



# GDP in the Future

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## COMPLEMENTARY MEASURES HELP ASSESS OUR PLANET'S TRUE WEALTH AND HOW TO INCREASE IT SUSTAINABLY

**G**ross domestic product (GDP) is one of the world's most-watched statistics. It's the benchmark of economic performance and a yardstick of national power; even small changes to this single statistic can move financial markets. Since its debut as an economic indicator some 90 years ago, GDP has been a cornerstone of economic policy.

But it's far from perfect. GDP is a poor measure of welfare. It tallies up all the goods and services produced in an economy—putting equal value on \$100 whether it's spent on concert tickets or courtroom litigation. It misses much of life's essence and the things we love most—family and friends, the breathtaking beauty of an unspoiled landscape, the heartwarming moment of a child's smile. Many of these are beyond the realm of economics, although some researchers have attempted to capture them,

including through the *World Happiness Report*.

Even as an economic statistic, GDP is incomplete. It focuses on the present and ignores the future. Today's production can deplete resources and damage the planet, but GDP doesn't reflect these costs. Two complementary approaches can help build measures that tell us whether our economic activity is sustainable.

The first is net domestic product (NDP). It subtracts the depreciation of capital (and will soon subtract the depletion of natural resources, too) from the value of production to reflect more accurately the sustainability of national income and our future prosperity. The second approach is comprehensive wealth. It elevates measures of national wealth to focus on whether we are getting richer or poorer, and what we will leave for future generations, using a much broader definition than just what we produce.

## Net domestic product

While GDP measures total economic output, a fraction of the physical capital used to generate that output is lost due to wear and tear in the production process. A factory cog can break, or a machine might seize up, for example. New gadgets become obsolete and are discarded. The pace of depreciation tends to speed up as economies develop and make greater use of technological assets that have shorter productive lives.

NDP subtracts this depreciation from GDP and thus recognizes the two-way impact economic activity has on physical capital—building new stock while degrading old stock. As such, it's a better indication of resources that can be allocated between current and future consumption.

Not all countries have collected the information they need to measure annual depreciation accurately. Even so, the data that are available suggest that the average country's NDP is about 10–20 percent lower than its GDP.

Physical capital is not the only factor of production that can be depleted by the production process, of course. Mineral resources used for today's production—the fossil fuels that fire power stations or the rare earths in smartphones and electric vehicles—won't be available tomorrow. It would make sense, therefore, to refine the concept of NDP by subtracting the depletion of nonrenewable resources from the value of production as they are used up.

At the IMF, we are working with our partners to do precisely this as part of an update of the internationally agreed framework for compiling measures of economic activity, known as the System of National Accounts (SNA). We are proposing to adjust NDP for the costs of nonrenewable resource depletion in the updated system of accounts that will be finalized next year. This will be a better gauge of future income flows given the available stock of nonrenewable resources.

The updated accounting standards will have a relatively small impact on NDP in most countries. But the additional requirement to subtract the value of nonrenewable resource depletion will have a greater impact on countries that depend heavily on mining and mineral extraction. NDP in these countries could be more than 30 percent lower than GDP. It will be a much better indicator of future prosperity for these countries.

Importantly, the refined measure of NDP will also affect economic activity's growth rates—which are typically watched more closely than levels. Higher output driven by accelerated resource extraction would give less of a boost to the headline growth rate.

Further refinements are worth considering, too. Air pollution, for instance, can reduce worker productivity and directly impact the economy's productive potential. More significantly, it lowers people's quality of life and shortens their lifespans. Greenhouse gas emissions affect the ability of the atmosphere to regulate climate. While we may want to account for the deterioration of the atmosphere in NDP conceptually, it's not easy. It's particularly difficult in the case of greenhouse gases because the effects are global rather than local and persist for centuries.

GDP will, of course, retain its significance as the go-to measure of economic output. But we believe more countries should compile NDP statistics and make greater use of them in policy analysis and decision-making. NDP should complement GDP, not replace it, by adding a much-needed sustainability perspective.

## Comprehensive wealth

Policymakers have come to appreciate the importance of incorporating both flows and stocks into economic analysis. Various crises have taught us to focus not only on budget deficits but also on government debt; not only on income but also on the assets and liabilities of people or companies; and not only on current account deficits but also on international reserves. Similarly, it's essential to consider not only indicators of economic activity, such as GDP or NDP, but also measures of wealth.

Greater wealth today allows us to enjoy higher consumption tomorrow. It raises living standards. A measure of wealth should include all the resources

### DATA

# 30%

In mining-dependent economies, net domestic product could be more than 30 percent lower than gross domestic product.



that will enable us to purchase or produce new goods and services. Traditionally, we count financial assets and physical capital, but that's a narrow view. As Kristalina Georgieva, the IMF's managing director, said in a recent speech, "We also recognize the need to put in place better measurement of wealth that goes beyond the traditional GDP, that values not only produced capital, but also nature, people, and the fabric of societies."

This means broadening our measures of wealth to include human capital (education and health), natural capital (mineral resources, renewable resources, ecosystems, water), and social capital (good governance, civic-mindedness). According to the World Bank, human capital constitutes the largest share of global comprehensive wealth, at 64 percent. Physical capital accounts for 31 percent. The remainder is split equally between renewable and nonrenewable natural capital.

Next year's updated SNA will spotlight measures of wealth in national accounts and how wealth is distributed. It expands the definition of natural capital, which has hitherto been limited largely to mineral wealth, to include renewable energy resources such as solar and wind. In addition, it will place greater emphasis on compiling human-capital accounts as extensions to the main sequence of national accounts.

All of this will contribute to a more comprehensive measure of wealth and provide policymakers with clearer signposts toward an economy that's better for people and planet.

## Keeping up

The world is changing, and economic statistics must keep up. Technological advances are disrupting traditional ways of working, and economic structures are evolving continuously. The new SNA will better account for the digital revolution by including the value generated by data, in both gross and net domestic product.

We must not delay incorporating new developments into statistical manuals. We must also get better at integrating different standards for measuring and categorizing economic performance; government activities; cross-border flows of goods, services, and capital; greenhouse gas emissions; and more. Without a mutually compatible set of accounts, it's almost impossible to construct a clear, consistent, and comprehensive view of the economy. This makes it difficult to design effective policies that address economic, environmental, and social challenges.

We do not underestimate the obstacles. Defining NDP and comprehensive wealth is conceptually and technically difficult. Moreover, our standards must

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work for economies at different levels of development and with different industrial structures.

Internationally recognized standards alone are not enough, however. It falls to national authorities to compile comprehensive measures of wealth that are comparable across countries and use them in their decision-making. Many sta-

tistical agencies struggle to collect data and calculate national accounts that meet higher standards. Even as we move toward finalizing the 2025 SNA, quite a few countries have yet to implement the previous update agreed 16 years ago, in 2008.

At the IMF, we are determined to overcome these challenges. We are working closely with other international institutions, national statistical agencies, and others to establish conceptually sound standards. And through our capacity development activities, often conducted in partnership with other institutions, we are helping countries produce more reliable and relevant estimates of GDP and related statistics so that they all have the data they need to support good policies.

The imperative to look beyond mere production statistics has also increased as the importance of economic, environmental, and social sustainability is recognized more widely. At the same time, our ability to paint a more complete picture of economies and societies has advanced, too, thanks to developments such as AI, big data, and satellite imagery. We can, for example, now combine AI with satellite data to measure ecosystem degradation—helping to assess the value of natural capital and the costs of humanity's impact on it.

Governments all over the world strive to grow their economies and raise their GDP. It's a measure of just how powerful statistics can be in the policymaking process. But we should not focus on one statistic at the expense of all others. Complementary measures that give a more complete picture of our planet's wealth and people's well-being deserve attention, too. **F&D**

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