How to measure well-being

Cutting to the core

Since 1972, economists and others have tried to supplant GDP-driven indicators with measures that take human well-being into account. But how easy is that, and how close are we?

Can human well-being be measured? This question is the subject of an extensive philosophical debate, and the end is not yet in sight. The problem lies in the definition of human well-being. What exactly is it, and how can it be measured? If you can't define it, can you even measure it?

Measuring human well-being is a problem of method, and there have been many notable attempts to solve it. Perhaps the most important contribution to this debate in recent years is the 2009 report by the Commission on the Measurement of Economic Performance and Social Progress, set up by French President Nicolas Sarkozy in 2008. Sarkozy asked three economists – Nobel laureates Joseph E. Stiglitz and Amartya Sen, and Jean-Paul Fitoussi of the *Institut d'Etudes Politiques de Paris* – to 'identify the limits of GDP as an indicator of economic performance and social progress, including the problems with its measurement'. Known as the Stiglitz Commission, they were also asked to propose alternative methods of measurement.

One of the commission's first major contributions came one year before the report was even published. The authors assessed previous methods for measuring human well-being and concluded there were in fact three separate problems. The importance of this finding, however, can only be properly understood in the larger context of a debate that has been going on for almost 40 years.

summary

- For decades, economists have attempted to develop reliable methods for measuring human well-being, as opposed to only material living standards.
- Each new indicator used a predecessor as a model and attempted to improve on it.
- The most notable contribution is the 2009 *Report by the Commission on the Measurement of Economic Performance and Social Progress.* It not only proposes a reliable standard, but also one that measures data across countries and over time.
- Most indicators assume that human well-being has to be defined before it can be measured, but that's not the case. Human well-being can only be defined by how it is measured.

A first attempt

The debate was unleashed by a study called 'Is growth obsolete?' by William D. Nordhaus and James Tobin in 1972. The study presented two methods for measuring well-being that acted as alternatives to more conventional ones, a Measure of Economic Welfare (MEW) and a Sustainable Measure of Economic Welfare (MEW-S).

As the title of their study suggests, the context for their alternative methods was the hypothetical obsolescence of growth. To set the tone, they quoted ecologist Paul Ehrlich, who suggested that we 'must acquire a lifestyle which has as its goal maximum freedom and happiness for the individual, not a maximum Gross National Product'.

These words marked a shift away from conventional methods of measuring well-being, which focused on statistics gleaned from GNP and GDP. If a society is materially well off, the conventional argument went, then the level of well-being must be high as well. But, as the authors say, 'GNP is an index of production, not consumption'. It measures material wealth but not economic welfare.

The two measures developed by Nordhaus and Tobin therefore introduced a series of corrections to conventional methods for calculating the product. This enabled them to remove factors that do not impact well-being and to include factors that do.

The first step in their complex system of corrections focused on the net instead of gross product since it is necessary to take capital depreciation into account. They then introduced the idea of a per capita level of consumption that does not exceed the 'trend rate of increase in labour productivity', a concept the authors described as 'sustainable'. If per capita consumption were to exceed this sustainable level, it would encroach on 'some of the fruits of future progress'.

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The authors concluded their study by comparing the results obtained with MEW to data on the Net National Product (NNP), which measures GNP minus depreciation. They should have compared them to GNP data, however, which would have been more consistent with their study's objective. Had they done so, they probably would have reached the opposite conclusion.

What's more, it is difficult to grasp today how the authors could have neglected to include estimates based on environmental damage or the depletion of natural resources in the calculations they termed MEW-S. Despite this gap, there is every reason to view their study as the predecessor of all later efforts to correct or adjust GNP (or GDP) to arrive at some aggregate measure of welfare.

First turnaround

It took 17 years for a significant new economic indicator to emerge as an alternative to GDP for measuring economic welfare. The Index of Sustainable Economic Welfare (ISEW), proposed by Herman E. Daly and John B. Cobb in their 1989 book *For the Common Good,* inevitably took its cue from its predecessor, MEW, and attempted to build on it.

For a start, ISEW attempted to fill the gaps in MEW-S by including factors such as environmental damage and the depletion of natural resources. As Tim Jackson, Nat McBride and Saamah Abdallah illustrated in their presentation to the 2007 conference 'Beyond GDP', ISEW can be likened to an equation. It is based on consumer expenditure, after which 'positive and negative adjustments are made to it to account for a series of social, economic and environmental factors'. Additions include household and volunteer work, while subtractions include pollution, climate change, crime and divorce.

This new, inclusive indicator for measuring human well-being initially made a huge impact. After the United States, at least 11 other countries from five continents had their ISEW calculated. In 1995, ISEW was transformed into the Genuine Progress Indicator (GPI) by the US NGO Redefining Progress to also include 'purely social factors such as the cost of family breakdown and underemployment'.

Corrections to GNP or GDP could result in a reasonable indicator that draws attention to the incongruent evolution between a national economy's performance and the economic welfare it has generated. However, this has little to do with sustainability, which necessarily refers to the future. Showing that the rate of increase in welfare is lower than the rate of increase in GNP or GDP says nothing about whether either measure will be sustainable.

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The major problem with ISEW – which worsened with GPI – is the speculative nature of attributing monetary value to environmental damage, gains in leisure and domestic or voluntary work. Assessing losses or gains in this way, particularly if they do not have a market-determined value, will always be an arbitrary exercise. It therefore remains to be seen whether society will ultimately accept such a measure.

Second turnaround

What MEW, ISEW and GPI have in common is that their analysis begins with national accounting data which traditionally focuses on calculating the product (be it internal or national, gross or net) in order to obtain an indicator of economic welfare or genuine progress. This is quite different from what followed in the 1990s, which witnessed an immense proliferation of indicators.

This inevitably only confused matters. This is clearly argued in *Sustainable Development Indicators in Ecological Economics,* a collection of essays from 2006 edited by Philip Lawn. The book's assessment of the situation is that no reliable indicator of economic welfare had been developed up to that point, nor could a satisfactory indicator of human well-being have arisen.

This changed with the publication of the report of the Stiglitz Commission in 2009. Its authors identified three separate problems. Measuring economic performance is one thing, they argued. Measuring the quality of life is another. And measuring the sustainability of the process is yet another. The report proposed guidelines for addressing these three problems that were far more radical than anticipated.

First, the GDP (or GNP) must be entirely replaced by an accurate tool for measuring available household income, and not product. Second, quality of life can only be measured by a sophisticated composite index that also incorporates recent discoveries in the economics of happiness. And third, sustainability demands a small group of physical indicators, and not a juggling act that artificially tries to place a monetary value on non-merchandise.

In other words, the report proposed abandoning product-driven accounting, adapting a more comprehensive approach to quality of life and a more pragmatic approach for measuring sustainability. This could bridge the gap between information contained in GDP or the Human Development Index and what people consider valuable in life. 'It requires developing a statistical system that complements measures of market activity by measures centred on people's well-being and by measures that capture sustainability'.

As the authors of the report point out, this kind of system has to be plural and embrace a gamut of different measures 'because no single measure can summarize something as complex as the well-being of the members of society'. They outline five recommendations for measuring material well-being. Look at income and consumption, rather than production; emphasize the household perspective; consider income and consumption jointly with wealth; assign more

Stiglitz Commission in search of new yardsticks

The economic crisis these past two years prompted severe questioning of the old model of finance-driven growth, and a search for alternative measures of well-being and societal improvement. In 2008, French President Nicolas Sarkozy expressed his concern that the government's efforts to offer economic opportunities for low-income residents and immigrants were not reflected in the GDP (or in the sense of citizenship in the *banlieue* suburbs). He therefore set up the Stiglitz Commission to look into alternative measures of societal well-being. The commission's report suggested options to surmount the problems of relying on unified indices. It also included a review of whether and how to incorporate environmental sustainability in the well-being equation, an effort led by Columbia University resource economist Geoffrey Heal.

But what well-being equation should be used as a yardstick? If well-being itself is inadequately measured (whether by GDP or the often-criticized Human Development Index, which conflates per-capita GDP with human well-being indicators such as health and education), imagine the commission's reaction to composite environmental indices! The section of the report on measures of sustainability says that little can be done in the general accounts to reflect environmental losses in a consistent and uncontroversial measurement. This should be done (if at all) in satellite accounts and/or with complementary measures, such as footprint analysis and 'dashboards', which tell you whether the economy is really getting off a sustainable track so that presumably it can be fine-tuned and put back on track. This approach would put greater emphasis on biophysical measures of sustainability, such as the ecological footprint, than on monetary expressions of human demand for environmental quality. In this light, it is more consistent with ecological economics than with mainstream environmental or resource economics.

When we look at the rationale behind Sarkozy's request for alternative measures, it becomes clear that a distinction should be made here between 'doing green economics' and improving the measurement of the economy using a sustainability yardstick. The Stiglitz Commission tried to measure the meaning of welfare improvements, incorporating some of the latest thinking on the metrics of sustainability (either in the same well-being equation or alongside it). Although the French government did not immediately see an improvement in its welfare indices as measured by the commission, it is plausible that better measurement might stimulate action to improve performance along more social and environmentally desirable lines. There is therefore some hope that if policy makers were to use this yardstick to measure economic performance, they would tend to invest more in greener, more socially desirable things, as they would have a greater weight in the aggregate measure of economic performance than they do now.

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prominence to the distribution of income, consumption and wealth; and broaden income measures to non-market activities.

Material wealth, however, only constitutes the first of eight key dimensions of well-being, according to the report. The other seven are health, education, personal activities, political voice and governance, social connections and relationships, environment and insecurity. All of the above impact well-being, and yet conventional indicators overlook many of them. These eight dimensions are the ingredients of a multidimensional definition of well-being, according to the report.

Measuring quality of life

The authors consequently adopt the phrase 'quality of life' (QoL) to denote those aspects of life that shape well-being beyond the command of economic resources. They propose five further measures for assessing QoL.

First, health, education, personal activities and environmental conditions need to improve. 'In particular', the authors argue, 'substantial effort should be devoted to developing and implementing robust, reliable measures of social connections, political voice, and insecurity that can be shown to predict life satisfaction'.

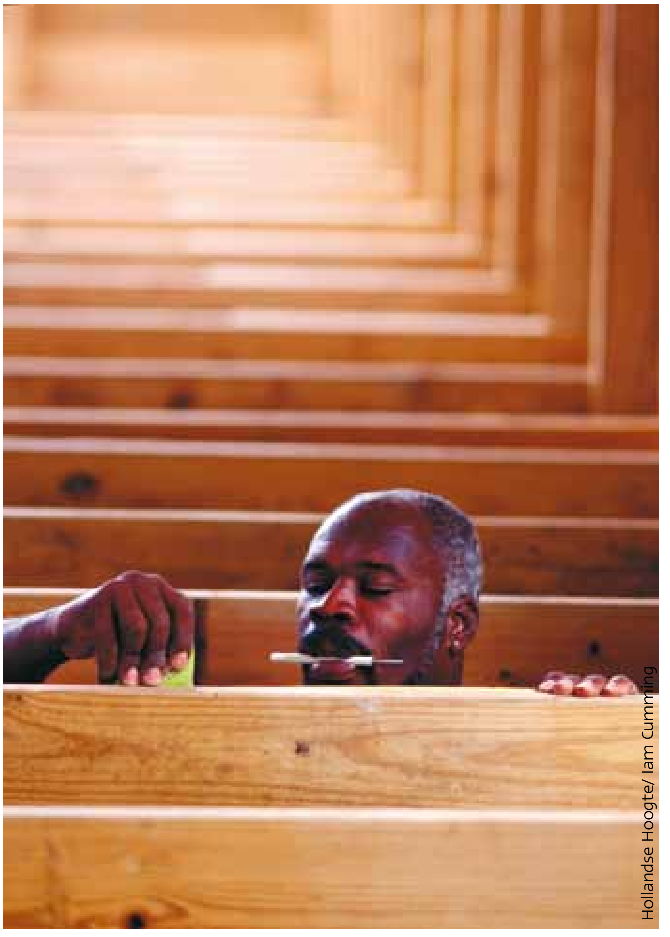
Second, QoL indicators should expose inequalities, as they 'are integral to any assessment of quality of life'. Third, surveys should identify the relationship between different QoL domains for individuals, 'and this information should be used when designing policies in various fields'.

Fourth, information is needed 'to aggregate across quality-of-life dimensions, allowing the construction of different indexes'. And fifth, since QoL is also determined by subjective well-being, and not only objective well-being, surveys are needed that capture people's 'life evaluations, hedonic experiences and priorities'.

Is there a meaningful and reliable method for collecting data on subjective well-being? According to the report, research shows it is possible. Since 'subjective well-being encompasses different aspects (cognitive evaluations of one's life, happiness, satisfaction, positive emotions such as joy and pride, and negative emotions such as pain and worry), each of them should be measured separately to derive a more comprehensive appreciation of people's lives'.

This will take a great deal of effort and 'investment in statistical capacity where available indicators remain deficient'. As the authors say, 'this is particularly the case for data on how people spend their time (and on their enjoyment in performing these activities). An important priority is to develop such data at regular intervals and based on standards that allow comparisons across countries and over time'. This would make it possible not only to measure standards of current well-being but also to identify factors that may influence future well-being.

Until now, none of the approaches developed in the past 40 years has entirely convinced policy makers, academics or the public to abandon conventional methods. This may be related to the difficulty of defining something so subjective.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The Stiglitz Commission's multidimensional definition is the most recent and perhaps the most complex attempt.

But the failure of new approaches to replace conventional ones may well rest on a paradox, namely that it is not true that you can only measure something once it has been defined. In fact, the opposite is true. A definition arises from an agreed-upon measure. In this context you could say that human well-being can only be defined by how it is measured. ■

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