WELL-BEING

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MEASURING Quality of Life

BY RENEE COURTOIS

How do you know when a country's "standard of living" has improved? Economists often use average income, as measured by real (inflation adjusted) gross domestic product (GDP) per capita, as a gauge of a country's current standard of living and changes to that standard over time. This seems to make sense: Income is what allows us to buy necessities and indulge in luxuries. Average income is also a widely available way for economists to analyze living standards, as it allows comparisons across time and different countries.

But do measures like average income, relatively easy for economists to crunch, really illustrate the quality of life in a country? In 1968 politician Robert F. Kennedy succinctly proclaimed that measures of income tell us "everything, in short, except that which makes life worthwhile." What he likely had in mind is that income alone does not capture qualitative aspects of life, like how safe we feel, or whether we have the freedom and ability to do things to improve our own quality of life.

So if measures other than income might help define our overall quality of life, should policymakers consider them when crafting economic policy?

A Measure of Well-Being

At its core, economics is largely about how people strive to make their lives better. As individuals trade and transact with each other out of self-interest, economists assume they are "utility" maximizers. Anything you do is meant to give

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you as much utility — happiness or fulfillment — as possible.

Eighteenth century philosopher Jeremy Bentham was the first to use utility as a way to judge the value of public choices too. To the "utilitarians" like Bentham and his protégé, John Stuart Mill, a polymath who was trained in classical economics as well as philosophy, what made some laws and policies undesirable was that they failed to increase the utility of the population as a whole. Instead, they said, governments should choose policies that provide "the greatest happiness for the greatest number." In other words, governments, too, should aim to maximize utility. But this raised an obvious question: What does utility look like in the real world, and how do we measure it?

Economic theory can explain why economists tend to equate utility with income. "Revealed preference theory," first developed in the late 1930s and 1940s, is based on the assumption that if you opt to go out to dinner instead of seeing a movie or using that money to purchase anything else (including items bought in the future), then your choice is the one that you estimated would best maximize your utility. Because people optimize, the theory goes, observing your actions — that is, your revealed preferences — is a way for outsiders to identify what is in your best interest. Because you will use an increase in income to further pursue those interests, economists generally believe policies that increase income will also increase utility or welfare. Tracking economic growth is therefore a way to gauge improvements in welfare.

There are criticisms of income as a measure of well-being, however. One is simply how GDP is measured and what it really captures. On a national scale, economic growth can create negative externalities that GDP figures ignore. Environmental degradation is a good example. Production that creates pollution imposes a cost on society that may not be priced into the cost of production itself. That means the true "social" value of that production is overstated by GDP.

National wealth statistics also miss some positive elements, such as what economists call "consumer surplus." Economist Justin Wolfers at the University of Pennsylvania has done some serious thinking about this issue. He estimates that TiVo — a device that allows the user to digitally record television shows for future playback and lets the viewer zip past the commercials — saves the average TV watcher the equivalent of thousands of dollars a year in time efficiency. The price is only the couple hundred dollars per unit that is reflected in GDP. "What we do to calculate GDP is value everything by what we pay for it," Wolfers says. "But if you were to ask people what they *would* pay, then you get a measure more like well-being."

The Root of All Utility?

Even if we could perfectly adjust GDP to account for "bads" and "goods" like negative externalities and consumer surplus, there may still be more to cultivating well-being than maximizing income variables.

Broader ideas of well-being reach as far back as Aristotle's ideas on human happiness. To Aristotle, happiness meant flourishing by achieving one's full potential and living a truly good and meaningful life. To determine whether someone has achieved that requires knowing more than what his paycheck looks like. So what does revealed preference theory miss when measuring well-being? Behavioral economists focus their research efforts on exploring this question.

Instead of assuming people are rational — that they make decisions through optimization and reason — behavior economics *tests* rationality through observation and social experiments. According to Harvard behavioral economist David Laibson, "The behavioral approach agrees that people often get optimizing right, but that in many important cases people get things wrong. There's a gap between what really is in our best interest and the behavior that we in fact pursue or in fact achieve." A quintessential example is a person who has the means to save money but fails to save sufficiently for retirement. That could be because he underestimates the hardship that doing so may present to his future rather than rationally anticipating that hardship as neoclassical economics would suggest. Because factors such as emotion and lack of information can make it hard to figure out one's own best interest, someone may sometimes resort to simple behavioral rules instead, some of which may not result in an optimally efficient outcome. This can create a gap between a person's actions and what is truly best for him in the long run. Once one embraces the possibility of that gap, the classical revealed preference approach begins to founder a bit, Laibson says.

For instance, many people believe that a higher salary will improve their well-being, but when they get that pay raise, they find that just the opposite occurs. Increased income can intensify a never-ending jog on life's "hedonic treadmill," whereupon a rise in income only increases a person's material desires and expectations. This effect would cause people to chase ever-increasing salaries, which lead to new, greater material desires, thus providing no major gain in utility on balance. These people tend to be more interested in their "relative position" — how they fare compared to their neighbors and friends, some of whom will almost always be richer — rather than their absolute condition. Under these circumstances, a country with a growing economy may include a substantial number of people who are experiencing that income growth but are not necessarily benefiting from it — for instance, made happier by it.

These ideas question the economics profession's reliance on average income and economic growth as measures of a country's well-being. "To the extent that you believe people clamoring after ever greater salaries might not be acting in their best interest, if you were skeptical of revealed preference theory you might also be skeptical of this pursuit of ever greater riches," Laibson says.

Income measures can miss facets of life like health and education. Since 1990 the United Nations has produced the Human Development Index (HDI) in an attempt to

measure both social and economic development in countries by combining income, educational attainment, and life expectancy into a single index. It is true that GDP is highly correlated with these other aspects of life quality — the UN estimates that income explains as much as half of the variation between countries in the health measures included in the HDI, for instance — but income doesn't explain it all, and there are exceptions. "There are areas of Africa that have essentially never grown, where literacy rates have been going through the roof, but child mortality rates through the floor," points out Charles Kenny, a Washington, D.C.-based development economist.

If You're Happy and You Know It

What alternatives do we have to using income to measure the standard of living? One approach is to survey people directly about their quality of life. Such studies on "subjective well-being" have the benefit of potentially collapsing several aspects of life quality into one variable.

In a 2008 paper, Wolfers and economist Betsey Stevenson, also from the University of Pennsylvania, studied subjective well-being data and came to three conclusions. First, within a country, rich people tend to be happier than poor people. Second, the inhabitants of rich countries are happier on average than poor countries. Finally, the inhabitants of countries actually get happier as they get richer: In other words, average happiness rises over time with economic growth. Money seems to indeed "buy" happiness — or, at least, correlates closely with it — more in line with traditional neoclassical ideas regarding revealed preferences.

The result that economic growth over time is associated with rising average happiness was actually quite controversial. It appeared to overturn the famous Easterlin Paradox, named for its founder, economist Richard Easterlin. He found in the 1970s that, over time, average happiness levels in a country don't improve as the country gets richer. Easterlin hypothesized at the time that this suggested a strong role for how people view relative income in determining their happiness. Research indeed seems to suggest that people largely use their peers as a frame of reference. As the economy and incomes grow, the material standing of your peers grows along with your own, with the result being no change in your relative status. In contrast, Wolfers and Stevenson's study on aggregate happiness implies a smaller role for policy to focus on relative income and instead a greater emphasis on absolute income. All told, it is probably the case that both absolute and relative income play a role in happiness.

The ability of survey measures to grasp aspects of well-being that concrete measures like income can't capture is a big part of their appeal. Yet it can also be a hindrance, because any measure of well-being that is highly subjective is going to be hard to use as a policy metric. There is also the fact that both income and measures of happiness are highly correlated with other things that we think of as critical to life quality, like good health and educational attainment, yet causal relationships between all these variables are hard to draw. But there is still something reassuring about subjective well-being studies: If it is true life quality we're trying to assess, measures of income and of happiness might be on the right track. "As a practical matter," Wolfers says of income and happiness, "they turn out to measure the same thing."

The Debate over Income Inequality

If policymakers are successful in their efforts to achieve economic growth, they might also care where the income gains go. If the benefits of economic growth are concentrated entirely at the top end of the income distribution, with no income improvements for the rest, we may conclude that the country as a whole has not become much better off.

One way to address income inequality is through outright income redistribution. Proponents of this view argue that a change in either direction of a thousand dollars in income means a great deal to someone earning, say, $20,000 per year while such a change probably means little to a millionaire. Economists refer to this as diminishing marginal utility. It seems to imply that the benefit to the poor of redistributing income could well outweigh the costs to the wealthy.

This is one of the rationales for progressive taxation, but it can be taken too far. For starters, it assumes that it is possible to meaningfully compare utility between people, a proposition most economists eschew. There is also the obvious fact that people work for a reason. Wealthier people, on average, work longer hours, a marked change from generations ago when blue-collar workers usually logged more hours on the job. If the marginal utility of income is truly so low at the top, why would so many wealthy people continue to further their careers and work such taxing hours at the expense of leisure? Is it likely that these people are simply misguided and acting irrationally as behavioral economists might predict?

It is also important to note that some increases in income inequality are not necessarily bad. For instance, Harvard University economist Martin Feldstein argues, along with many neoclassical economists, that policymakers' decisions should be informed by the "Pareto principle." This principle, named after the Italian economist Vilfredo Pareto, says that a change is good as long as it makes some people better off and no one else worse off. To illustrate this principle,

Feldstein offers the following thought experiment: A magic bird appears and gives every upper-income American $1,000, increasing income inequality but hurting no one in an absolute sense. Should we begrudge the people who got those $1,000 windfalls? To do so would be to indulge in what Feldstein has called "spiteful egalitarianism." He argues that analyses which "conclude that all increases in inequality are bad imply ... that the social value of incremental income to a rich person is actually negative," and are inherently misguided.

There is perhaps a better way to address income inequality. We care about income inequality if we think it means that opportunities also are not equal. Promoting equality of opportunity is an important goal of policy though there are obvious differences of opinion about how actively policymakers should equalize opportunity. Some believe equality of opportunity includes providing access to goods such as housing and health care, while others believe it means freedom from excessive taxation or infringement on personal liberties. However you define it, equality of opportunity should be distinguished from promoting equality in outcomes, especially when that equalization jeopardizes incentives for individuals to further invest in skills and education.

What's a Policymaker to Do?

If measures of income are inadequate as a measure of well-being in ways that are well-known, are we on the verge of devising new ways to evaluate quality of life? Probably not.

Anyone who doubts the importance of income for well-being may be less inclined to do so during a recession. Research suggests that a person's utility can be damaged even more severely by an income decline than it is helped by an income boost. After all, for people who base their happiness on relative income, this could include evaluations not only of how they are doing compared to their neighbors but also of how they themselves are doing now compared to how they did in the past.

Income and GDP may actually be the most all-encompassing measures of well-being we have. They are also highly correlated with many other things that matter, including access to basic necessities, better health, and more education. We can believe income is a good proxy for well-being while recognizing that it requires some qualifiers. "The power of any one number is a myth," Kenny warns. "Life just isn't that simple." But the cause of economic modeling demands concrete, observable ways to measure well-being, and for that task income measures often fit the bill.

At the end of the day, economic analysis is often a basis for policy action. Would re-engineering economic policies to incorporate other measures of well-being change the policies themselves? Yes and no. GDP and its growth are critical, Kenny says. For one, they determine our ability to fund public programs with tax revenues. "Faster economic growth can make a real difference to a lot of pressing policy issues."

Rather, in his mind, GDP and other measures of well-being are complementary. "It's not that the emphasis on growth should stop, but taking some of that energy and talent to think about how we get better education and health outcomes — for their own sake, not because they raise income or tax revenues — would be a good thing," he says.

Wolfers believes that many policymakers are far from being staunch technocrats and look at many things besides just income growth. "When I talk to economists we talk about GDP. But I've never talked to a politician who said what we should maximize is GDP," he says. "They intrinsically have a broader sense of a good life and the good society, and democracy forces that on them."

The right policies can help achieve the type of economic growth that is conducive to a higher standard of living — and the modern world affords opportunities that previous generations could not have even imagined. The role for econmists is to illuminate the trade-offs of the policy choices that can help make that possible. Meanwhile, the pursuit of the good life is something individuals will always be engaged in — no matter how anyone defines it. **RF**

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