

Chapter X: Measuring Genuine Social Progress

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Nations need indicators that measure progress towards achieving their goals—economic, social, and environmental. But how would you measure the levels of overall progress and success in a society? Would it be through environmental protection measures, or the levels of physical health among the population, or how well poverty and inequality had been tackled? They are all worthy measures.

What about measuring society's success by how much economic activity is created by environmental disasters like oil spills or hurricanes? How about an increase in cancer rates? Are they good ways to measure success?

To most people the answer to the latter would be 'no'—people want to see true measures of success, not just economic measurements that track financial activity. So why are we still using Gross Domestic Product (GDP) to gauge our successes?

Standard economic indicators, like GDP, are useful for measuring just one limited aspect of the economy—marketed economic activity—but GDP has been mistakenly used as a broader measure of welfare.

Why an alternative to GDP is necessary?

GDP was never designed to measure social or economic welfare. The original creators of GDP warned against using it for anything except as a specialized tool that measured only a narrow segment of society's activity. However, since the 1950s we've used the size of the economy as our primary indicator of overall progress. By that yardstick the global economy (as measured by GDP) has grown more than three-fold since 1950. However, economic *welfare*, as estimated by the Genuine Progress Indicator (GPI) has actually decreased slightly since 1978. As opposed to the GDP, GPI adjusts for income distribution, adds some positive things left out of GDP like volunteer work and subtracts some major costs.

GDP's current role poses a number of problems. One major issue is that it interprets every expense as positive and does not distinguish welfare-enhancing

activity from welfare-reducing activity. For example, an oil spill increases GDP because of the associated cost of cleanup and remediation, but it obviously detracts from overall well-being. Examples of other activities that increase GDP include hurricanes (and all other natural disasters), cancer (and other illnesses), crime, car accidents and divorce.

GDP adds up all *marketed* deliveries to “final demand” (sales to households, government, net exports, and capital formation) that occur within a country, regardless of whether they represent a real benefit or a “defensive expenditure” like cleaning up an oil spill or treating pollution caused health effects. This is because GDP is calculated using the input/output model. This means that the only things that can be included in GDP are those items that are produced and consumed by one of the sectors in the economy. Nothing else is included.

Now imagine if a corporation used GDP accounting to do its books. It would be adding all its income and expenses together to get a final number. This would not provide a very good indication of how well the business was doing. Herman Daly, a former senior economist at the World Bank, once commented that, “the current national accounting system treats the earth as a business in liquidation.” He also noted that we are now in a period of “uneconomic growth”, where GDP is growing but economic welfare is not.

GDP also leaves out many components that enhance welfare but do not involve monetary transactions and therefore fall outside the market. For example, the act of picking vegetables from a garden and cooking them for family or friends is not included in GDP. Yet buying a similar meal in the frozen food aisle of the grocery store involves an exchange of money and a subsequent GDP increase. A parent staying home to raise a family or do volunteer work is also not included in GDP and yet they are potentially key aspects of someone’s well-being.

There are problems with GDP including that it does not account for the distribution of income among individuals, which has considerable effect on individual and social well-being. GDP doesn’t care whether a single individual or corporation receives all the income in a country, or whether it is equally distributed amongst the population. A dollar’s worth of increased income to a poor person produces more additional welfare than a dollar’s increased income to a rich person. Additionally, the distribution of income within a country influences a range of social problems and overall societal welfare.

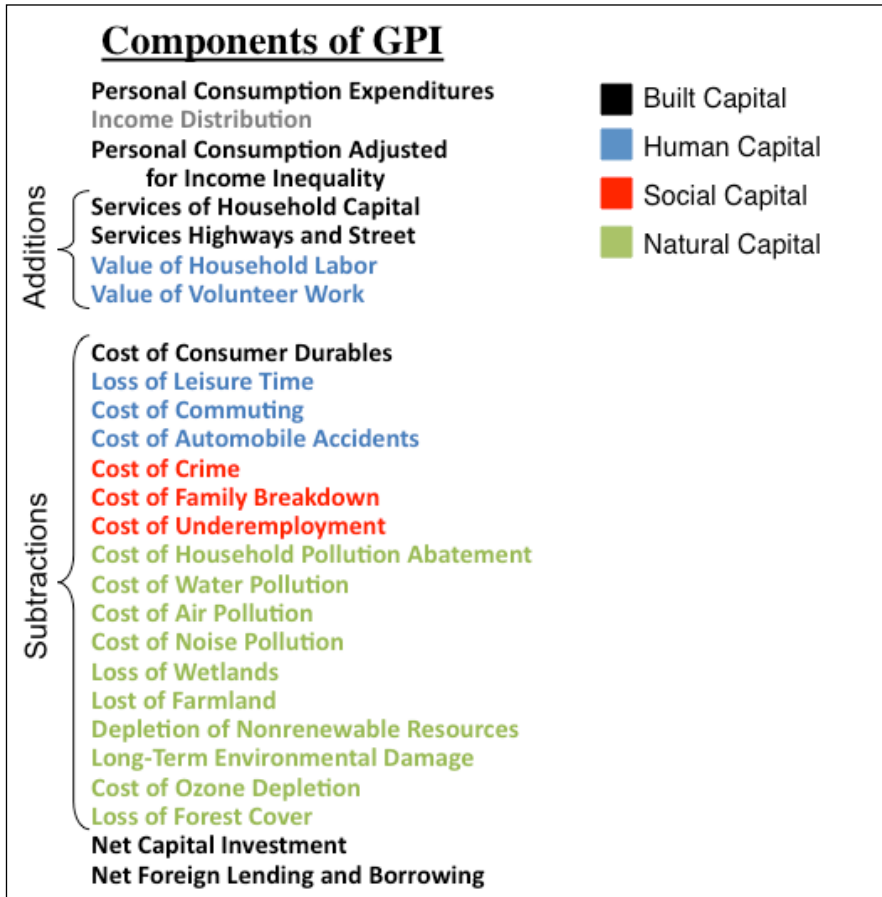
And yet, even with all the problems surrounding GDP, it is the most commonly used indicator of a country’s overall performance. And by that yardstick, the global economy (as measured by GDP) has grown more than three-fold since 1950.

Recent work on alternative indicators

In recent years much work has been done on alternative indicators to GDP—more comprehensive indicators that would consolidate economic, environmental, and social elements into a common framework to show net progress. A number of researchers have proposed alternatives to GDP that make one or more of these adjustments with varying components and metrics. Some have also noted the dangers of relying on a single indicator and have proposed a “dashboard” approach with multiple indicators.

One such alternative indicator is the Genuine Progress Indicator (GPI). The GPI is a version of the Index of Sustainable Economic Welfare (ISEW) first proposed in 1989.

GPI starts with personal consumption expenditures (a major component of GDP) but adjusts it using about 25 different components (seen in box 1), including income distribution, environmental costs, loss of leisure time, cost of family breakdown, cost of unemployment, negative activities like crime and pollution, and others. GPI also adds positive components left out of GDP, including the benefits of volunteering and household work. By separating activities that diminish welfare from those that enhance it, GPI better approximates sustainable economic welfare. GPI is not meant to be an indicator of sustainability. It is a measure of economic welfare that needs to be viewed alongside biophysical and other indicators. In the end, since one only knows if a system is sustainable after the fact, there can be no direct indicators of sustainability, only predictors.



Box 1: Components of GPI

If the same method of input/output tables were to be used to calculate GDP, the entire process would have to be adjusted. The tables would have to distinguish between the economic activities that added to versus subtracted from human well-being. Another major change would have to be the inclusion of goods and services that are not within the economic market but do have a large influence on human well-being. Over the past few years, various groups,

including the United Nations and the World Bank have been working on creating national accounts that incorporate ecosystem services. Some of these efforts modify the input/output model to incorporate services provided by nature.

Over the past few decades, ISEW or GPI have been calculated in around 20 countries worldwide. These studies have indicated that in many countries, beyond a certain point, GDP growth no longer correlates with increased economic welfare. The trend is similar in many countries, GPI tracks GDP pretty closely as a country develops, but at a certain point the two diverge. In the United States it happened in the mid-1970s while in China in the mid-1990s. GDP keeps growing while GPI levels off or decreases.

Recently, a global GPI was also estimated using GPI and ISEW data from 17 countries, containing approximately 53 per cent of the world's population and 59 per cent of the global GDP. On the global level GPI/capita peaked in 1978 (Figure 1). Interestingly, 1978 is also around the time that the human ecological footprint, a biophysical indicator that measures humanity's demand on nature, exceeded the Earth's capacity to support humanity. Other global indicators, such as surveys of life satisfaction from around the world, also began to level off around this time. In fact, a strikingly consistent global trend suggests that as income increases, well-being often decreases amidst rising rates of alcoholism, suicide, depression, poor health, crime, divorce, and other social pathologies.

An important function of GPI is to send up a red flag at that point. Since it is made up of many benefit and cost components, it also allows for the identification of which factors increase or decrease economic welfare. Other indicators are better guides of specific aspects. For example, Life Satisfaction, determined by surveys, is a better measure of overall self-reported well-being. By observing the change in individual benefit and cost components, GPI reveals which factors cause economic welfare to rise or fall even if it does not always indicate what the driving forces are behind this. It can account for the underlying patterns of resource consumption, for example, but may not pick up the self-reinforcing evolution of markets or political power that drive change.

Recently, two state governments in the United States have adopted GPI as an official indicator, the states of Maryland and Vermont. In addition, the data necessary to estimate GPI is becoming more available in many countries and regions. For example, remote sensing data allow better estimates of changes in natural capital and surveys of individuals about their time use and life satisfaction are becoming more routine. New means of measuring inequality are being developed, and more detailed data are being collected on the costs of crime, family breakdown, underemployment, and other measures that might be used in GPI in the future. The bottom line is that the costs of estimating GPI are not particularly high, the data limitations can be overcome, and it can be relatively easily estimated in most countries.

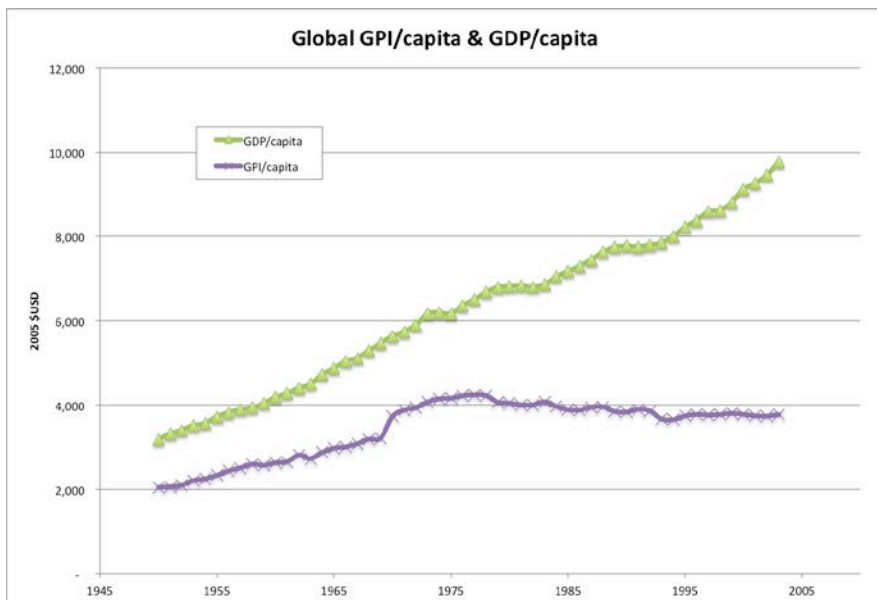


Figure 1: Global GPI/capita & GDP/capita. GPI/capita was estimated by aggregating data for the 17 countries for which GPI or ISEW had been estimated, and adjusting for discrepancies caused by incomplete coverage by comparison with global GDP/capita data for all countries. All estimates are in 2005 US\$.
Source: Kubiszewski 2013

So why the divergence between GDP and GPI?

GDP was created after the Great Depression in the US and WWII, when the world needed to repair its built infrastructure and financial systems. Natural resources were perceived as abundant and inadequate access to infrastructure and consumer goods represented the main limit on improvements to human well-being. During this time, it made sense to create an indicator that ignored relatively abundant natural resources, and the distribution of wealth and focused solely on increasing the production and consumption of market goods and services, which were relatively scarce.

However, as a result of our success, the world has changed dramatically over the past few decades. We now live in a world full of human infrastructure. The human footprint has grown so large that, in many cases, limits on the availability of natural resources now constrain real progress more than limits to consumer goods.

Between approximately 1950 and 1975, GPI per person for the majority of countries was increasing. Much of this was due to the rebuilding effort after World War II when consumption and built capital were the limiting factors for improving well-being in many countries and environmental externalities had not yet become significant. However, around the mid to late 1970s, much of the infrastructure was rebuilt. However, rising income inequality and increasing external environmental costs began to cancel the growth in consumption-related benefits, causing GPI/capita to level off.

GPI is not a perfect measure of overall human well-being since it emphasizes economic welfare and leaves out other important aspects of well-being. It is, however, a far better indicator than GDP, which was not designed to measure

welfare at all. Societal well-being or welfare ultimately depends on stocks of natural, human, built, and social capital, and because the GPI makes additions and deductions to GDP to reflect net contributions to these stocks it is a far superior measure of economic welfare than GDP. The disconnect between GPI and GDP, beginning in 1978, shows the aspects of our well-being that have been declining since that time. It also provides focus areas where societal improvement is necessary and possible.

Conclusion

GDP was never designed as a measure of economic welfare and GDP growth is no longer an appropriate national policy goal. Although GPI is certainly not a perfect measure, it is a far better approximation measure of human well-being than GDP.

If we hope to achieve a sustainable and desirable future, we need to rapidly shift our policy focus away from maximizing production and consumption (GDP) and toward improving genuine human well-being (GPI or something similar). This is a shift that will require far more attention to be paid to environmental protection, full employment, social equity, better product quality and durability, and greater resource use efficiency. These changes are clearly within our grasp, and are underway in several countries and regions. Alternative measures of progress, like GPI, are useful to help chart and guide the course if appropriately used and understood. The future we want is within our grasp, but not while we remain in the grasp of a measure of progress (GDP) that has clearly outlived its usefulness. It has often been said that you get what you measure and we need to begin to measure what we really want if we have any hope of achieving it.

Further readings

- Daly, H. E. and J. B. Cobb, Jr. (1989). *For the common good: Redirecting the economy toward community, the environment, and a sustainable future.* Boston, Beacon Press.
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- Wilkinson, R.G., K. Pickett. *The spirit level: Why greater equality makes societies stronger.* (Bloomsbury Press, New York, 2009).