

Moving the goalposts

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Almost 50 years ago, two economists who went on later to win the Nobel Prize in Economics, William Nordhaus and James Tobin, published a paper entitled “Is Growth Obsolete?” In that paper they suggested that GDP was an inappropriate measure for the assessment of economic welfare and proposed a new measure that they called the Measure of Economic Welfare (MEW). They discussed many differences between GDP and MEW and attempted to measure some of them carefully -- for example, the value of leisure and non-market activity, as well as the disamenities of urbanization such as congestion and pollution.

Since then, there has been considerable economic and some policy research devoted to the question of how to measure economic welfare, especially by those concerned about the impact of climate change on the economy. Nevertheless, GDP, labor productivity, and their growth have continued to be the benchmark by which we measure the progress of an economy. Therefore it should be no surprise that our economies are built for GDP growth.

Use of GDP as a benchmark has had the consequence that almost all papers in economics that investigate the returns to research, development, and innovation begin with a statement like this one, from one of my papers: “Innovative activity on the part of firms and individuals is viewed by most economists as a key driver of productivity and economic growth..” Although this may be true, it ignores the fact that society’s welfare and the things that individuals care about may not be adequately measured by GDP per person or per worker. Such a focus at the individual, enterprise, or country level produces incentives for innovation that may not be well targeted to make individuals better off.

Why are our economies made for GDP growth? The first reason is the desire of individuals to increase their standard of living; in a market economy, this means increasing the returns to their labor and any capital they might own, via education, entrepreneurship, and other means, especially if the standard of living is defined by the consumption of material goods

and services. Therefore in a well-functioning economy, the combined efforts of individuals inevitably lead to growth in GDP and productivity, as a consequence of their desire to raise their standard of living.

The second reason is the government and market focus on GDP growth and productivity as measures of the success of the economy. If instead they used a different measure that accounted for health, human capital, the quality of leisure, the costs of pollution of all kinds, and the contributions to climate change, the policies that appear desirable might be different. I am not the first to make this suggestion, by any means. Among others, see the well-known [report by Stiglitz, Sen, and Fitoussi for the Commission on the Measurement of Economic Performance and Social Progress](#), recommending measures that account for the quality of life, and sustainable development. Also see [Measuring Economic Sustainability and Progress](#), edited by Jorgenson, Landefeld, and Schreyer, a collection of papers on the topic of improving GDP measurement and [Measuring and Accounting for Innovation in the Twenty-First Century](#), edited by Corrado, Haskel, Miranda, and Sichel. I merely wish to argue that shifting to a better and more comprehensive measure of the economy could lead to shifts in the direction of innovative activity that would be beneficial in an era of slower GDP growth and concerns about climate change.

For example, focus on a measure that properly took account of the costs of greenhouse gas creation and pollution of all kinds associated with production might encourage governments to increase growth by reducing such costs rather than increasing output. Policy makers in many jurisdictions already act on these costs in a variety of ways (carbon trading, bans on single use plastic bags, etc.) but at the moment these policies for the most part raise costs and therefore reduce productivity. Shifting the benchmark would change the collective mindset about what leads to growth. This in turn could lead to a greater emphasis on innovative activity directed towards a reduction in such costs. Obviously one does not expect firms to abandon a quest for higher profits, but signals sent by governments in the form of taxes and subsidies will matter.

A suggested first step here might be a serious effort to evaluate the returns to R&D and innovation in terms of the currently available measures of economic welfare, in order to

see whether there are differences from the conventional evaluation in terms of GDP, and also what the differences across countries and technologies might be. Do our current efforts to increase innovative activity generate a commensurate increase in economic welfare as compared to GDP? This is a research agenda for the immediate future.