



Measuring well-being: An overview

R Nagabhushan

Associate Professor, Department of Economics, Government First Grade College, Kuvempunagar, Mysore, Karnataka, India

Abstract

Using monetary measure like GDP per capita as a proxy for well-being of the people was accepted in many countries. However, in recent years, concerns have emerged that indicators such as GDP don't provide a sufficiently detailed picture of the living conditions that ordinary people experience. They have failed to give a true account of people's current and future living conditions. Data on GDP provide only a partial perspective on the broad range of factors that matter to people's lives. Of course, GDP per capita can measure a country's capacity to deal with the material needs of its residents. However, as more and more developed societies have been moving away from a situation of scarcity to a situation of plenty, use of GDP per capita as a good proxy measure of well-being is no more the obvious choice for economists. The need to go 'beyond GDP' is now fully recognized at international level. It is felt that the time is ripe to shift emphasis from measuring economic production to measuring people's well-being. In recent years, there has been an increased interest in defining and measuring well-being. Well-being is multidimensional in nature. It takes into account the material living standards such as income, consumption and wealth; health; education; personal activities including work; political voice and governance; social connections and relationships; environment; and economic and physical insecurity. All these dimensions shape people's well-being. Conventional income measures fail to capture many of these dimensions. This paper attempts to look at some of the approaches to measuring well-being. The paper is based on the literature available on the subject.

Keywords: GDP, well-being, measure

Introduction

Happiness is what people cherish most. In order to influence happiness, policy-makers need measures for it. So far, there is no consensus on the best measure. GDP only measures the market value of all final goods and services produced within a country in a given period. It is the most widely followed metric for assessing an economy's performance. However, GDP includes many items that do not help well-being: depreciation, income going to foreigners, and regrettable like security expenditure. Happiness, as the ultimate goal, requires the most encompassing measure. This happiness depends primarily on family, friends, work satisfaction and activities. Income does not play a major role.

Since the publication of the Final report of the 'Commission on Measuring Economic Performance and Social Progress' in 2009 (Stiglitz, Sen and Fitoussie, 2009) ^[10] there has been a tremendous upsurge of interest in and initiatives to develop measures of human well-being as a yardstick of societal progress. The report is of the opinion that the measurement of development in terms of income is inadequate and has misguided public policy in both developed and developing countries. The focus on income measures encourages an unbalanced focus on economic growth and policies that, at their worst, have proven to be unsustainable, unequal and not poverty-reducing. The main recommendation and challenge to policy makers, academics and civil society actors set out by Stiglitz Report was to shift emphasis from measuring economic production to measuring people's well-being. The Stiglitz Commission argues that there are eight dimensions to measurement of well-being: Material living standards, health, education, personal activities, political voice, personal relationship, environment and physical and economic security. The OECD's 'How's Life' Framework (2011a), expands the number of dimensions to eleven. As shown in Figure1, these 11 dimensions are divided between two pillars that are labeled 'Quality of Life' and 'Material Conditions'. A third and important element of the How's Life Framework is labelled 'Sustainability' and this elaborates the context for the reproduction of the material conditions and quality of life.

What is well-being?

Well-being can be understood as how people *feel* and, more importantly, how they *function*, both on a personal and a social level. How people *feel* refers to emotions such as happiness or anxiety. How people *function* refers to things such as their sense of competence or their sense of being connected to those around them.

Economic well-being is a broader concept, but still restricted to material aspects. It is influenced by parts of GDP, by non-market activity, leisure and wealth. Unemployment and income inequality tend to reduce economic well-being.

Well-being also has non-economic dimensions: good health and education, a clean environment and safe streets all contribute individual's overall well-being. These elements are difficult to quantify and aggregate. Although happiness is inherently difficult to measure, surveys provide valuable insights on the levels and determinants of individual's overall satisfaction with life.

Well-being could be both subjective well-being and objective well-being. Subjective well-being refers to how people are in themselves - their emotions, judgments and experiences. Objective well-being refers to things external to people that are thought to be necessary for living good lives, such as a sufficient income, decent housing and a good education. So we can think of someone as having high well-being if they function well and have positive feelings day-to-day and overall.

Well-being is not same as happiness. The latter refers to how people are feeling moment-to-moment and does not always tell us about how they feel about their lives as a whole or about how they function in the world. Well-being is a much broader concept than happiness: it includes happiness but also other things such as how satisfied people are with their lives as a whole, and issues such as autonomy (having a sense of control over their life) and purpose (having a sense of purpose in life).

Recent researches suggest that positive feelings like happiness can actually lead to better well-being overall. This is because positive feelings broaden people's potential responses to challenging situations and build their capabilities.

GDP as a measure of well-being and its limitations

The monetary measure most commonly used to assess the total value of the economic resources that affect well-being is GDP per capita. GDP measures the value of the goods and services produced within a country during a given period of time. In practice, this means the production of those activities that fall within the boundary of the System of National Accounts.

A number of ways of measuring national-level progress have been proposed, developed, and used to address this growing realization that GDP is a measure of economic quantity, not economic quality or welfare, let alone social or environmental well-being. The measures also address the concern that GDP's emphasis on quantity encourages depletion of social and natural capital and other policies that undermine quality of life for future generations. In general, these new measures can be categorized as:

GDP per capita is only a proxy of well-being, meaning that there are several areas in which it fails to take into account factors that are of importance as well:

- GDP excludes a range of non-market activities that influence well-being, due frequently to practical concerns with measuring them, because their value is not easily defined in market terms.
- These include not only illegal activities and home activities like housework and do-it-yourself work, but also leisure, which is clearly of value to society and important to well-being.
- Conventional measurements of GDP exclude changes in asset values, although these clearly influence what an individual can consume in the current period without becoming worse off.
- GDP does not take account of externalities, such as pollution or environmental deterioration, nor of depletion of non-renewable resources. This distorts how much market prices actually reflect the marginal contribution of certain items to well-being, including those of future generations.
- GDP does not distinguish inter-country differences in the distribution of income. To most people, a huge increase in national income that goes exclusively to a tiny handful of very wealthy families will not increase general well-being as much as if it were more equitably distributed.
- GDP includes the replacement of depreciated capital: it is a 'gross' concept. Depreciation does not boost welfare and the replacement of old capital just takes the economy back to square one.
- GDP measures income produced in a country but not how much income people in that country receive. Some income may go to foreigners.
- GDP only counts monetary transactions; it misses many other activities that people value like caring for children or elderly at home. GDP also ignores the value of leisure time spent relaxing or with family and friends. It does not include the value of clean air and water.

GDP, while a poor measure of welfare, nonetheless serves crucial and helpful roles in macroeconomic policy and is unique in that it combines simplicity, linearity, and universality as well as carries the objectivity of the observable market price as its guiding principle (Goossens, Makipaa *et al*, 2007).

OECD identifies three pillars for understanding and measuring people's well-being: material living conditions, quality of life, and sustainability. This approach draws closely on that proposed by Stiglitz *et al.*, (2009)^[10] by previous OECD work and by measurement practices around the world.

Alternative measures of well-being

Nobel laureate James Tobin and William Nordhaus highlighted in the early 1970s that "GDP is not a measure of welfare and proposed a Measure of Economic Welfare (MEW) that adds to GNP the value of household services and leisure, subtracts the cost of capital consumption and of 'bads' such as pollution, and excludes, for example, police services to combat crime. Many later studies followed their lead.

a. Social indicators

Policy makers and citizens are concerned with much more than GDP per capita as a measure of well-being. In particular, they seek to ensure the overall well-being of society, both today and in the future. Social indicators aim to provide information on well-being beyond that conveyed by conventional economic measures. Social indicators focus on observable outcomes in a variety of fields such as health, literacy and poverty. Considerable progress has been made in developing a comparable set of social indicators, particularly since 1980s, when the OECD first presented its social indicators (OECD, 1986). Social indicators provide a complementary approach to GDP-derived proxies for well-being. OECD has used four domains – self-sufficiency, equity, health status and social cohesion. The selection of these indicators is based on both their importance to social well-being and their availability, so as to allow meaningful cross-country comparisons.

Self-sufficiency: reflects the extent of participation in the economy and society and how well individuals are able to get through daily life on their own. It is measured in terms of overall employment rate, the proportion of the population in households where nobody has a job, the average number of years of schooling, and the average school performance of children at age 15.

Equity: Reflects the distribution of household incomes and the extent of equality of opportunity among individuals. It may be measured in terms of income inequality, relative poverty rates, child poverty and the gender wage gap.

Health Status: Reflects not only disease and its cure, but other social factors that can affect mortality and morbidity. The four indicators of health status used here are life expectancy at birth, healthy life expectancy at birth, infant mortality rates and the potential years of life lost as a result of accidents or preventable diseases.

Social Cohesion: A feeling of belonging to a wider community and the satisfaction that derives from participation in the broader society are important to well-being. But social cohesion is measured not only through positive indicators, like the share of people who volunteer in community groups, but also through negative manifestations, such as levels of crime, victimization and suicide.

b. Green GDP

Numerous attempts have been made to develop Green GDPs - GDPs that factor estimates for environmental degradation and depletion of natural resources into the national income accounts to arrive at a single number. Work on a Green GDP for Japan in the 1980s informed the Daly and Cobb efforts on the ISEW. Green GDP calculations also have been developed for countries as diverse as Australia, Canada, China, Costa Rica, Indonesia, Mexico, Papua New Guinea, and the US, although none of these efforts have resulted in regular reporting of the results.

c. Genuine Savings

Genuine Savings was developed for the World Bank (World Bank 1997) ^[17] and is defined as “ the true level of saving in a country after depreciation of produced capital; investments in human capital (as measured by education expenditures); depletion of minerals, energy and forests; and damages from local and global air pollutants are taken into account” (Hamilton, Ruta *et al.* 2006) ^[5]. This includes the value of global damages from carbon emissions. Genuine Savings measures the built, natural, and intangible capital that is required for human society to exist and to thrive. Intangible wealth is related to the social and human capital of a nation and includes skills and know-how of the labour force, trust and cooperation, efficient judicial system, clear property rights, and effective government. Like the GPI, the national income accounts are the underpinnings of Genuine Savings. The calculation subtracts the amounts for environmental degradation and resource depletion and adds in amounts for investments in human capital. GS attempts to measure sustainable use of resources although it does not take into account equity issues related to consumption.

Indexes that do not use GDP

Some alternative indexes do not measure economic activity; rather, they measure environmental or social activities, well-being, or changes in environmental, social, or human capital.

a. Ecological Footprint

The Ecological Footprint (EF) was developed by Mathis Wackernagel and William Rees as a way to account for flows of energy and matter into and out of the human economy and convert those flows into a measure of the area of productive land and water required to support those flows (Wackernagel and Rees 1996) ^[16]. The EF is intended to be used as a resource management tool for assessing whether and to what extent an individual, city, or nation is using available ecological assets faster than the supporting ecosystems can regenerate those assets. The EF has been used as a stand-alone index of environmental sustainability and is also used as part of composite indicators described below.

b. Subjective Well-Being

Over the last two decades, there has been a growing body of work that evaluates human well-being based on self-reporting by individuals and groups. Generally referred to as measures of subjective well-being (SWB), these studies attempt to measure “satisfaction” with quality of life or people’s moods and emotions (Diener and Suh 1999) ^[3]. The intent is to measure the extent to which human needs are actually being met. Because these measures are based on the judgments of the survey respondents rather than on more easily quantifiable inputs of money and material goods, there are concerns that these “subjective” measures are not factually based and therefore less valid than “objective” measures like GDP. However, as pointed out by Costanza and others, objective measures such as life expectancy, rates of disease, and GDP are only proxies for well-being that have been identified through the subjective judgment of decision-makers. There is also a concern that there are cultural differences that make it difficult to compare the results across different ethnic, gender, age, religion, and other cultural boundaries. Comparisons of reported well-being and per capita GDP have shown that beyond a certain income level, happiness does not increase significantly with additional income.

c. Gross National Happiness

Gross National Happiness (GNH) is frequently mentioned as an alternative measure of progress. It was originally suggested by the King of Bhutan in the early 1980s as a more appropriate measure for his small kingdom than GDP. It was not an actual index, but a principle for guiding Bhutanese development in a fashion consistent with the country’s culture and spiritual values rather than by focusing on increasing economic activity. Since 2004, the Bhutan government has sponsored four international conferences on GNH. Bhutan has established a Gross National Happiness Commission but a specific methodology for measuring GNH has not yet been defined (Ura and Galay 2004).

Composite Indexes Including GDP

All of the alternatives to GDP (and GDP itself) are composite indexes that combine several different measures into a single number. Here we list some indexes that combine GDP or GDP variants with some of the non-GDP environmental or social indexes already described or with other measures of well-being.

a. Human Development Index

Since 1990, the United Nations Development Program has used the Human Development Index (HDI) in its annual Human Development Report. The purpose of the report is to show how well the management of economic growth and human development is actually improving human well-being in the nations of the world. The inaugural report defines human development as the “process of enlarging people’s choices...to live a long and healthy life, to be educated, have access to resources needed for a decent standard of living. [to have] political freedom, guaranteed human rights and personal self-respect.” However, the authors acknowledge the difficulty of quantifying the last three components and the index focuses on “longevity, knowledge and decent living standards” as proxies for people’s ability to live long and prosperous lives (UNDP, 1990).

- Longevity is measured using life expectancy at birth. This also serves as a proxy for other aspects of well-being such as adequate nutrition and good health.
- Knowledge is measured using literacy rate and school enrollment, which are intended to reflect the level of knowledge of the adult population as well as the investment in the youth.
- Access to a decent standard of living is measured using GDP adjusted to reflect purchasing power parity and the threshold effect using a logarithm of real GDP per capita. Initially reported for 14 countries, the UN’s 2007 report presented HDI results for 177 countries (UNDP, 2007).

b. Living Planet Report

Along with several partner agencies, in 1998, the World-Wide Fund for Nature (WWF, formerly the World Wildlife Fund) published the first Living Planet Report. The report has two components: the state of the world’s natural environment and the burden placed on the natural environment by humanity. The Living Planet Index (LPI) is a measure of the world’s forests, freshwater and marine ecosystems, specifically on the “extent and severity of biodiversity loss” (Hails 2006). The LPI tracks biodiversity trends by tracking the populations of 1,313 species of fish, amphibians, reptiles, birds, and mammals. In the initial reports, the Global Consumption Pressure - a measure of six subcomponents of human-related consumption of grain, marine fish, wood, cement, carbon dioxide emissions, and water withdrawals—was the measure of the human burden on the environment (Loh, Randers *et al.* 1998) ^[6]. Since 2002, the Ecological Footprint has been used as the measure of human consumption and waste generation. The 2006 Living Planet Report (LPR) showed that human use of the earth’s bio capacity is exceeding the regenerative capacity by 25 percent.

c. Happy Planet Index

The purpose of the Happy Planet Index (HPI), developed and published by the New Economics Foundation (NEF), is to measure a country’s ecological efficiency in delivering human well-being. The index is a composite of three measures: life expectancy at birth, life satisfaction, and ecological footprint. The 2006 report by NEF shows the results for 178 countries using a color-coding scheme that depicts graphically not only how a country rates on the HPI scale but also how the three components affected the rating. Countries can also have similar life

satisfaction measures but different overall results. For example, although people in the US and New Zealand report similar levels of life satisfaction, New Zealand's overall HPI is 13 points higher than the US' because the average New Zealander has a slightly higher life expectancy and uses only half the resources of the average US citizen as measured by their respective Ecological Footprints (Marks, Abdallah *et al.* 2006)^[7]. An interesting result of comparing the HPI and HDI methodologies is that two countries can have very similar results for the HDI but have very different results of HPI. For example, Honduras's HPI is 30 points higher than Moldova even though the two countries have similar HDI ratings, ecological footprint and life expectancy. The reason is that the Life Satisfaction in Honduras is more than double that of people in Moldova.

d. Calvert-Henderson Quality of Life Indicators

The Calvert-Henderson Quality of Life Indicators were developed as a collaborative effort between the socially responsible investment firm, Calvert Group, economist and futurist Hazel Henderson, and a multi-disciplinary group of practitioners and scholars from government agencies, for-profit firms, and nonprofit organizations. The indicators, the result of an extensive six-year study, cover 12 issue areas: education, economy, energy, environment, health, human rights, income, infrastructure, national security, public safety, recreation, and shelter. The indicators were developed as a suite rather than as a composite, leaving overall interpretation to the user.

e. Millennium Development Goals and Indicators

In 2000, leaders of 189 countries signed the United Nations Millennium Declaration, which established eight international goals for improving the global human condition. The goals included eradicating extreme hunger and poverty, achieving universal primary education, promoting gender equality and empowering women, reducing child mortality, improving maternal health, combating HIV/AIDS, malaria and other diseases, ensuring environmental sustainability, and developing a global partnership for development. Forty-eight indicators were defined to measure progress towards these goals (UN DESA 2007).

Conclusions

At the time it was conceived, GDP was a useful signpost on the path to a better world: a path where increased economic activity provided jobs, income, and basic amenities to reduce worldwide social conflict and prevent a third world war. That economic activity has created a world very different from the one faced by the world leaders who convened at Bretton Woods in 1944. We are now living in a world overflowing with people and manmade capital, where the emphasis on growing GDP and economic activity is leading the world back toward the brink of collapse. As Herman Daly said recently: "Economists have focused too much on the economy's circulatory system and have neglected to study its digestive tract. Throughput growth means pushing more of the same food through an ever-larger digestive tract; development means eating better food and digesting it more thoroughly" (Daly 2008)^[1].

Economic indicators are important for steering economic policy and individual decisions. As things stand today, there is no consensus on how to best measure well-being and happiness. Over the coming years there is a good chance that measuring and improving life satisfaction will become a more important focus of policymakers.

Reference

1. Daly H. A Steady-State Economy. UK Sustainable Development Commission, 2008.
2. Daly HE, Cobb Jr JB. For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future. Boston: Beacon Press, 1989.
3. Diener E, Suh EM. National Differences in Subjective Well-Being. Well-Being: The Foundations of Hedonic Psychology. Kahneman, Diener and Schwarz. New York: Russell Sage Foundation, 1999, 434–450.
4. Gupte J, te Lintelo D. 'Informal Work and Wellbeing in Urban South Asia'. End of Project Report to DFID South Asia Research Hub. Brighton: Institute of Development Studies, 2015.
5. Hamilton K, Ruta G, *et al.* Where Is the Wealth of Nations? Measuring Capital for the 21st Century. Washington, DC: The World Bank, 2006.
6. Loh J, Randers J, *et al.* Living Planet Report 1998: Overconsumption is driving the rapid decline of the world's natural environments. Gland, Switzerland: World Wildlife Fund for Nature, 1998.
7. Marks N, Abdallah S, *et al.* The (un) Happy Planet Index: An index of human well-being and environmental impact. London: Friends of the Earth, New Economics Foundation, 2006.
8. McGregor JA, Boarini R, Kolev A. 'Measuring well-being and progress in countries at different stages of development: Towards a more universal conceptual framework'. OECD Working Paper 325. Paris: OECD, 2014.
9. OECD. How's Life: Measuring well-being. Paris: OECD, 2011a.
10. Stiglitz JE, Sen A, Fitoussi JP. 'Report by the Commission on the Measurement of Economic Performance and Social Progress' Sustainable Development Commission on the Measurement of Economic Performance and Social Progress, 2009.
11. Talberth DJ, Cobb C, *et al.* The Genuine Progress Indicator 2006: A Tool for Sustainable Development. Oakland, California: Redefining Progress, 2007.

12. UN DESA. The Millennium Development Goals Report. New York: United Nations Department of Economic and Social Affairs, 2007.
13. UN Development Program. 1990. Human Development Report: Overview. New York: Oxford University Press.
14. UN Development Program. 2007. Human Development Report 2007/2008: Fighting Climate Change: Human Solidarity in a divided world: Summary.
15. Ura K, Galay K (eds). Gross National Happiness and Development. First International Seminar on Operationalization of Gross National Happiness, Thimphu, Bhutan: The Centre for Bhutan Studies, 2004.
16. Wackernagel M, Rees WE. Our Ecological Footprint: Reducing Human Impact on the Earth. Gabriola Island, BC: New Society Publishers, 1996.
17. World Bank. World Development Report: The State in a Changing World. New York: Oxford University Press, 1997.