysis of South African Social Policy (CASASP) (University of Oxford; Michael Noble, Director; Kate Wilkinson; and Gemma Wright, Deputy Director) is undertaking this project for the South African National Government Department of Social Development. SAMOD is funded by the Southern Africa branch of the United Kingdom Department for International Development as part of its Strengthening Analytical Capacity for Evidence-Based Decision-Making Programme (SACED). It is being developed by the CASASP in collaboration with the Department of Social Development so that existing and possible future policy options for the social security system in South Africa can be explored. Following up on the work of the Taylor Commission in 2000, the Government of South Africa is currently reassessing ways in which the social security system could be made more comprehensive (for example, there are currently no benefits for healthy, unemployed people of working age who have not contributed to the Unemployment Insurance Fund). It is intended that this model will be used to explore different policy options and to inform policy decisions within Government. Members of the Department of Social Development team will be fully trained so that they can update the model themselves beyond the life of the project, by incorporating new or speculative policies and by utilizing new survey data as they become available.

Latin America: LATINMOD is a UN Development Programme (UNDP)-funded project that aims, in the long run, to make tax-benefit microsimulation techniques as widespread as possible across Latin America. Building on the framework of the EU model EUROMOD, the viability of such an objective will be evaluated by constructing models for a selection of countries: Brazil, Chile, Guatemala, Mexico and Uruguay. These countries have been selected on the basis of the fact that they represent different examples of social, economic and demographic circumstances as well as of tax and benefit systems. The policies to be simulated will comprise personal taxes and cash benefits identified as suitable for this exercise by country experts involved in the project. Once built, the model will allow conducting quantitative analysis of tax-benefit policies, including ex-ante assessment of fiscal reforms. In order to promote and disseminate its use, training courses will be provided in each of the participating countries. The project is coordinated by Horacio Levy and Carlos Urzúa.

tries with the support of UNU-WIDER (see box V). Further examples of tax-benefit models being implemented in less developed countries are provided by the SAMOD and LATINMOD projects; both started from the framework provided by the EU model EUROMOD, developed by Sutherland and colleagues;[19] the former in South Africa and the latter in Latin America (see box VI). They demonstrate that tax-benefit simulations will become increasingly important as anti-poverty programmes come increasingly to be funded by domestic fiscal sources.

[19] See http://www.iser.essex.ac.uk/msu/emod/

The extent to which microsimulation models enjoy an advantage over model families analysis crucially depends, of course, on the quality and timeliness of the underlying data. The representativeness of the findings derived from microsimulation may be open to question if there is not a sufficiently large sample, or if there is serious differential non-response. We may be able to obtain more accurate aggregate figures from model families weighted by results from administrative records than from a microsimulation based on a highly unrepresentative sample survey. The accuracy of the calculations for individual households depends on the availability of adequate information about the relevant socio-economic characteristics. For example, the geographical information may not be sufficiently detailed to pinpoint the precise administrative authority. In some cases, owing to the limitations of the input data, it is not possible to model particular transfers, such as survivor pensions and disability benefits. Policy initiatives may have attached conditions that cannot be verified with the available data, or the policy may be restricted to groups of the population that cannot be identified. This means that there are certain classes of policy change that cannot be simulated.

The accuracy of the simulation results depends also on the provision of household responses without serious error. This is one reason why it may not be possible to recreate the observed taxes paid and benefits received: the taxes and benefits calculated by applying the rules may not be equal to the amounts recorded. This is not the only reason for such a discrepancy. In reality, the administration of taxes and benefits may not follow the formal rules. There may be mistakes in the calculations; the family may make an incorrect statement to the authorities of its income or other circumstances. Where it is not possible to reproduce in the simulation model the current levels of taxes and transfers, we have to take as the basis for the simulation the calculated figure; otherwise, the results will confound errors and policy changes. The total cost of a policy proposal, for example, has to be calculated using the differences in the simulated figures before and after the policy change.

In the model families analysis and the microsimulation models just described, labour-market behaviour is assumed to be fixed, which means that the models cannot allow for the effects of policy that operate via behavioural change. For this reason, they are sometimes described as "static" and are criticized for not casting light on the behavioural changes with which policymakers are concerned. This criticism is too severe in so far as both kinds of analysis can provide a valuable *input* into the analysis of behavioural change. One product of model families analysis can be calculations of the impact of policy change on the incentives faced by the family. For different possible variations in labour supply, or in savings behaviour, we can see how the policy change affects the return to extra effort or to extra savings. This is the *marginal tax rate*: the amount taken away from $1 extra gross income as a result of the operation of the tax and benefit system. The same calculations can be carried out using microsimulation models to obtain distributions of marginal tax rates. We can see how many people face a marginal tax rate of 50 per cent or higher and whether these rates are to be found at the bottom of the earnings distribution, where people are in receipt of one or more means-tested types of benefits, or at the top of the earnings distribution, among those facing the top rates of income taxation. To give just one example, Harding and Polette (1995) have shown the impact of means-tested transfers on effective marginal tax rates in Australia, while Harding *and others* (2006) show that high effective marginal tax rates now affect more working age Australians compared with a decade ago.

These calculations cast light on the implications for work incentives. They also serve to highlight the many different dimensions of labour supply. A person can increase the labour he or she supplies by working more hours, or by taking a job that requires more effort. Both approaches may increase earnings, but the implications may be different. For example, if benefits are paid subject to an hours-related condition, then a person may become eligible by increasing working hours. A couple can increase its labour supply via an increase in the hours worked by the man or by the woman or by both. Again, the implications may be different: for example, in cases where husbands and wives are taxed independently. In the same way, savings can take different forms. A savings bank may offer both taxable and non-taxable accounts; a person can invest in shares that generate capital growth rather than dividends; a person can invest in enlarging their house rather than in financial instruments. The marginal tax rate may be different in all these cases. For example, where transfers are subject to an assets test, certain classes of assets (such as owner-occupied houses) may be excluded.

The marginal tax rate calculations, however, take us only part of the way. They do not predict what is to happen to labour supply or savings as a result of the policy change. We cannot say that unemployment will fall by *x* per cent. We cannot say that there will be a *y* per cent reduction in the proportion of the population living in jobless households. For this, we require a *model of behavioural response* and access to the rapidly growing body of research on the empirical impact of policy interventions. Although it is not possible to review this literature here, it is important to note that the "join" should be made, with the results from policy intervention studies feeding into policy simulation models. This may sound self-evident, but there are several reasons why incorporation of the findings of this literature into microsimulation models is not a straightforward matter:

(a) Many of the estimates relate to a subset of the population

(b) The estimates typically cover only certain dimensions of behavioural response

(c) Econometric models predict behaviour up to a stochastic disturbance term, and we need to consider how it is to be interpreted (whether as a transitory variation or a fixed taste difference or a "mistake")

(d) Households make multiple decisions and these are interrelated (for example, the decision to work in the city and the savings decision)

(e) It is not easy to explain to the users of the results the basis for the predictions

It should be stressed that these are reasons not for rejecting the approach but for developing the research: they represent a challenge.

The tools of analysis described above are extremely valuable. At the same time, we should not lose sight of the fact that they embody a set of assumptions about our values and objectives. A good example of such an assumption is that about income-sharing within the household, which is very relevant to the gender dimension of poverty and social exclusion. In spite of the importance of eliminating inequalities and promoting equality between women and men (see above), much policy analysis still does not take into account the gender dimension. Analyses based on survey data typically treat the household as a unit, assuming an equal sharing of financial resources within households.

There are two important issues in this regard. The first is empirical and concerns the actual distribution of resources within the household. The assumption of equal sharing does not necessarily reflect reality. The second issue is one of judgement: should individuals be dependent on the sharing of resources within the household? The answer to this second question may depend on whether we are concerned with *standards of living* or with *rights*. Sharing may ensure that women have a comparable standard of living, and the observed differences in money income may be the result of a mutual agreement, but the fact remains that people do not have the same entitlement as when the income comes to them directly. We may therefore, on a rights basis, be concerned with the share of income that they receive by right. (See also discussion above in section III.D entitled "Consumption versus income".)

VII. Development of social inclusion indicators for use in a worldwide context

A. Structure of international portfolio

The diversity of country concerns, and the differences in levels of development on a world scale, mean that an international portfolio of social inclusion indicators has to be designed flexibly. The portfolio has to conform to the principles set out earlier, while recognizing the diversity of needs and priorities. One way in which this could be achieved is through the creation of a three-tier structure set up as follows:

- *Tier 1* would consist of a restricted number of lead indicators (no more than 10) for the main fields relevant to all countries, including income poverty, material deprivation, lack of education, lack of productive role, poor health and poor housing. The lead indicators have to reflect the various key dimensions of social inclusion. This is important not only because this would serve to concretely recognize and emphasize the multidimensionality of poverty and social exclusion, but also for countries' Governments. Indeed, there would undoubtedly be advantages arising from the fact that rankings will differ across the various fields, so that one might expect greater willingness on the part of Governments to diffuse the results and actively participate in the *contextualized benchmarking* advocated throughout this study (see Marlier *and others*, forthcoming).

- *Tier 2* would contain supporting indicators, providing greater detail and describing other dimensions of the problem, and covering dimensions of social inclusion not (yet) included in the tier 1 list. It would also contain useful contextual information, both quantitative *and* qualitative. There would be no limit imposed on the number of tier 2 indicators and on the contextual information provided, but one should avoid unnecessary proliferation, since each additional indicator increases the statistical and other resources required. Topics covered could include, for instance: access to justice, social and political participation, civil rights, security and justice, well-being, information and communications, mobility, leisure and culture.

- *Tier 3* would consist of indicators and contextual information that individual countries themselves decide to include, in order to highlight specificities in particular areas and to help interpret the tier 1 and tier 2 indicators; no doubt, these national indicators will provide a source of ideas and experience about new indicators which may be adopted at tier 1 or tier 2, in time replacing those initially proposed.

Both tier 1 and tier 2 indicators would be commonly agreed.

The three-tier structure has a number of advantages. Definitely most important is that it allows the principle of balance across different dimensions to be satisfied without restricting the scope for development of individual fields. Certain areas are more developed, methodologically and empirically, than others. Financial poverty, for example, may be measured in a number of ways (poverty count, poverty gap, etc.). The three-tier structure allows there to be several indicators of poverty at tier 2 without their being allocated a disproportionate weight in the overall assessment at tier 1. By appropriate choice of the lead indicators, it will be possible to satisfy the requirement that the significance of the components be "proportionate": that is, that the individual fields have degrees of importance that, while not necessarily being exactly equal, are not nonetheless grossly different. Countries may differ in respect of the relative weight that they attach to the different fields but there is likely to be broad agreement that each field is relevant.

B. Presentation of indicators

There are clearly dangers in using the commonly agreed indicators to draw up "league tables". The aim of policy (social policy as well as other policies relevant to the social field) should be to improve overall performance and, ide-

ally, bring all countries to a high level of social inclusion. If such a high level is achieved more or less uniformly, then the rankings will have little meaning. Likewise, all countries may be performing equally badly, and a ranking would then give no indication of the need for action. In a situation where countries are improving their performance, but where there are no changes in ranking, no change would be recorded. At the same time, comparable indicators are designed to provide benchmarks and rankings can be valuable aids to policymaking if they are properly contextualized and if error measurements are duly taken into account (see above, sections IV.A and IV.C on "A principles-based approach" and "Data for the construction of indicators"). In seeking to understand which policies "work", it may be a helpful first step to identify those countries that are better performing, based on several indicators.

In the presentation of the indicators, it is indeed important to convey as clearly as possible the uncertainty that surrounds the numerical magnitudes. Section IV.C above (on "Data for the construction of social indicators") briefly described the way in which the statistical sources become subject to a variety of errors. More generally, the variables employed as indicators may be only imperfect measures of our underlying concerns. As has been emphasized in the literature on national league tables for schools and hospitals (see, for example, Goldstein and Spiegelhalter (1996)), the uncertainty needs to be made explicit. For example, the user will ask whether a reduction of one percentage point in the rate of illiteracy is larger than the margin of error. This is not, however, an easy question to answer. Intervals can be supplied that take account of sampling variability, such as standard errors for the proportion of the population living below an income cut-off; but other forms of error are less easily formalized. Ultimately, a judgement has to be made concerning the reliability of specific indicators for the purpose in question.

C. Disaggregation of indicators

It is envisaged that the indicators would be disaggregated by a number of key variables, subject to the data constraints. The importance of disaggregation by gender has already been emphasized. In determining the extent of other disaggregations, it will be necessary to carry out a detailed consideration of each of the dimensions along which disaggregation should take place. The objective here is not to enter into such a discussion, but rather to refer to some general issues and then consider the specific dimension of region.

There are at least three ways in which indicators can be disaggregated. The first – and perhaps the most natural – is to consider *values of the indicator for specified subgroups* of the population. We may be, for instance, interested in the differences between rural and urban households. For this purpose, the subgroups need not be exhaustive. We may look at the poverty rate among children (that is, the proportion of children living in households below the poverty line) and the poverty rate among the older persons, without considering the intermediate age range. Second, we may consider the *variation of the indicator across subgroups* of the population. This may involve, for example, looking at the ratio of the poverty rates of children and older persons or at the standard deviation of regional employment rates. The third approach to disaggregation involves the *decomposition* of the identified population by exclusive (that is, non-overlapping) subgroups. We may, for instance, be interested in the composition by age of the long-term unemployed.

In considering what disaggregations are possible, the first issues are statistical. The statistical reliability of the results depends on the sample sizes, which can easily become too small if the population is divided into several groups, generating standard errors so large that no distinctions can be drawn among the subgroups covered. Sampling errors may also limit the conclusions that can be drawn about changes over time. Against this, where the values of the indicator are sufficiently different, the differences may still be significant. This may apply, for example, to the poverty rates for one-parent families, whose proportion in the population is relatively small but among which the differences in poverty rates is large. A further statistical problem is that the data sources in some countries may not contain the variable required for the disaggregation, or the coverage may be different (for example, including or excluding non-nationals). Indeed, in some States, there may be legal or constitutional prohibitions imposed on collecting certain information in statistical enquiries (for

example, that on ethnicity); or the information may be deemed too sensitive to allow for collection without adversely affecting response rates.

A second issue concerns the definition of subgroups, and their comparability across countries. For example, we may want to classify people according to their activity status: employed, self-employed, unemployed, retired or otherwise inactive. These activity states have to be defined consistently. As far as household composition is concerned, we may distinguish between classifications based on household composition and those that seek to take account of the relations between different household members. For example, a household may consist of two adults and one child. This information may be sufficient for classifying the household in terms of its potential economic activity, but it is in fact consistent with several different familial relationships: the two adults may be a married or a cohabiting couple, they may be mother and grandmother, they may be mother and adult child, etc. It may be difficult to secure comparability in the definitions across countries. For a number of policy purposes, we may wish to have indicators for those with disabilities, but there are serious measurement problems related to cross-national differences in definitions.

D. Composite indicators

There is considerable appeal in the idea of adding up indicators for different fields to arrive at a total score. Such a composite score would attract the attention not only of newspaper headline writers but also of policymakers and the general public. An aggregate performance measure can, as argued by Micklewright (2001), serve the twin functions of summarizing the overall picture and facilitating communication.

The popularity of such an approach has been demonstrated by the most widely known measure of this kind in current use: the UNDP human development index (HDI), which is a composite measure encompassing three basic components: longevity, knowledge and standard of living. The rationale given for this procedure in 1990, when it was published for the first time, was that "too many indicators could produce a perplexing picture – perhaps distracting policymakers from the main overall trends" (UNDP, 1990, p. 11). Combining separate indices for gross domestic product (GDP), life expectancy and educational attainment has certainly served to broaden the focus to embrace more than looking only at GDP. The HDI has been an important step forward.

The reduction of a multidimensional phenomenon to a single number does, however, raise a number of issues. To begin with, it is important to distinguish two different forms of aggregation. The first form of aggregation combines different characteristics at the individual level (for example, persons or households), which are then summed over individuals to form an aggregate index. The focus is then on multiple deprivation at the individual level, which requires microdata sets containing information covering the different relevant domains. An example of one such indicator would be the proportion of people who are poor *and* who are living in a household with no one engaged in paid work. Instead of first aggregating across fields for an individual and then across individuals, the second approach aggregates first across people and then across fields and thus utilizes (like the HDI) a combination of aggregate indicators (see also Atkinson (2003)).

The focus below is on this second approach, which utilizes what are referred to as "composite" indicators. It is clear that the design of any such indicator requires social judgements, which are not easy to make. The problem is illustrated in figure II in respect of poverty risk and illiteracy for seven hypothetical countries, ranging from A, with low illiteracy but high poverty risk, to G, with low poverty risk but high illiteracy. Summation of the two scores, as in the HDI, results in country C being ranked the highest. Even with summation, however, there is no reason why the variables should be weighted equally. If we were to attach a greater weight to the risk of poverty than to illiteracy, then country E could be ranked the highest. Moreover, why should we simply add? Alternatives to simple addition are considered, in the context of poverty indices, by Anand and Sen (1997). One limiting case is that entailing Rawlsian social judgements, where we rank countries according to the dimension within which they perform least well. The poverty risk/ illiteracy space is then divided into two. Above the 45-degree line, poverty risk has priority; below that line, literacy has priority.

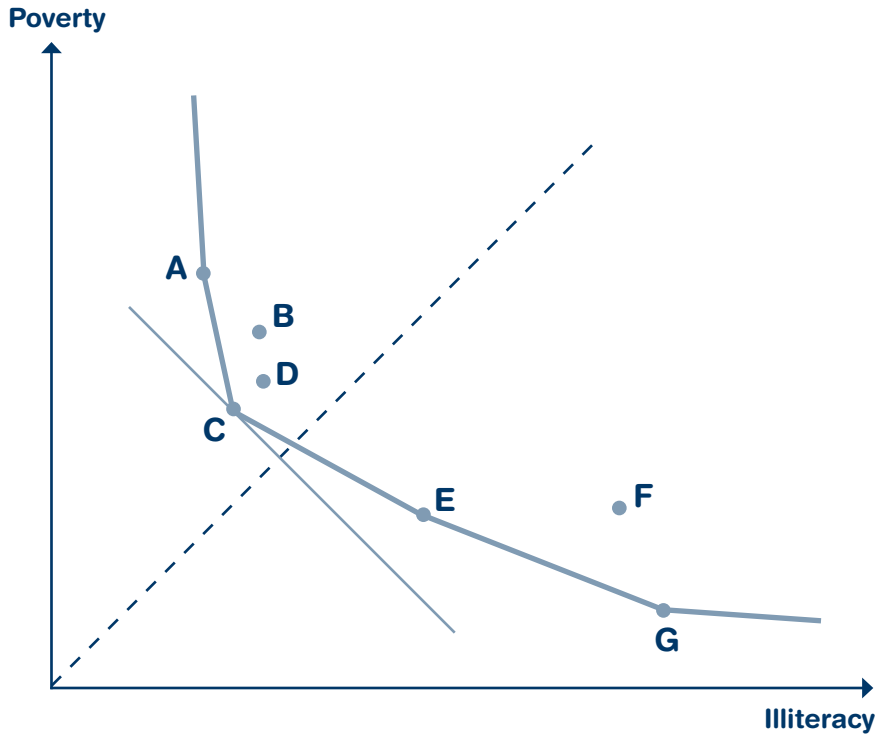

Figure II: Aggregating indicators

One problem with the choice of weights is that these may not conform to those embodied in national policy objectives., which has led Cherchye, Moesen and Van Puyenbroeck (2003) to argue that the weights should vary across countries according to their own national priorities, as revealed in their performance. If a country regards poverty risk as more important than illiteracy, then we should weight poverty more highly when constructing the synthetic indicator for that country. Cherchye, Moesen and Van Puyenbroeck developed such an approach by drawing a parallel with data envelopment analysis in production theory. In essence, this involves asking how close countries are to the "efficiency frontier", as illustrated in figure II by the broken line ACEG. All four of these countries score 100 per cent, since none is dominated by another country. There is, for example, always a dimension for which country E scores better than any other country (it beats G on literacy and all the others on poverty risk). They then devised a measure of the distance by which "non-frontier" countries fall short of the frontier, obtaining the weights by solving a linear programming problem. In effect, this is based on the "revealed preferences" of countries.

The efficiency frontier approach is a good example of cross-fertilization in social science, with a technique developed for one purpose being applied imaginatively to a quite different field. However, it is open to question whether policymakers would find the solution of a linear programming problem less perplexing than consideration of a number of separate indicators. It may appear to offer a scientific resolution of what is at heart a political problem, but overlooks the advice that "weighing together different welfare components should be avoided to the very last so as not to conceal dissensions in a 'scientific' model" (Erikson, 1974, p. 279). We could drop the linear programming element and by simply ranking each country based in the dimension on which it performs best, measure the distance from the best performance. However, this would convey the message to national and subnational Governments that they did not need to make efforts to improve their performance in the other dimensions. One feature of the objective functions described above is that, in certain situations, the pay-off for improving performance for a particular country can be concentrated on one of the two dimensions. A country judged according to its better-performing indicator can improve its position only by doing even better on that

indicator: it invests in success. On the other hand, the social welfare function is Rawlsian, the country can improve its position only by doing better on the dimension where its performance is less satisfactory. In both cases, there is a risk that countries will pursue "bang bang" policies, concentrating on a single objective, rather than a balanced approach to different dimensions of deprivation.

If combining different indicators into a single measure is certainly appealing at first sight, this approach raises, as shown above, serious technical and political issues. The technical and political issues become even trickier if such indicators are to be used for international comparisons and for measuring changes over time. For these reasons, even though composite indicators like the human development index can undoubtedly play a valuable role in certain contexts, and although they undoubtedly appeal to policymakers, they should be employed sparingly. It was, after all, the first *Human Development Report* that stated that "people cannot be reduced to a single dimension" (UNDP, 1990, p. iii).

VIII. Conclusions and summary of the main issues

The present study has tried to demonstrate the analytical and operational significance of the measurement of poverty and social exclusion, and its relevance to the design of policies. It has tried to systematically identify the key issues that need to be debated and resolved in this context and has suggested concrete answers which hopefully will be of value to international organizations, to national and subnational governments, to researchers, to members of civil society organizations and to practitioners.

The main conclusions presented in the study are summarized in the (a) to (z) below:

a. Measurement of poverty and social exclusion is crucial at the national and subnational levels in order for countries to be in a position to assess their current performance according to an explicit set of criteria, to determine whether or not they are making progress in fighting poverty and social exclusion, and to compare the impact of different policy measures undertaken to promote social inclusion;

b. Measurement of poverty and social exclusion is necessary at the global level in order to make it possible to compare, in a (reasonably) harmonized way, the extent of poverty and social exclusion across countries, to determine progress being made in reducing poverty and social exclusion across countries and in the world as a whole, and to improve international comparative analysis and mutual learning among countries through *contextualized benchmarking*. The last-mentioned objective is important, as specific policies and their impacts measured through indicators can be properly understood only in the context of the broad institutional setting in which they operate, and this calls for a *system-wide analysis*;

c. Given the multidimensional nature of the phenomenon at issue, measurement of poverty and social exclusion is a task of considerable difficulty. Apart from economic resources and employment, fields to be covered include, inter alia, health, education, affordable access to other public services (for example, justice), housing, civil rights, security and justice, well-being, information and communications, mobility, social and political participation, leisure and culture;

d. In order for the measurement of poverty and social exclusion to meet the aforementioned subnational, national and international objectives, close links are required between the design of social indicators and the questions that they are intended to answer. Indicators need to be *fit for purpose*, which means that their construction must follow a principles-based approach. Eight principles have been put forward and discussed.

   Five principles concern the single indicators:

   - An indicator should identify the essence of the problem and have an agreed normative interpretation
   - An indicator should be robust and statistically validated
   - An indicator should be interpretable in an international context
   - An indicator should reflect the direction of change and be susceptible to revision as improved methods become available
   - The measurement of an indicator should not impose too large a burden on countries, on enterprises nor on citizens

   Three principles concern the portfolio as a whole:

   - The portfolio of indicators should be balanced across the different dimensions
   - The indicators should be mutually consistent and the weight of single indicators in the portfolio should be proportionate

- The portfolio of indicators should be as transparent and accessible as possible to citizens

Although, these eight principles are open to debate and the content of the actual portfolio may be seriously constrained by data availability, making them explicit should aid the development of social indicators. The next challenge is to implement them in practice;

e. While quantification is essential for analysing poverty and social exclusion, quantitative indicators are still not sufficient. These need to be accompanied by qualitative evidence, which helps interpret the numbers and provides a start in understanding the underlying mechanisms. Significant elements of human experience cannot readily be reduced to a simple scale. Findings from qualitative studies can provide some reassurance that quantitative indicators correspond to the reality on the ground;

f. Some of the broader indicators of social exclusion, such as lack of political voice of the poor and the socially excluded, may contain elements that are inherently subjective but that may prove highly useful for the analysis of certain aspects of poverty and social exclusion. Subjective indicators also have a role to play in increasing the legitimacy of the entire measurement and assessment exercise advocated by this study. There are three distinct means by which social indicators can incorporate subjective elements;

g. The global perspective discussed in the study does not imply that there should be a single global set of indicators for all countries and all purposes. Indeed, there is a wide diversity of national and also subnational circumstances across the world. The sources of concern about poverty and social exclusion are varied. Countries identify different fault lines in their societies. When debating poverty and social exclusion indicators, it is therefore important to address various definitional issues, which encompass: the measurement of poverty in absolute rather than in relative terms, the use of consumption rather than income as the basis for calculating the "financial" indicators, and the distinction between stock and flow indicators and between static and dynamic indicators;

h. A natural starting point for constructing social indicators is the position of individual citizens. For some purposes, however, we may wish to look at the position of a unit wider than the individual. Once we aggregate, a range of possibilities open up for the unit of analysis, making use of various potential criteria: household, spending unit, family unit, inner family and even wider groupings (for instance, because one may find it important that the measure of a person's standard of living take account of possible support networks). In some cases, for instance, that of income poverty, we may opt for a combination of individual and household characteristics;

i. The implications arising from different choices of unit depend on the variable in question; however, it is important that, when considering a group, one clearly distinguish between the relevance of the group for assessing individual standards of living and its use as an analytical category. This needs to be addressed, in particular, when analysing indicators that have an important territorial dimension;

j. Gender mainstreaming, as a means of achieving equality rather than as a goal in itself, should be implemented at every stage of the policy process (design, implementation, targeting and monitoring, and evaluation). As far as social indicators are concerned, the issue of gender is important in terms not only of disaggregation but also of the very definition of indicators. Choices made with regard to definitions may not be neutral with regard to gender (as the concept of an equal sharing of resources within households or families, for example, makes clear);

k. Children mainstreaming, a more recent concept, does not imply that children should necessarily have priority over other groups but rather, as with gender mainstreaming, that a specific perspective should be taken. The approach should entail not simply disaggregation by age but also asking: what indicators would best serve the needs of children. It has to give a different "cut" through the problem of constructing social indicators;

l. Some indicators are more sensitive than others to differences across countries in terms of their social structure. Indicators that are oversensitive to these structural differences or that raise specific problems of interpretation for particular countries should be avoided;

m. The construction of social indicators necessarily entails a compromise between the theoretical definition and what is possible empirically. Data may simply be unavailable or they may not be of adequate quality or sufficiently comparable across countries (or even within countries) and/or across time, etc. Sampling merely allows one to draw conclusions about a characteristic of the population with a certain degree of (un)reliability. This must be taken into account and it is always advisable to provide sampling errors for key estimates from sample surveys. The accuracy and reliability of sample-based estimates depend primarily on the sample size and on the efficiency of the design. There are, moreover, elements in the conduct of surveys that especially affect the measurement of poverty and social exclusion, such as the degree of overall non-response, the item non-response, the outliers, etc. Small differences in the indicators between countries, or over time in one country, should thus not be given too much emphasis;

n. As regards to the data required for constructing social indicators, significant progress has been made in various countries, but there is a considerable distance yet to be travelled. Where needed and where possible, countries should be encouraged to develop their statistical information so as to improve the degree of international comparability of the measurement of poverty and social exclusion. Consideration of the quality and design of social indicators should influence the plans for improved or new statistical instruments. Full use should be made not only of household surveys but also of the potential offered by other data sources. Administrative and registers' data, in particular, have the advantages of facilitating speed (the need for timeliness is one of the major constraints on the choice of social indicators), and ensuring a relatively low cost and a reduced burden on respondents;

o. The construction of performance indicators needs to be based on a participatory approach, involving the regional and local public authorities, the different non-governmental actors and bodies implicated in the fight against poverty and social exclusion, including social partners, non-governmental and grassroots organizations (at international, national and subnational levels), and the poor and socially excluded people themselves. Widespread citizens' ownership is key to promoting social inclusion;

p. It is therefore important that there be a high level of confidence in the validity of social indicators, and that they should not be seen as subject to political manipulation. This is an issue that involves, on the one hand, the institutional structure (in particular the need to ensure the independence of statistical agencies) and, on the other, the design of the indicators. In defining components of the social indicators, consideration must be given to the perceived reliability of the underlying data. Moreover, confidence in quantitative indicators may be enhanced if they are accompanied by qualitative evidence (see above, conclusion (e));

q. Countries should adopt an *objective-driven* approach to the fight against poverty and social exclusion, encompassing clear social inclusion-related objectives, with related quantitative targets and strategies. They should concentrate on a carefully selected *shortlist* of key national policy objectives, expressed in terms of social outcomes. It is essential that these objectives be the result of an in-depth *diagnosis* of the causes of poverty and social exclusion in the country concerned, based on a thorough multi-dimensional analysis of the national situation with regard to poverty and social exclusion across all important areas. Integrated social inclusion strategies need to be put in place. These strategies should follow a multidimensional approach cutting across and integrating a range of policy domains, one that calls for *joined-up government* (at and among the different policy levels) as well as the *active participation* of all the relevant actors (see above, conclusion (o)). In this highly focused framework, the selection of policy measures designed to back the strategies should be based on ex ante impact assessments. Academic research can play an important role in the di-

agnosis of the causes of poverty and social exclusion and in the analysis of the impact of policies on social outcomes;

r. This *objective-driven* approach constitutes a major challenge for countries, which need to develop their own social inclusion monitoring framework. Each country's framework should adequately respond to the national (and possible subnational) specificities and include targets and indicators. It should also allow clear links with the overall worldwide framework, so as to improve international comparative analysis and mutual learning among countries through *contextualized benchmarking*. Making this work requires the building of statistical *and* analytical capacity.

s. Diagnosis, policy evaluation and definition of outcome indicators and outcome targets are essential tools for social inclusion policies—but they are not enough. Given the multidimensional nature of poverty and social exclusion, social inclusion-related goals have to be anchored in all the relevant policies at all levels of governance – local, regional, national and (when relevant and when possible) international. In order to go beyond words and achieve a real interaction among these various policy areas, *mainstreaming of social inclusion* in policymaking has to be implemented through the establishment of a scheme of systematic policy assessments (both ex ante and ex post). The impact on social inclusion of all relevant specific policies should be monitored to allow for the identification of possible ways of adjusting the policies so as to strengthen their contribution to promoting social inclusion. In short, social inclusion-related objectives should be better integrated with general policy design, implementation and budgetary decision-making. Instruments such as poverty proofing and social impact assessment have a major role to play in this context;

t. There are four main ways in which social indicators can be usefully employed in the process of policy formation:

- The first way is the forensic one. In applying the indicators to internationally comparable data, one can learn about the differential performance of different countries, while keeping in mind the dangers in reading too much into "league tables".

- To advance further, and to draw conclusions about the policies applied, a proper comparative international policy analysis of performance is needed. The results of such an analysis provide a valuable cross-reference for *national* assessments of performance, which thereby offers a second role for indicators.

- Social indicators may also be used by regional and lower-level governments, although this may lead to political conflict, particularly where resource allocation is affected by the measurements (among and across the different levels of governments). However, it may also lead to an increased degree of *joined-up government*. This is a third role for social indicators which may thus contribute to coordinating policy.

- A fourth application of indicators is to the explicit setting of targets;

u. The need for countries to strengthen policy analysis has been highlighted. In considering the link between policy and outcomes, that is, in examining the impact of policy, one needs first to establish a *baseline*. Another difficulty concerns the counterfactual with respect to the outcomes. Finally, it is evidently important to look at the total range of policies that impact on the problems of poverty and social exclusion;

v. Two main tools for examining the impact of policy on financial circumstances that are widely used at a country level have been discussed: the model families analysis and microsimulation models. These were presented separately, but they are best seen as complementary;

w. A world "portfolio" of indicators could be designed with different levels. Taking account, inter alia, of European Union experience, a three-tier structure has been suggested here. The top tier would consist

of a small number of lead indicators (no more than ten) for the main fields relevant to all countries; the second tier would consist of supporting indicators and contextual information. These two tiers would be commonly agreed and would reflect the multidimensionality of poverty and social exclusion. The third tier would consist of nationally selected indicators;

x. Indicators should be disaggregated by a number of key variables, subject to the data constraints. In determining the type and degree of the disaggregations, it is necessary to carry out, for each indicator, a detailed examination of the dimensions along which disaggregation should take place. Three ways in which indicators can be disaggregated have been briefly discussed, involving consideration of: the *values of the indicator for specified sub-groups* of the population, the *variation of the indicator across subgroups* of the population and the *decomposition of the identified population* (by exclusive subgroups);

y. There is considerable appeal in the idea of adding up indicators for different fields to arrive at total scores (as exemplified by the human development index). Even though such *composite indices* do tend to attract the attention not only of writers of newspaper headlines but also of policymakers and the general public, the reduction of a multidimensional phenomenon to a single number nonetheless raises a number of issues. Composite indicators should therefore be employed sparingly; in this way, they will have greatest impact;

z. By contrast, *aggregate indicators* can be very useful. They combine different characteristics at the individual level (for example, that of. persons or households) that are summed over individuals to form an aggregate index. The focus is then on multiple deprivation at the individual level, which requires micro-data sets containing information covering the different relevant domains.

This study may be seen as having provided a *checklist*. It has tried to identify the key issues that arise in analysing and measuring social inclusion, seen here as the process by which societies combat poverty and social exclusion. The design of a set of social indicators entails asking a series of questions. The best responses to these questions may well be different in different countries and different policy environments. There are good reasons why the Millennium Development Goals are framed in terms of an absolute $1–a-day poverty line, whereas the European Union defines the risk of poverty in terms of relative incomes. At the same time, the framework provided here should allow the indicators to be viewed and interpreted within a global context.

Annex

Revised official monitoring framework for the Millennium Development Goals (MDGs): goals, targets and indicators (effective since 15 January 2008)

Millennium Development Goals	
Goals and targets (derived from the United Nations Millennium Declaration)	**Indicators for monitoring progress[a]**
Goal 1: Eradicate extreme poverty and hunger	
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1.1 Proportion of population below $1 (purchasing power parity (PPP)) per day[b] 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people	1.4 Growth rate of gross domestic product (GDP) per person employed 1.5 Employment-to-population ratio 1.6 Proportion of employed people living below $1 (PPP) per day 1.7 Proportion of own-account and contributing family workers in total employment
Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.8 Prevalence of underweight children under five years of age 1.9 Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1 Net enrolment ratio in primary education 2.2 Proportion of pupils starting grade 1 who reach last grade of primary 2.3 Literacy rate of persons 15-24 years of age, women and men
Goal 3: Promote gender equality and empower women	
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1 Ratios of girls to boys in primary, secondary and tertiary education 3.2 Share of women in wage employment in the non-agricultural sector 3.3 Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 4.A: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate	4.1. Under-five mortality rate 4.2. Infant mortality rate 4.3. Proportion of 1-year-old children immunized against measles

Goal 5: Improve maternal health	
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	5.1. Maternal mortality ratio 5.2. Proportion of births attended by skilled health personnel
Target 5.B: Achieve, by 2015, universal access to reproductive health	5.3. Contraceptive prevalence rate 5.4. Adolescent birth rate 5.5. Antenatal care coverage (at least one visit and at least four visits) 5.6. Unmet need for family planning
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	6.1. HIV prevalence among population aged 15-24 years 6.2. Condom use at last high-risk sex 6.3. Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS 6.4. Ratio of school attendance of orphans, to school attendance of non-orphans, aged 10-14 years
Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	6.5. Proportion of population with advanced HIV infection with access to antiretroviral drugs
Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	6.6. Incidence and death rates associated with malaria 6.7. Proportion of children under age 5 sleeping under insecticide-treated bed nets 6.8. Proportion of children under age 5 with fever who are treated with appropriate antimalarial drugs 6.9. Incidence, prevalence and death rates associated with tuberculosis 6.10. Proportion of tuberculosis cases detected and cured under directly observed treatment, short course
Goal 7: Ensure environmental sustainability	
Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	7.1 Proportion of land area covered by forest 7.2 Carbon dioxide (CO_2) emissions, total, per capita and per $1 GDP (PPP) 7.3 Consumption of ozone-depleting substances 7.4 Proportion of fish stocks within safe biological limits 7.5 Proportion of total water resources used 7.6 Proportion of terrestrial and marine areas protected 7.7 Proportion of species threatened with extinction
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	7.8 Proportion of population using an improved drinking water source 7.9 Proportion of population using an improved sanitation facility

Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum-dwellers	7.10 Proportion of urban population living in slums[c]
Goal 8: Develop a global partnership for development	
Target 8.A: Develop further an open, rule-based, predictable, and non-discriminatory trading and financial system Includes a commitment to good governance, development and poverty reduction, both nationally and internationally Target 8.B: Address the special needs of the least developed countries Includes: tariff- and quota-free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous official development assistance (ODA) for countries committed to poverty reduction Target 8.C: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States[d] and the outcome of the twenty-second special session of the General Assembly[e]) Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	*Some of the indicators listed below are monitored separately for the least developed countries, countries in Africa, landlocked developing countries and small island developing States.* *Official development assistance (ODA)* 8.1 Net ODA, total and to the least developed countries, as percentage of Organization for Economic Cooperation and Development/Development Assistance Committee (OECD/DAC) donors' gross national income 8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation) 8.3 Proportion of bilateral ODA of OECD/DAC donors that is untied 8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes 8.5 ODA received in small island developing States as a proportion of their gross national incomes *Market access* 8.6 Proportion of total developed-country imports (by value, and excluding arms) from developing countries and least developed countries, admitted free of duty 8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 8.8 Agricultural support estimate for OECD countries as a percentage of their GDP 8.9 Proportion of ODA provided to help build trade capacity *Debt sustainability* 8.10 Total number of countries that have reached their HIPC decision points and total number that have reached their HIPC completion points (cumulative) 8.11 Debt relief committed under the Heavily Indebted Poor Countries and Multilateral Debt Relief Initiatives 8.12 Debt service as a percentage of exports of goods and services

Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	8.13 Proportion of population with access to affordable essential drugs on a sustainable basis
Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications technology	8.14 Telephone lines per 100 population 8.15 Cellular subscribers per 100 population 8:16 Internet users per 100 population

The Millennium Development Goals and targets are derived from the United Nations Millennium Declaration (see General Assembly resolution 55/2), signed by 189 countries, including 147 Heads of State and Government, on 8 September 2000 (http://www.un.org/millennium/declaration/ares552e.htm), and from further agreement by Member States at the 2005 World Summit, as reflected in the World Summit Outcome (see Assembly resolution 60/1), (http://www.un.org/Docs/journal/asp/ws.asp?m=A/RES/60/1). The goals and targets are interrelated and should be seen as constituting a whole. They represent a partnership between the developed countries and the developing countries, established to "create an environment – at the national and global levels alike – which is conducive to development and to the elimination of poverty" (Assembly resolution 55/2, para. 12).

[a] All indicators should be disaggregated by sex and urban/rural as far as possible.

[b] For monitoring country poverty trends, indicators based on national poverty lines should be used, where available.

[c] The actual proportion of people living in slums is measured by a proxy, represented by the urban population living in households with at least one of the following four characteristics: (a) lack of access to improved water supply; (b) lack of access to improved sanitation; (c) overcrowding (three or more persons per room); and (d) dwellings made of non-durable material.

[d] Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April – 6 May 1994 (United Nations publication, Sales No. E.94.I.18 and corrigenda), Chap .I, resolution 1, annex II.

[e] General Assembly resolution S-22/2 of 28 September 1999, annex.

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