Inclusive Wealth Report

Relevance

For many decades we have been measuring human societies' success based on countries' production indicators, such as Gross Domestic Product (GDP). As mentioned by the Stiglitz-Sen-Fitoussi commission (Stiglitz, 2009), measuring well-being requires a shift from conventional production indicators to metrics that incorporate non-economic aspects of well-being, including sustainability. Well-known critics of GDP as an indicator of a country's well-being often point out, for instance, its inability to capture many of the crucial variables for human welfare which take place outside of the market sphere, as it is the case of social networks or advantages of the natural surroundings. Another GDP shortcoming with regard to environmental protection is that a country could, for example, deplete its entire stock of natural resource, while still recording a positive GDP change. Other measures such as the Human Development Index (HDI) are also limited as measures of human progress. The HDI has been largely criticized because of its lack of an environmental component, as well as redundancy concerning other indicators. In general, both flow measures focus on the short-term, with no indication of whether current well-being can be sustained in the long run.

There have been recent advances in addressing the weaknesses in contemporary measures of welfare that are used to judge the progress and regress of nations. In this realm, a prominent indicator of well-being is '*wealth*'. While the above indicators are based on a flow concept, the *wealth* indicator relies on the stocks of different assets: Natural Capital (natural resources, land and ecosystem services, etc.); Produced Capital (machinery, buildings, etc); Human Capital (education, health, skills, etc.); and Social Capital (institutions, networks among people, etc.). There is a large body of theory and empirical testing which demonstrate that asset accounts can provide robust indicators of social welfare. Some of the reasons why wealth accounting can provide interesting insights into the multi-dimensional sustainability debate (besides overcoming the problems mentioned in the GDP and HDI measures) are:

- The inclusion of present and future generations: inter-temporal well-being depends, to a large extent, on the per capita conservation of the different capital stocks that are passed to future generations;
- Assets represent a crucial productive base of economies; and
- The inclusion of other forms of capital, which occur outside of the pure economic dimension based on the market system, particularly in the case of ecosystem services and/or social capital.

Project Focus

The Inclusive Wealth Report (IWR) is a joint initiative of UNEP and IHDP-UNU. The project aims at developing the first report on wealth and changes in wealth of nations, with a particular focus on developing countries. Furthermore, it will be the first IWR launched at the Rio+20 conference in 2012. In the long-term, the project aims at producing a series of IWR's on a biennial basis.

The first IWR is to have a special focus on natural capital. While considerable progress has been made in measuring asset values for natural capital, significant gaps still remain, particularly with respect to the inclusion of ecosystem services and the linkages to human well-being. The Millennium Ecosystem Assessment (MA) reported in 2005 that 15 of the 24 ecosystem services assessed were in decline, with the major drivers causing these declines having occurred over the last 50 years. It goes on to report that many developing countries' chances of achieving their Millennium Development Goals (MDGs) will be in jeopardy if the present rate of ecosystem services decline continues. Therefore, one of the methodological and empirical challenges is the inclusion of ecosystem services within the natural capital accounting framework.

Objectives

1. To establish the methodology for computing the wealth of nations, including ecosystem services.
2. To create a database for computing the different kinds of wealth of nations over time. It is expected to cover, ideally, the last ten to fifteen years. Concerning the spatial aspects of the project, the report will cover from 12 to 20 nations, with a special focus on developing countries.
3. To carry out a comprehensive analysis of the different components of wealth by country and their link to economic development, particularly highlighting the role played by natural capital.
4. To formulate policies based on the notion of asset portfolio management. The ways in which nations manage their diverse assets and create productive economic bases for the future, have critical implications for long-term sustainable development.

Methodological Aspects

One pragmatic way to articulate the sustainability concept from an economic viewpoint is by preserving the welfare of present and future generations over time. Recent studies (Arrow et al., 2010; Arrow et al., 2004; Dasgupta, 2001) have shown that the sum of different natural capital can be combined with manufactured capital, human capital, and social capital, in such a way that the resulting index (which can be called Inclusive Wealth or the sustainability index) is able to reflect the progress or regress of economies. This is mainly because, as it has been proven by Hamilton and Hartwick (2005), the sum of the different forms of wealth is equal to the present value of future consumption, and thereby, the emphasis of the indicator on the non-declining of the total wealth (or per capita wealth). There are, however, important challenges that need to be addressed at different methodological and empirical levels, for example, the valuation of ecosystem services for human well-being. In this realm, The Economics of Ecosystems and Biodiversity (TEEB) project presents updated figures on the significant economic benefits of natural capital and ecosystem services. For instance, TEEB has measured and concluded that about two-thirds of the total economic value of tropical forests comes from outside of the market system, its major value not being in the provisioning (e.g. wood), but regulating services. Carrying out valuations for different types of ecosystems (terrestrial, aquatics), for different ecosystem services (provisioning, regulating, cultural), in time series and at national level, is a challenging task and requires the combinations of various kinds of economic and ecological tools, as done by the Artificial Intelligence for Ecosystem Services (ARIES) or the Integrated Valuation of Ecosystem Services and Tradeoffs (INVEST) tools.

Table 1 offers an illustration of just how different assessments of the progress of nations would become if we were to study movements in their inclusive wealth. The final three columns of the table offer sets of estimates on the progress of a sample of countries and regions during the period 1970-2000. They, in turn, report changes in the inclusive wealth per capita, GDP per

capita, and HDI. Notice that if you were to rely on HDI, you would conclude that all countries and regions mentioned in the table enjoyed economic progress. The penultimate column says that, barring sub-Saharan Africa (which recorded a tiny decline in GDP per capita), all the economies in the sample enjoyed economic progress. However, the column consisting of estimates in the percentage rate of change in the inclusive wealth per capita tell us that the poor countries in the sample were barely on a sustainable path. Sub-Saharan Africa and Pakistan were clearly on unsustainable paths, as witnessed by the fact that growth in inclusive wealth per head was negative. Arrow et al. (2004) have shown that the reason the figures for changes in inclusive wealth are so different from those for changes in GDP per capita and HDI, respectively, is that the depreciation of natural capital is included when movements in inclusive wealth are recorded. In computing movements in inclusive wealth in Table 1, only three forms of natural capital were considered: carbon concentration in the atmosphere (with a negative shadow price); forests as a source of timber; and oil and natural gas. There are good reasons to believe that if we were to include many of the regulating and supporting services that nature provides in estimating the genuine savings (i.e. changes in wealth) the figures in the column for inclusive wealth would be lower. Both economic theory and empirics tell us that national and international agencies ought now to make use of inclusive wealth per capita as a yardstick to measure economic progress.

Table 1: The progress of nations

Country/Region	**Annual Growth Rate 1970-2000 (%)**		
	Comprehensive Wealth (per head)	GDP (per head)	HDI*
Sub-Saharan Africa	-2.81	-0.1	+
Bangladesh	-0.79	1.9	+
India	-0.45	3.0	+
Nepal	-0.37	1.9	+
Pakistan	-1.42	2.2	+
China	4.47	7.8	+

*Change in HDI between 1970 and 2000.

Source: adapted from Arrow et al., 2004.

Timeline

Work on the development of the report was initiated in March 2010 by IHDP through a grant from UNEP. The release of the first IWR is planned for April of 2012, at the Rio+20 conference. The report will continue to be produced on a biennial basis.

References

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