International Conference on Measuring Human Development

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CONCEPT NOTE

Human development is about putting people at the centre of development. It is about people realizing their potential, increasing their choices and enjoying the freedom to lead lives they value. Since 1990, the annual Human Development Reports (HDRs) have explored a range of critical challenges from poverty, gender inequality, human rights, and cultural liberty to globalization, water scarcity, climate change, migration, and most recently - sustainability and equity.

The first Human Development Report (HDR) in 1990 introduced the Human Development Index (HDI), constructed to emphasize that people and their capabilities should be the ultimate criteria for assessing the progress of a country, not economic growth alone.

Measuring progress has always been an important but challenging task for those involved in understanding and promoting human development. Since the beginning, Human Development Report Office (HDRO) has been aware of the many challenges that this task imposes but also of its relevance for policy debate. As a simple summary index, the HDI was designed to reflect average achievements in three basic aspects of human development – leading a long and healthy life, being knowledgeable and enjoying a decent standard of living.

Additional complementary composite indices were later introduced to cover some of the "missing" dimensions in the HDI. Gender disparity, inequality and human deprivation are measured by other indices (Gender Inequality Index, Inequality-adjusted HDI, and Multidimensional Poverty Index).

Measurement issues related to these aspects of human development demonstrate the conceptual and methodological challenges that need to be further addressed. This conference will represent an important step on the evolution of the HDI and its family of indices.

CONFERENCE OBJECTIVES

- To present and discuss new ideas and proposals for revision of the set of human development indices, with particular aims of improving the methodology for measuring human development and strengthening the usefulness of the indices for decision making.

- To facilitate the exchange of knowledge and best practices in promoting the use and development of the high quality socio-economic policy-relevant indicators.

EXPECTED OUTCOMES

- A set of recommendations on how to
    - improve the human development indices; and
    - how to implement the proposed changes.

PARTICIPANTS

Approximately fifty participants will come from a range of sectors, representing both the users and producers of statistical indicators. Including:

- Senior officials from government and international organizations;
- National and international statisticians;
- Leading academics;
- Experts in the design and use of indicators from NGOs and beyond

IN MORE DETAIL

In 2010, the HDI and other human development (HD) composite indices were revised in response to some of criticisms raised over the 20 years of their existence, while trying to work within a set of quality criteria placed on the indicators: conceptual relevance, non-ambiguity, reliability, value-added, power of discrimination, and availability of data. The revision generated considerable debate among the development community with opinions divided on the changes that had been made. So in January 2012, HDRO organized a Conference on Measuring Human Progress to take another look at the indices. The conference brought together a range of experts- both critics and supporters of the changes - and included Amartya Sen. Although the discussion was rich here was not much consensus on what further changes were needed. However, the overall position of the conference was that the HD family of indices should be kept simple and be designed to endure challenges over time.

In late 2012 a second review process of the indices was commissioned among leading researchers in the area of socio-economic measurements with the objective to address the limitations of the current indices and concerns about their usefulness. Any revised indices are supposed to allow for comparison across countries while maintaining simplicity and transparency. Moreover they must be easy to communicate and be resonant with policy makers.

In the case of the HDI, reviewers were invited to critically review the technical and analytical implications of the following arguments raised about the index:

- The current use of moving maxima, which reduces HDI comparability across time.
- Actual weights of component indicators differ although the explicit (normative) weights are kept equal across dimensions. This implies a higher effect of some indicators on the HDI than others, contrary to the normative assumption of equal importance of all components.
- The use of a geometric mean for aggregation across dimensions together with the min-max normalization entails a potentially distorted trade-off among dimensions, particularly for the poorest countries where the indicators become disproportionately dependent on the minimum values.
- The relative grouping of countries by quartiles of the HDI distribution is more difficult to interpret than the grouping based on predetermined (fixed) cut-off points. Countries like to have the possibility of graduating from lower groups.
- The use of the geometric mean distorts the decomposability property of the HDI.
- The lack of a straight-forward cardinal interpretation of the HDI seems to be problematic. Irrespective of the indicators used or the method of aggregation applied, the HDI has not had a cardinal interpretation.
- The use of the logarithmic transformation of income distorts the symmetry of the HDI and in combination with the geometric aggregation it seems to double penalize income.
- It is not necessary to have two separate indicators for education.
- Being a combination of a flow indicator (gross national income) and stock indicators (mean years of schooling, life expectancy, expected years of schooling), the HDI is unable to easily reflect the impact of changes in social and other policies in the short term.

The Inequality-adjusted HDI (IHDI) introduced in 2010 takes into account not only the average achievements of a country in health, education and income, but also how those achievements are distributed among its citizens by "discounting" each dimension's average value according to its level of inequality. The IHDI is based on a distribution-sensitive class of composite indices proposed by Foster, Lopez-Calva, and Szekely[1] (2005), which draws on the Atkinson[2] (1970) family of inequality measures. It is computed as the geometric mean of

[1] Foster, J., L. López-Calva, and M. Szekely. 2005. "Measuring the Distribution of Human Development: Methodology and an Application to Mexico." *Journal of Human Development and Capabilities*. 6 (1):5–25.
[2] Atkinson, A. 1970. "On the Measurement of Economic Inequality." *Journal of Economic Theory* 2 (3): 244–63.

the HDI dimension indices adjusted for inequality. The inequality in each dimension is estimated by the Atkinson inequality measure, which is based on the assumption that a society has a certain level of aversion to inequality. The IHDI will be equal to the HDI when there is no inequality in the distribution of achievement across people in society, but falls below the HDI as inequality rises.

In the case of the IHDI, reviewers were invited to particularly address and justify or propose a better approach for the following issues:

- Applicability of the welfare-based Atkinson inequality measure to distributions of life expectancy and years of schooling is questionable and need to be better justified.
- The income index based on logarithmically transformed incomes is adjusted by inequality calculated from untransformed income data. This assumes that the percentage loss due to inequality in income distribution is the same for both average income and its logarithm. This doubtful assumption may lead to some inconsistencies.
- The IHDI captures the inequality in distribution of the HDI dimensions. However, it is not association sensitive, meaning it does not account for overlapping inequalities for the people that experience the multiple deprivations.
- Values of indicators at the micro level can be zero or even negative (no income, overall loss of income, no education). They need to be adjusted to non-negative non-zero values uniformly across countries so that the Atkinson measure can be computed. Sensitivity analysis has shown that there is an effect of these adjustments on the overall value.
- In general, the loss in HDI due to inequality, a measure derived from the HDI and IHDI, needs a better justification and interpretation, e.g., the distinction between the potential and the real HDI is not straightforward.
- Combining inequalities that pertain to different years across dimensions may be misleading and the final result – the IHDI - may be misinterpreted.

The Gender Inequality Index (GII) was introduced in 2010 in response to some of the critiques of the Gender Development Index (GDI) and the Gender Empowerment Measure (GEM), both published in the HDRs between 1995 and 2009. The GDI was developed to capture gender disparities in overall well-being measured by the HDI. The GEM was introduced as a complementary measure of gender equality in political, economic and decision-making power. Both indices were widely criticized for not measuring what they were supposed to. The GII is a composite measure reflecting lost human development due to inequalities in women and men's achievements in three aspects of human development—reproductive health, empowerment and the labour market. The reproductive health dimension is measured by the maternal mortality ratio and adolescent fertility rate. Although the reproductive health indicators do not have male equivalents, it is argued that high levels of maternal mortality and adolescent births are the results of unequal gender power relations. The empowerment dimension is measured by the share of parliamentary seats held by each sex and by secondary and higher education attainment levels; while the labour dimension is measured by women's and men's participation in the work force. The functional form and calculation of the GII is similar to the Inequality-adjusted Human Development Index.

In the case of the GII, reviewers were invited to particularly address the following limitations pointed out by critics:

- To simplify the methodology to allow for easy interpretation: the way in which the GII has been constructed limits its usefulness and appropriateness as a global gender inequality index.
- The current GII does not explicitly indicate which sex is better off. This limits the policy relevance of the index.
- Indicators measuring the reproductive health dimension — the maternal mortality ratio and adolescent fertility - do not have male equivalents, which makes the index conceptually unclear and hard to interpret. By using the maternal mortality ratio and adolescent fertility rate as index components, less-

developed countries are penalized even if the loss attributed to gender inequality may not be entirely explained by real gender inequality.
- Failure of the GII to capture the time women spend in unpaid labor makes it insufficient in capturing the true global disparities of women.

In 2010, **the Multidimensional Poverty Index (MPI)** was introduced based on the methodology previously developed by Alkire and Foster [3] (2007, 2009). The MPI accounts for overlapping deprivations suffered by the same household and its members. It covers deprivations in the three HDI dimensions as measured by ten indicators. Dimensions are weighted equally and indicators within dimensions are also weighted equally. A household and its members are classified as poor if they suffer overlapping deprivations in at least one-third of the weighted indicators.

Notwithstanding the good properties of the MPI there are limitations that the reviewers were invited to address:
- The cut-off point of 1/3 for a household deprivation score is subjective and needs better justification.
- The number of indicators, especially for the living standard dimension, seems large. For a number of countries the living standard indicators unduly influence the outcome.
- There is a possibility of using an assets (or wealth) index, now customarily computed for each household in international surveys, as an indicator of living standards.
- Alternatives are needed for the current health indicators.
- International comparability needs to be thought about in terms of reference dates and the indicators used.
- Two of the MPI components, the headcount of MPI poor and the intensity of poverty, are expressed in percentages, but of population and indicators respectively. While the components are easily interpretable because they have the cardinal meaning, the MPI itself is not. It is a unit-less index made for country ordering only. Attaching a cardinal interpretation to the MPI itself would be important.

[3] Alkire, S., & Foster, J. (2007). 'Counting and Multidimensional Poverty Measurement', Oxford Poverty and Human Development Initiative, Working Paper No. 7, Oxford Department of International Development, University of Oxford; Alkire, S., & Foster, J. (2009). 'Counting and Multidimensional Poverty', In Von Braun J. (Ed.) The Poorest and Hungry: Assessment, Analysis and Actions. Washington D.C.: International Food Policy Research Institute.