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## Economics and Well-Being

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### Definition

Economics and well-being is the study and measurement of welfare at both the individual and societal level. Traditionally, economists have measured well-being indirectly, by observing the choices people make in markets. More recently, as a result of advances in behavioral economics and availability of data, economists are measuring people's preferences as expressed in subjective surveys.

### Introduction

The economic analysis of well-being has been criticized for focusing too narrowly on material well-being. Although economists have always recognized that happiness (a term used interchangeably with utility, satisfaction, welfare, and well-being) is not solely derived from being financially well-off, the inherent difficulty of measuring well-being and theoretical results that

rationalize money-metric measures of utility led to the use of income measures as substitutes for well-being in economic analysis. Recent advances in behavioral economics and in the measurement of well-being through subjective surveys have led to a rethinking of the economics of well-being. The purpose of this entry is to summarize the traditional and new approaches to understanding the relationship between economics and well-being, of which material well-being is only one aspect.

### The Traditional Economic Approach: Revealed Preferences and Income

Economic analysis of the individual as a consumer is based on the principle of utility maximization – individuals attempt to make themselves as well-off as possible through the choices they make as market participants. Individuals are characterized by their preferences over the goods available to them in markets. (It is worth noting that the set of goods analyzed is not limited to consumer goods and can include a variety of lifestyle choices including the 'consumption' of leisure.) An individual's preferences must be known in order to assess how she is affected by a change in her environment, for example, a change in prices or tax policy. Unfortunately, an individual's preferences are not observable and must be inferred. Economists have traditionally been skeptical of self-reported measures of well-

being, believing that the only credible data come from revealed consumption choices made within a budget and requiring genuine trade-offs. The revealed preference approach, first formalized in the work of Samuelson (1938, 1948), uses observed market choices (e.g., the quantity of each good a consumer purchases under different prices), along with the assumption of rationality, to reconstruct individual preferences. Having derived an estimate of the underlying preferences, it is possible to assess how well-being will be affected by changes in the economic environment. As a simplified example, consider an individual in the market for fruit. If this person is observed to continue buying apples rather than oranges, even as the relative price of apples rises, then it can be concluded that the person has strong preferences for apples and these preferences can be quantified. It is then possible to approximate the effect on the individual's well-being of changes in the markets for apples and oranges. This type of analysis has led to money-metric measures of welfare, for example, calculating the amount of additional income the individual would have to receive in order to compensate her for an increase in the price of apples. The resulting link between income, consumption, and well-being has given a foundation to the view that welfare may be approximated through observed market outcomes, including prices, production, and income.

At roughly the same time as the theory underpinning revealed preferences was developed, countries were improving on their systems of national accounting. The main goal was to measure short-term economic fluctuations. Gross domestic product (GDP) is an aggregate measure of production and is defined as the dollar value of final goods and services produced during a given time within the borders of a country. The focus is on traded goods and services because only market transactions have reliable price information and, building on the revealed preferences approach, people's willingness to pay for a good is the best indication of the value a good adds to individuals in a society. Aggregation is also simplified because all measures are in dollar terms and can easily be added up. Comparisons across countries and time are facilitated by the fact that there are

international standards on the collection and aggregation of production data and on price level (inflation) data.

In the absence of measurement error, production should be equal to the income generated within a country as well as expenditures within a country. Any good or service that shows up in GDP must have been produced in the country and sold in a market. This transaction must show up as income for the seller of the good or service and as an expenditure for the buyer. As such, GDP can be said to capture not just economic activity but also income and consumption. Building on the logic of revealed preferences, changes in consumption and expenditure patterns, as well as prices, can serve as proxies for material well-being. Furthermore, this data are widely available, reliable, and objective, allowing for cross-sectional and time series analysis. GDP is also highly correlated with many other dimensions of well-being, including health, education, and life expectancy. For these reasons, GDP has commonly been used as a measure of aggregate well-being and growth in GDP as an indicator of how well-being changes over time.

### **Criticisms of GDP as a Measure of Well-Being**

Criticism of GDP as a measure of well-being and a guide for policy evaluation can be grouped into four main strands: errors in measuring production, errors in measuring material well-being, omission of important determinants of well-being, and omission of considerations of sustainability. Many of these criticisms have been made since its inception, but in the absence of better data and due to the widespread availability of GDP figures for a large sample of countries over time, GDP continues to be the benchmark for measuring aggregate well-being. Only recently, national governments have begun to consider large-scale improvements in the gathering of national accounts data (Stiglitz et al. 2009).

In measuring aggregate production by valuing goods and services traded in markets, GDP does not fully account for important components of

production, including nonmarket activities, government services, and changes in quality. Although some effort is made to impute the value of nonmarket activity, it is likely underrepresented. Consider two households with the same total market income: the first has one adult earning the full amount in market wages and one adult who takes care of the child care and household chores, while the second has two working adults and must purchase child care and other home maintenance services in the market. The market value of the production of the two households is the same, but their total production (and well-being) are clearly not. Furthermore, as societal changes lead to shifts from nonmarket to market production (i.e., from the first to the second type of household), increases in GDP overstate increases in production. Similarly, government expenditures are generally valued at cost because they are not bought and sold in markets. Consider the case of health spending. Whereas in a market-based system, health insurance services are valued at market prices, in a publicly funded system health services would be valued at cost, with little attempt to account for the value added by governments. Finally, measures of GDP also have difficulty accounting for changes in quality, which are increasingly important and likely have a growing impact on output and well-being. By failing to account for nonmarket activity, government services, and changes in quality, GDP may be problematic even as a measure of production.

Setting aside issues of measuring production, which may not have an easy solution, GDP has shortcomings as a measure of material well-being. Although in theory the product, income, and expenditure methods of calculating GDP should yield the same results, in an increasingly globalized world driven by technological change, production aggregates may differ considerably from measures of aggregate income or consumption. Furthermore, GDP is a measure of income over a period of time and as a result does not account for a country's wealth. Relying solely on GDP to assess material well-being is comparable to assessing the performance of a company by only considering the income statement and not the balance sheet. Clearly, a full accounting of a

country's material well-being should, in addition to measuring what is produced, also account for the income, consumption, and wealth that result from said production.

Well-being is multidimensional and material well-being is only one aspect. The use of GDP as a measure of overall well-being omits important aspects of quality of life, including health, education, political voice, social connections, and insecurity. Although GDP is correlated with many of these dimensions, the link is not strong enough to fully capture the level or changes in all of them. The Easterlin paradox is an empirical statement of this failure. Over time, measures of subjective well-being do not increase when a country's income increases (Easterlin 1974). This is despite the fact that there is overwhelming evidence that in the short-term the relationship between income and well-being is positive and strikingly consistent within countries and across countries (Stevenson and Wolfers 2008). A final criticism of GDP as a measure of well-being is that it ignores considerations of sustainability. GDP does not distinguish between increases in national wealth and resource depletion, and it does not account for incurred future costs.

### **A New Approach: Expressed Preferences and Subjective Well-Being**

Recent developments in economics have given greater impetus to finding alternative ways of measuring well-being. Behavioral economics incorporates psychological, social, and cognitive factors in studying economic decision-making. For example, theories based on bounded rationality incorporate the idea that people are only as rational as their available information, environment, and intellect permit. Advances in these fields have formalized the conditions under which the revealed preference approach fails and established that these conditions are empirically relevant (Thaler and Sunstein 2008). Observed market choices are a poor guide for approximating underlying preferences when individuals have limited or no choice or are powerless to make changes, when considering public goods, or

when information is difficult to obtain (Graham 2011). In these cases, preferences are best observed directly through surveys of subjective well-being.

Large survey data sets on subjective well-being have recently become available and are being used in econometric analysis. Individuals are typically asked, among other things, to rank their well-being. There are different definitions of well-being. Questions about *hedonic* well-being require that individuals characterize how happy they feel in general. Life satisfaction questions focus on *evaluating* their life circumstances as a whole. Somewhat related are questions that ask people to evaluate their *capacity* to pursue a meaningful life. Questions can be open-ended, allowing respondents to apply their own definition of well-being, or framed, as in Cantril's ladder of life question. Traditional economists have expressed skepticism about these data because the content of responses is unclear and can be biased by the wording of the questions and the order in which they appear. But new research using these data is shedding light on the relationship between income and well-being, the determinants of well-being, and the importance of adaptability and agency in measuring well-being.

## Income and Well-Being

The relationship between income and well-being has important policy implications. If the two are not related, policies aimed at raising income levels or pursuing economic growth may not be serving the public. Early research on this topic utilized country-level data on per capita GDP and average country well-being levels, mostly for OECD countries due to data limitations. As countries grow wealthier over time, average happiness levels do not increase, even though within countries wealthier people are on average happier than poorer ones (Easterlin 1974). Later studies incorporating lower-income countries have posited that income is good for well-being only at low levels of income – there is a satiation point above which additional income does not contribute to well-being. A common interpretation of these results

is that people adapt relatively quickly to new levels of income (once they have achieved a basic level of material well-being) and revert to their original level of well-being. An alternate explanation is that people only care about their income relative to that of a comparison group so that economic growth, which raises the average income, needs not make the average person better off.

Recent research using well-being surveys has taken advantage of the wealth of worldwide, individual-level data to clarify some of the features of the Easterlin paradox. There is a positive and robust relationship between income and well-being that is similar for country averages and within country levels (Stevenson and Wolfers 2008). Furthermore, the relation between income and well-being is stronger for evaluative measures than hedonic ones (Kahneman and Deaton 2010). The income-well-being relationship for the poor is similar to that for the rich and in fact may be stronger for the rich (Stevenson and Wolfers 2013). Relative income does not appear to explain reported levels of well-being (Deaton and Stone 2013). Although these results refute some of the interpretations of the Easterlin paradox, there remains debate about whether the new data refute the absence of a long-term relationship between income and well-being (Easterlin et al 2010).

A focus on the level of income or its growth rate may be misguided. There is evidence that what people do not adapt well to is uncertainty. During the worst of financial crisis, levels of reported well-being decreased steadily, but as stability was restored, these levels recovered quickly to levels higher than before the crisis, even though material well-being was still significantly lower (Graham and Sukhtankar 2004). This suggests that people adapt to unpleasant certainty about their income better than to uncertainty.

## Determinants of Well-Being

The determinants of happiness and well-being are surprisingly consistent across the world, regardless of culture or level of development. Wealthier people are on average happier than poorer ones.

Health is very important for happiness. Employment and marriage are associated with greater well-being. Age has a U-shaped relationship with well-being, with the low point coming in the mid-1940s. Although modest differences in these relationships can be found across some countries, cultures, or demographic groups, they can typically be explained by large differences in economic conditions (Graham 2011).

The consistency of determinants allows researchers to use them as controls when looking at differential effects of other variables. Because answers to well-being questions are ordinal rather than cardinal, ordered logistic or probit models can be used to yield the probability that an individual will place himself in a given category of well-being. The estimated coefficients are then used as a basis for relative weights, which allows researchers to estimate how much income a typical individual would need to experience a level of well-being sufficient to compensate for the loss in well-being resulting from a change in the variable of interest. For example, one study using data on the USA and UK estimates that it would take \$100,000 to compensate the average person for a divorce and \$60,000 for a job loss (Blanchflower and Oswald 2004). It is worth noting that, similar to revealed preferences approach, this generates a monetary equivalent to the event in question. The difference is that the focus is on quantifying expressed preferences, rather than reconstructing preferences from observed actions.

This literature has produced a variety of interesting results. The relationship between income and well-being runs both ways: happier people tend to perform better in the labor market (Graham et al 2004). Unexpected lottery gains have a positive but temporary effect on happiness, supporting the idea that people adapt to changes in their life situation (Gardner and Oswald 2001). The effect of inequality on reported well-being depends on context. In Europe and the USA, there is little or no relation between the two, while in Latin America inequality has a negative effect on poor and positive effect on the rich. This suggests that inequality, in addition to being an outcome of markets and policy, serves as a signal of future opportunity (Alesina et al., 2004).

Inflation and unemployment have negative effects on happiness, but unemployment effects are stronger. This has direct implications for the trade-offs typically considered by central banks in deciding monetary policy (Di Tella and MacCulloch 2001). Evidence from tobacco taxes suggests that the negative financial effects of taxes on addictive substances are outweighed by positive self-control effects (Gruber and Mullainathan 2002). Results like these are useful in providing quantitative estimates of the relative costs and benefits of different policies.

### **Adaptability, Capacity, and Agency**

When making comparisons using subjective measures of well-being, several issues arise which can complicate its usefulness in guiding policy decisions. A first is that differences in norms and tolerance for adversity imply that people can report being happy in conditions that are objectively intolerable. For example, unemployment makes people unhappy, but less so when it is prevalent (Clark and Oswald 1994). The same has been found for obesity, crime, and corruption. The capacity to adapt may lead to collective tolerance for a bad equilibrium. A second complication is that individuals report and seek out different types of well-being depending on their capacity to pursue a meaningful life. When they have limited capacity, individuals value hedonic well-being and cite friendship, family, and religion as important factors in their well-being. When individuals have a greater capacity, they tend to care more about evaluative happiness and focus on achieving objectives, as well as the quality of institutions (Graham 2011). Interpreting subjective well-being comparisons is further complicated by the conflict between agency and people's evaluation of that agency. People who have children report lower satisfaction, even though they typically had them willingly (Hansen 2012). Greater autonomy for women is associated with decline in self-reported well-being for women (Stevenson and Wolfers 2009). But many would argue that the capacities that come with greater freedom of choice are as or more important than

reported feelings about these freedoms. Taken together, these issues suggest that using measures of subjective well-being to guide policy is problematic.

## Conclusion

Economists have traditionally used income and production measures as proxies for well-being. This practice was justified by the theoretical results of revealed preference theory and the relative abundance of quality, standardized income data. Although it has always been recognized that there were limitations to the usefulness of income measures, recent developments in behavioral economics and the availability of large sets of survey data on subjective measures of well-being have resulted in a move toward using expressed preferences in evaluating well-being. In particular, subjective well-being data is useful for studying welfare implications when individuals have limited or no choice. The clearest application of this research is in understanding and quantifying the costs and benefits of policy changes.

The question of whether a measure of well-being comparable to GDP can be created from subjective well-being data remains unanswered. The goal is to create a metric that allows us to make well-being comparisons across time and location, much like GDP is an accepted way of measuring and comparing what an economy produces. But it is not clear how to aggregate well-being, or even which definition to consider. Societies which care more about achieving equality in outcomes may favor hedonic measures, while societies that care more about equality of opportunity or process are likely to favor evaluative measures. Many rich people report being unhappy, but it does not necessarily follow that society should dedicate scarce resources to sad millionaires, even if the poor report being happy.

## Cross-References

► [Agency](#)

- [Happiness](#)
- [Personal Agency](#)
- [Personality and Subjective Well-Being](#)
- [Rationalism](#)
- [Social Cooperation](#)

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