KILM 18. Poverty, income distribution, employment by economic class and working poverty

Introduction

Tables 18a and 18b present two of the indicators that are used for monitoring progress toward the first UN Millennium Development Goal (MDG), eradicating extreme poverty and hunger. The proportion of the population living below the international poverty line of US$1.25 is an indicator under the first target (1a) of the MDG (on the eradication of poverty), while the proportion of persons living with their families below the poverty line, the "working poor", is an indicator for monitoring the Goal's second target (1b) on decent work.[13] These indicators are supplemented by other measures of economic well-being, including the employed population living in different economic class groups (denoted by different per-capita household consumption thresholds), estimates of the population living below nationally defined poverty lines and the Gini index as a measure of the degree of inequality in income distribution.

Information on poverty in tables 18a and 18b relates almost entirely to developing economies because similar data do not exist for most high-income economies, where extreme poverty is a more rare occurrence. In table 18a, 114 economies have at least one estimate of people living below the national poverty line from 1990 to present while 86 countries have national poverty lines for at least two years since 1990. In terms of the international poverty lines, 124 economies have an estimate for one year from 1990 up to present, with 106 economies having at least two

estimates.[14] The Gini index is shown only in those countries for which poverty information is available; however, this statistic is also available for many high-income economies from the original data repository (the World Bank). In table 18b, estimates of the "working poor" – defined as the proportion of employed persons in a household whose members are living below the US$1.25 international poverty line as well as the full distribution of employment across five economic classes – are available for 59 economies.

Use of the indicator

The value of measures of poverty, the distribution of workers across different economic class groups and income inequality lies in the information these indicators provide on the outcome of economic processes at the national level, as a reflection of the access of different groups of people to goods and services. The information relating to poverty shows the absolute number and the proportion of the population that has "unacceptably" low consumption or income levels, while the employment by economic class and inequality series show the disparity between different groups of people within a country in terms of consumption or income levels. Measurements of poverty are extremely important as an indication of the well-being and living conditions in a country. In addition, a poverty line helps focus the attention of governments and civil society on the living conditions of the people in poverty and can be used to gauge the need to devise public policies and programmes to reduce poverty and enhance the welfare of individuals within a society. Analysing information on poverty over time, when comparable, is crucial for monitoring any increase or decrease in the incidence of

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[13] The first Millennium Goal includes three targets and nine indicators, see the official list at: http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm. The remaining indicators under the target on decent work are the growth rate of GDP per person engaged (i.e. labour productivity growth; KILM 17), the employment-to-population ratio (KILM 2) and the vulnerable employment rate (KILM 3).

[14] When compiling the poverty data for table 18, a few observations on the international poverty line were discarded when the overall trend for a country series was deemed inconsistent over time.

poverty and can help in assessing the results of poverty reduction programmes. Any assessment of poverty can also contribute to explaining its possible causes, an important step in finding a solution.

During the 1990s, a decade characterized by increased globalization and an increase in the number of market-based economies, poverty was increasingly recognized as a major challenge for the international community. The first of the UN MDGs[15] is to "eradicate extreme poverty and hunger", with the specific target of halving the share of people in the world living on less than US$1 a day between 1990 and 2015.[16]

While poverty in the developed world is often associated with unemployment, the extreme US$1-a-day poverty that exists throughout much of the developing world is largely a problem associated with persons who are working, which is why the second target under MDG1 is to "achieve full and productive employment and decent work for all, including women and young people". The majority of working-age people in poverty must work in order to survive and support their families in a context where no efficient social protection schemes or social safety nets exist. For these poor workers, the problem is typically one of poor employment quality, including low wages or incomes and low levels of labour productivity. Thus, reducing overall poverty rates in line with the MDG necessitates fostering an enabling environment in which the employment opportunities and incomes of the working poor are improved.

It is important to note that the poverty, employment by economic class and inequality

measures presented here focus on only one aspect of absolute and relative deprivation. They concentrate on personal income or private consumption and do not directly address deprivation related to other spheres, such as access to health care, education, productive employment, and social and political participation. A comprehensive analysis of poverty and inequality should include a link to these other dimensions, which are captured at least partially in some of the other KILM indicators.

Definitions and sources

Because of the multiple dimensions of poverty, there are various theoretical conceptions of measurement. Three are described below:

1. One common approach is to analyse information on monetary income or personal consumption as opposed to human development. The underlying information relates, in most cases, to personal consumption expenditure and, in only a few cases, to personal income. This is because obtaining information on income from surveys can be difficult and because such information may not fully reflect the "real" living standard of households. A drawback of measuring poverty in this manner is that household surveys often vary across countries and over time, thus reducing the comparability of the information (see "Limitations to comparability" below).

A key feature of using income or personal consumption as measures of poverty is the establishment of a poverty line, the predetermined level of income or consumption below which a person (or household) is considered to be poor. The incidence of poverty is typically measured as the fraction of the population whose consumption expenditure falls below this predetermined level. Many countries have adopted national income poverty lines, using thresholds based on the amount of income necessary to buy a specified quantity of food. Measurement of poverty using internationally comparable poverty lines is also useful because it allows poverty estimates to be developed on a global basis. The World Bank has established two international poverty lines, at US$1.25 and US$2 of consumption per person a day.

2. A second perspective relies upon a "basic needs" approach and reflects deprivation in terms of material requirements for minimally acceptable fulfilment of human needs, includ-

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[15] As part of the Millennium Declaration of the United Nations "to create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty", the international community has adopted a set of international goals for reducing income poverty and improving human development. A framework of eight goals, 21 targets and 60 indicators to measure progress was adopted by a group of experts from the United Nations Secretariat, ILO, IMF, OECD and the World Bank. The indicators are interrelated and represent a partnership between developed and developing economies. For further information on the Millennium Development Goals, see http://www.un.org/millenniumgoals/.

[16] The Millennium Development Goal on poverty is expressed in terms of shares. That is, the goal is to reduce by half the proportion of people living below US$1 a day. Because populations tend to rise over time, a falling share of the poor population will not necessarily translate into a decline in the actual number of poor people. US$1.25 is the current threshold for the international "$1 per day poverty line" (see box 18). This poverty line has been updated on the basis of 2005 price levels and new price data collected through the International Comparison Program (ICP).

ing food and employment. The concept goes beyond the lack of income because it takes into account the need for basic health care and education, as well as essential services such as access to safe water. In addition to its Human Development Index, the United Nations Development Programme (UNDP) in 1997 introduced the concept of the Human Poverty Index (HPI) for developing economies.[17] The HPI is a composite index that aims to capture the extent of deprivation in human life. It combines three dimensions – limitations of life expectancy, illiteracy and overall standard of living – for which information is available and comparable across countries.

3.   The third approach, which combines elements of the two previous perspectives, is related to the capabilities required for a person to function in a particular society, under the assumption that a minimally acceptable level of such capabilities exists. This approach covers a wide range of capabilities, and can vary from the capability of being well nourished in a low-income economy to more complex social achievements in a high-income economy, such as the capability of gaining computer literacy (on the assumption that a person lacking computer literacy is likely to face difficulties in entering the labour market in a developed economy). Poverty is defined in terms of being out of the mainstream of a society, notably being outside the labour market. Poverty analysis from this angle has led to development of the concept of "social exclusion".

4.   Finally, the Gini index is a well-known direct measure of the degree of distributional inequality in income or consumption. It looks at the cumulative distribution of income or consumption (represented by the Lorenz curve) and estimates the extent to which it deviates from perfect equality.

The data presented for national and international poverty lines and the Gini index were obtained from the set of World Bank development indicators.[18] The data sets included in

tables 18a involve the use of poverty lines, with poverty rates calculated as the percentage of the population living below the line. National poverty lines are based on the World Bank's country poverty assessments, while international poverty lines are based on tabulations from nationally representative primary household surveys and published in the PovcalNet database. Estimates of the Gini index are based on national household surveys, supplemented by the Luxembourg Income Study database for high-income economies.[19]

Employment by economic class estimates, which provide the distribution of employment across five household consumption-based economic classes (see box 18), are also based on nationally representative primary household surveys, but only those surveys that include questions on employment status. In order for an estimate of employment across economic classes to be included in 18b, the definition of employment must be found to be sufficiently in line with the international definition of employment as provided in the resolution adopted by the 13th International Conference of Labour Statisticians (ICLS).[20] For countries and years with available distributional data from the World Bank's PovcalNet database but for which no national employment by economic class estimate is available, the employment by economic class estimates are derived from an ILO econometric model referenced in box 18.

The **national, urban and rural poverty lines** are specific to each country. Several factors may have influenced the choice of poverty threshold, such as nutritional requirements, basic consumption needs or minimum acceptable consumption levels. The population below country-specific poverty lines cannot readily be compared between countries. Also, over time, these poverty lines may have been changed to take account of new developments or new data, casting doubts on comparability over time as well.

The **international poverty lines** use a sum of money in constant US dollars, converted into a

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[17] For more information on the UNDP Human Poverty Index (HPI), see: http://hdr.undp.org/en/ statistics/indices/hpi/.

[18] National and international poverty data and the Gini index were extracted from the World Bank, World Development Indicators Online. Data on the population distribution across economic class thresholds were downloaded from PovcalNet, an interactive web-based computational tool managed by the World Bank that allows users to replicate the calculations by the World Bank's researchers in estimating the extent of absolute poverty in the world. PovcalNet is available online at http://iresearch.worldbank. org/povcalnet/. It is important to note that alternatives to World Bank estimates of poverty do exist and the issue of

(Note 18 continued)

"best" poverty estimation is a topic of debate in the research community. See, for example, the ILO study on alternative estimates of poverty, Karshenas, M.: *Global Poverty: New National Accounts Consistent and Internationally Comparable Poverty Estimates*, ILO mimeo (Geneva, 2002).

[19] For additional information regarding the Luxembourg Income Study, see: http://www.lisproject.org/

[20] See the manuscript for KILM 2 for further details on the ICLS definition of employment.

sum of money for the country concerned using purchasing power parity (PPP) conversion factors rather than market exchange rates. Taking the US$1.25 poverty line as an example, this amount is converted into an equivalent amount in the currency of the country in question, using the PPP conversion factor. This measure has the virtue of allowing comparisons over space and time.

The third data set for the indicator, the **Gini index**, is a convenient and widely used measure of the degree of income inequality. It measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative percentages of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and the hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line.[21] The Gini index has a value of zero for perfect equality of incomes and 100 for perfect inequality. As with all summary measures, it cannot fully capture differences between countries and over time in the cumulative share of different clusters (fractals) of the population in income or consumption, which is represented by the Lorenz curve.

Finally, the **employment by economic class** estimates indicate individuals who are employed *and* who fall within the per-capita consumption thresholds of a given economic class group. By combining labour market characteristics with household consumption group data, employment by economic class estimates give a clearer picture of the relationship between economic status and employment. Because of the important linkages between employment and material welfare, evaluating these two components side by side also provides a more detailed perspective on the dynamics of productive employment generation, poverty reduction and growth in the middle class throughout the world.

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[21] Readers may wish to consult other sources for additional information and alternative measures of inequality. See, for example, Tabatabai, H.: *Statistics on Poverty and Income Distribution: An ILO Compendium of Data* (Geneva, ILO, 1996); and the *World Income Inequality Database* (WIID) of the United Nations University at: http://www.wider.unu.edu/research/Database/en_GB/database/.

Limitations to comparability

Cross-country comparisons should not be made using national poverty lines, as these do not reflect any single agreed-upon international norm on poverty. However, when the focus is narrowed to one country and the same poverty line has been used consistently over time, analyses of trends and patterns of poverty may be informative and in many cases more useful for national inferences than analysis of international poverty lines.

At the country level, comparisons over time may be affected by such factors as changes in survey types or data collection procedures. Both agricultural conditions and the occurrence of natural and economic disasters affect poverty rates, and membership of the poor group may change from year to year, as some individuals climb out of poverty while others fall into it.

In the case of estimates based on an international poverty line, the use of PPPs rather than market exchange rates ensures that differences in price levels across countries are taken into account. However, it cannot be categorically asserted that two people in two different countries, consuming at US$1.25 (or US$2) a day at PPP, face the same degree of deprivation or have the same degree of need. Apart from the well-known problems in economics in making inter-personal comparisons of welfare, there are other problems, such as rural-urban price differentials and differences in required calorie intake due to climatic variations, which may or may not have been taken into account. One estimate may relate to consumption and the other to income, and a daily income of US$1.25 (or US$2) may permit less consumption than a daily consumption expenditure of the same amount. The adjustments that are often made to convert income estimates into consumption estimates can also impart bias to the resulting consumption distributions. The extent of non-market activity and the way in which non-market production and consumption are valued could substantially hamper comparability.

Even if measurements of poverty and economic class groups using international poverty lines were perfect, several unanswered questions would remain. For example, is a person with a particular consumption level (say US$4 a day) in a poor country better or worse off than a person with the same consumption level in a rich country? Or is a person living on

Box 18. New ILO estimates of employment across economic classes

New ILO research has provided a picture of the developing world's workforce in terms of the distribution of workers across five economic classes: (1) the extreme working poor (less than US$1.25 a day), (2) the moderate working poor (between US$1.25 and US$2); (3) the near poor (between US$2 and US$4); (4) developing middle-class workers, which are those workers living in households with per capita consumption between US$4 and US$13); and (5) developed world middle-class and above , which are those workers living in households with per capita consumption greater than US$13 per person per day).

Building on earlier work by the ILO to produce global and regional estimates of the working poor, a new methodology has been developed to produce country-level estimates and projections of employment across five economic classes (Kapsos and Bourmpoula, 2013). This has facilitated the production of the first ever global and regional estimates of workers across economic classes, providing new insights into the evolution of employment in the developing world. The aim of the work is to enhance the body of evidence on trends in employment quality and income distribution in the developing world – a desirable outcome given the relative dearth of information on these issues in comparison with indicators on the quantity of employment, such as labour force participation and unemployment rates.

The authors define workers living with their families on between US$4 and US$13 at purchasing power parity as the developing world's middle-class, while workers living above US$13 are considered middle-class and upper-middle-class based on a developed world definition. Growth in middle-class employment in the developing world can provide substantial benefits to workers and their families, with evidence suggesting that the developing world's middle-class is able to invest more in health and education and therefore live considerably healthier and more productive lives than the poor and near-poor classes. This, in turn, can benefit societies at large through a virtuous circle of higher productivity employment and faster development. The rise of a stable middle-class also helps to foster political stability through growing demand for accountability and good governance (see Ravallion, 2009).

The econometric model developed in the paper utilizes available national household survey-based estimates of the distribution of employment by economic class, augmented by a larger set of estimates of the total population distribution by class together with key labour market, macroeconomic and demographic indicators. The output of the model is a complete panel of national estimates and projections of employment by economic class for 142 developing countries, which serve as the basis for the production of regional aggregates.

Source: Kapsos, S. and Bourmpoula, E. (2013). "Employment and economic class in the developing world", ILO Research Paper No. 6. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_216451.pdf.

US$4 a day worse off if he or she lives in a country that has high inequality?

The Gini index, in principle, makes it possible to compare inequality levels in different countries and over time, without defining a particular poverty line, national or international. In practice, however, it involves other problems of comparability. The index is calculated from survey data, which may relate to income or consumption. If both consumption and income information were available in the requisite detail, the Gini index would be expected to show greater inequality of income than of consumption. Whether the index is based on income or consumption is made clear in the notes to the tables, and it is important for users to bear the distinction in mind when attempting to make comparisons. The cumula-

tive distributions of consumption or income used in constructing the index relate to per capita levels, and the percentiles are of population, not households. Apart from possible weaknesses in the quality of the underlying consumption or income data, the adjustments made to convert the index into a cumulative distribution of the population may introduce additional bias or error into the estimates. Nevertheless, despite these numerous imperfections, the index is very useful for studying trends in inequality across space and time.

Aside from disaggregation into rural and urban areas for national poverty lines, the poverty and inequality data in table 18a are provided at the aggregate level only, without disaggregation by age and sex. This is due to the fact that disaggregated poverty data are not

available in the major international data reposi- tories from which table 18a draws. However, the employment by economic class estimates in table 18b compiled by the ILO on the basis of national survey data are disaggregated by age (age groups included are 15+, 15-24 and 25+) and by sex, allowing for comparisons across these groups.