The idea of having GDP growth as the main target of economic policy has been under attack in recent years. **Nicholas Oulton** answers some of the criticisms and argues that continued GDP growth would be good for the UK – and not just in the short term to reduce high levels of unemployment.

Hooray for GDP!

The much-loved poet John Betjeman is reported to have said on his deathbed that the one thing he regretted in his life was not having had more sex. This reminds us that there is more to life than just buying and consuming stuff. And that is what GDP measures: the output of goods and services on which we collectively spend our income.

Many people today would say that promoting the growth of GDP is undesirable or even irresponsible. Here I consider three common criticisms of GDP as a target of policy and explain why I think they are wrong:

■ The first criticism is that GDP is hopelessly flawed as a measure of human welfare. For example, the argument goes,

it takes no account of pollution.
■ The second criticism is that GDP ignores distribution. In a rich country like the United States, some say, the typical person or family has seen little or no benefit from growth since the 1970s. At the same time, inequality has risen sharply.
■ The third criticism is that above a certain level, a higher material standard of living does not make people happier. This view concludes that we should stop trying to raise GDP and look instead for policies that promote happiness.

'GDP is a flawed measure of human welfare'

GDP has always been a measure of *output*, not of welfare. Using current prices, it measures the value of goods and services produced for final consumption, private and public, present and future.

(Future consumption is covered since GDP includes output of investment goods.) Converting to constant prices makes it possible to calculate the growth of GDP over time or the differences between countries across space.

But although GDP is not a *measure* of human welfare, it can be considered a *component* of welfare. The volume of goods and services available to the average person clearly contributes to welfare in the wider sense, though of course it is far from being the only component. So it is possible to imagine a social welfare function that has GDP as one of its components alongside health, equality, human rights, etc.

GDP is also an *indicator* of human welfare. In cross-country data, GDP per capita is highly correlated with other factors that are important for welfare. In particular, it is positively correlated with

GDP GROWTH

life expectancy and negatively correlated with infant mortality and inequality. Since parents naturally feel grief for children they have lost, infant mortality might be thought of as an indicator of happiness.

Figures 1-3 illustrate these facts for large samples of countries, plotting household consumption per capita (which closely tracks GDP per capita) against three measures of human welfare. They show that richer countries tend to have greater life expectancy, lower infant mortality and lower inequality. Of course, correlation is not necessarily causation, although there is a strong case for the view that higher GDP per capita leads to improved health (Fogel, 2004).

According to the Commission on the Measurement of Economic Performance, policy should be concerned with wellbeing, which encompasses many dimensions, including material living

standards, health, education, political voice, social relationships and the environment (Stiglitz et al, 2009). In response to the Commission's report, both the OECD and the UK's Office for National Statistics are now developing measures of these aspects of life.

Few will disagree that these dimensions of life are important for human welfare and no one can object to improved measurement. But for the UK, I question whether the ONS is capable of taking on a potentially vast new programme when even the basic economic statistics on which GDP rests are not fully in accordance with the OECD's best practices for measuring productivity and capital (Oulton, 2004a).

What's more, we can go a long way towards measuring welfare just using the apparatus of the national accounts. Martin Weitzman's concept of Net

National Product (NNP) is key here. It is defined in real terms as consumption plus net investment (gross investment less depreciation), all deflated by the price index for consumption. Weitzman (1976) showed that his NNP could be thought of as the yield on society's wealth and was therefore equal to the maximum sustainable level of consumption.

It is fairly simple to calculate Weitzman's NNP from published national accounts (Oulton, 2004b). In principle, we would want to include the net change to all assets that are relevant to human welfare, including environmental stocks. In practice, we are a long way from achieving this: for example, the UK's national accounts include mineral oil exploration as part of gross investment but depletion of oil and gas stocks by extraction is not included in depreciation and so official NNP is overstated.

Yet the statistical infrastructure built to estimate GDP can be used to estimate a welfare measure such as Weitzman's NNP. So GDP retains its usefulness as a measure of output and as a welfare indicator.

'Most people don't benefit from GDP growth'

Many people assert that the typical US household's living standards have stagnated since the 1970s, despite the relatively rapid growth of labour productivity and GDP per capita. But while it is uncontroversial that US income inequality has been rising for decades, does this mean that the typical household has received no benefit from growth? The results of a comprehensive recent examination of these issues reveal quite a different picture (Wolff et al, 2012).

The measure of household welfare that this study uses is what is known as the Levy Institute Measure of Economic Wellbeing (LIMEW). Table 1 shows the growth rates of median and mean LIMEW (and GDP per capita) over the period 1959-2007 and sub-periods within that near half-century. The difference between the growth rates of mean and median LIMEW is an indicator of changes in inequality: if the mean rises faster than the median, then inequality is increasing.

Over the whole period, equivalent median LIMEW grew at an annual rate of 1.01%. The period 1959-72, supposedly the golden age of economic growth, was actually a comparatively poor one for households. And it was followed by a fall in living standards over 1972-82.

Far and away the best time for households was the period 1982-89, which coincides roughly with the Reagan administration. True, this excludes the Volcker deflation and recession of 1980-81: GDP per capita was 2.8% below its 1979 level in 1982, which helps to explain some of the subsequent rapid growth. But GDP per capita still grew at 2.43% a year during the period 1980-88, which is faster than in any sub-period except 1959-72. Since 1989, the growth rate of living standards has been declining, but it has still been positive, even in 2004-07.

Table 1 also shows that equivalent median LIMEW grew less than half as fast as GDP per capita, which grew at 2.18% a year. What accounts for this huge gap? It is partly due to rising inequality since for nearly the whole period, the mean was growing faster than the median, the exception again being during the Reagan administration.

But this only accounts for a small proportion of the gap. Most of it is accounted for by three factors. First, the study deflates household incomes by the consumer prices index: arguably, a better choice would have been the price index for consumption from the national accounts, which rises about 0.5% a year more slowly. Second, GDP includes investment as well as consumption – and investment tends to rise more rapidly. Third, LIMEW
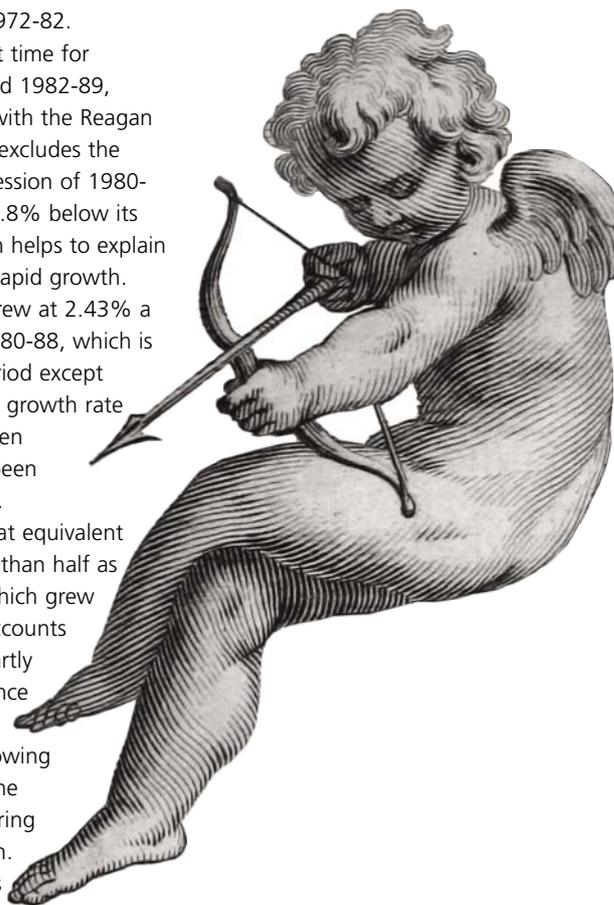
> GDP retains its usefulness as a measure of output and an indicator of human welfare

Table 1:
Real income measures, per capita and per household, in the United States: annual percentage rates of growth, 1959-2007

	1959-72	1972-82	1982-89	1989-2000	2000-04	2004-07	1959-2007
1. Equivalent median LIMEW	0.94%	-0.13%	3.22%	0.97%	0.84%	0.42%	1.01%
2. Equivalent mean LIMEW	1.11%	0.14%	3.27%	1.94%	0.10%	0.93%	1.31%
3. GDP per capita	2.73%	1.34%	3.37%	2.03%	1.26%	1.58%	2.18%

Sources: Wolff et al (2012) and US National Income and Products Accounts

Notes: LIMEW (Levy Institute Measure of Economic Wellbeing) is defined as income minus taxes plus cash and non-cash benefits plus individual public consumption plus household production, with property income valued on an annuity basis, per household. 'Equivalent' means that household income is measured after adjusting for household size and composition.

includes a slow-growing component, household production, which GDP excludes.

The typical US household has therefore gained significantly from growth since 1959 and also since 1980. This remains the case even though the median household would have gained more (to the extent of 0.30% a year) if inequality had not widened. But most of the gap between the growth rates of GDP per capita and median LIMEW is not due to rising inequality but to other factors. What's more and contrary to the common view, there were large gains in the 1980s, which continued, albeit at a slower rate, in the 1990s and even into the 2000s.

'GDP growth doesn't make people happier'

Surveys of wellbeing or happiness repeatedly find that in any given country at any point in time, richer people report themselves to be happier than poorer people do. But when the same survey is repeated in the same country over time, there is no rise in the average level of happiness, despite the fact that per capita income has gone up. Most of this time series evidence (which is disputed by Stevenson and Wolfers, 2008) is for the United States and the result is known as the 'Easterlin paradox' (Easterlin, 1974).

The most common explanation for the paradox, suggested by Richard Easterlin himself, is that at least above a certain level of income, people care more about their relative position in the income scale than they do about their absolute

position. They are motivated less by pure desire for stuff and more by envy, by the pressure of 'keeping up with the Joneses' and by the satisfaction of looking down on the less successful.

This explanation reconciles the cross-section and time series evidence. But it leaves the implication that stopping growth would have no effect on happiness. It also suggests that more redistribution from rich to poor would raise overall happiness (provided it did not reduce GDP too much through adverse effects on people's incentives).

I find the results of these happiness surveys puzzling because they are inconsistent with other facts about people's behaviour. First, if people care mainly about their relative position, why has there been so much fuss about the financial crisis? After all, for most people in the UK, the drop in income has been (on this view) trivially small, no more than 8% – and at least initially, it fell disproportionately on the rich.

Second, if people care about their relative position, why does this have to be expressed in terms of annual income? After all, most workers today can work part-time if they want. So why can't A boast that his daily rate of pay is higher than B's even if B's *annual* earnings are higher and this is because smart A works only three days a week while poor dumb B, a slave to the rat race, works five?

Yet surveys of part-time workers regularly show that many would

like to work longer hours if only they could. And while it is true that some leisure activities like skiing require a lot of complementary expenditure on stuff, many other activities – watching TV, surfing the internet, chatting with friends in pubs or cafés or avoiding Betjeman's regret – do not.

In fact, people's leisure choices provide powerful evidence against the view that only relative position matters.

The classical economists argued that the amount of time people were prepared to work depended on the range of goods and services

People's choices between work and leisure show that they value higher consumption in absolute terms not just relative to others
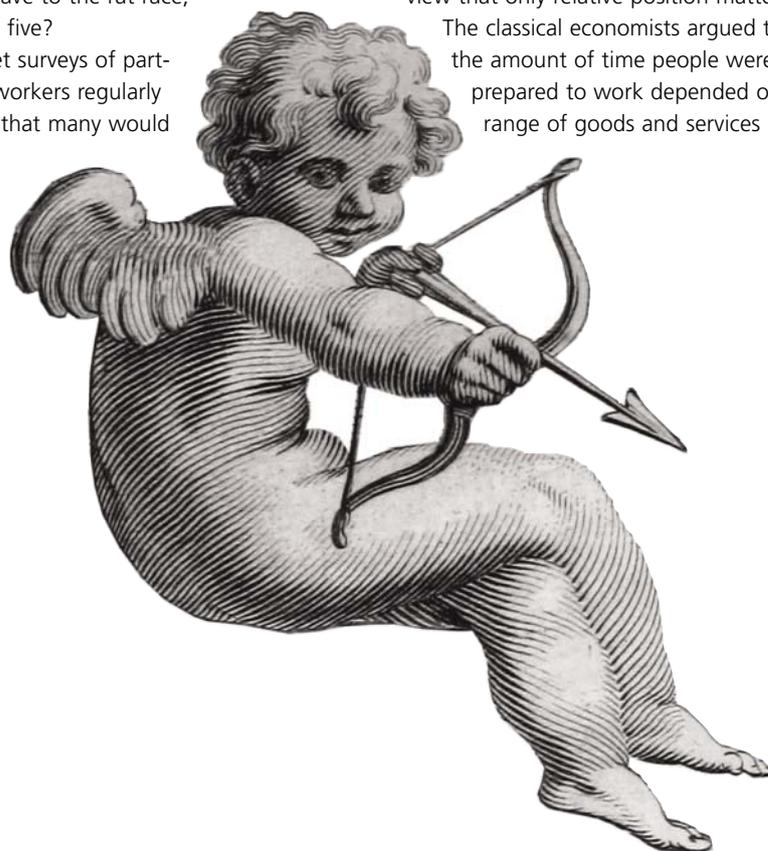
Despite widening inequality, the typical US household has gained significantly from GDP growth since 1980

Figure 1:
## The relationship between a country's household consumption per head and its rate of infant mortality
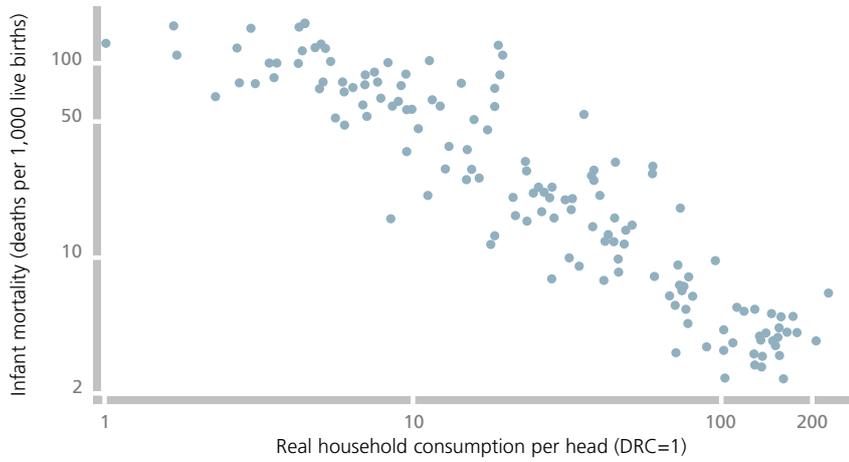
Source: Oulton (2012); **Notes:** 146 countries.

Figure 2:
The relationship between a country's household consumption per head and its life expectancy
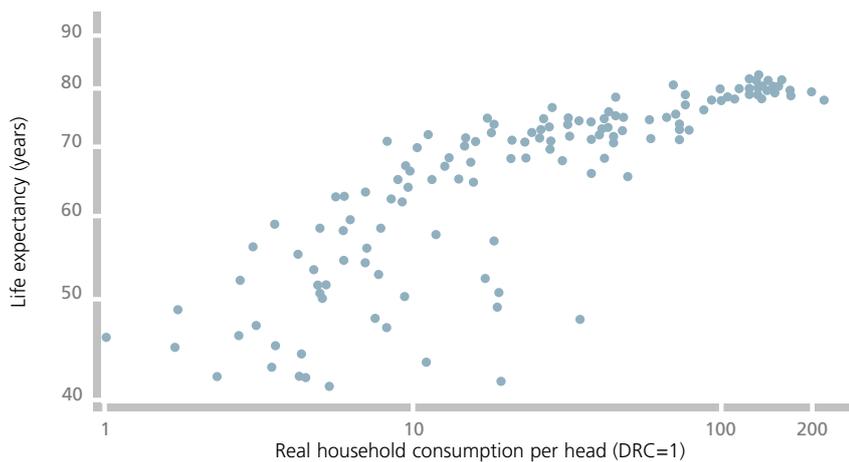
Source: Oulton (2012); **Notes:** 144 countries.

Figure 3:
The relationship between a country's household consumption per head and its inequality
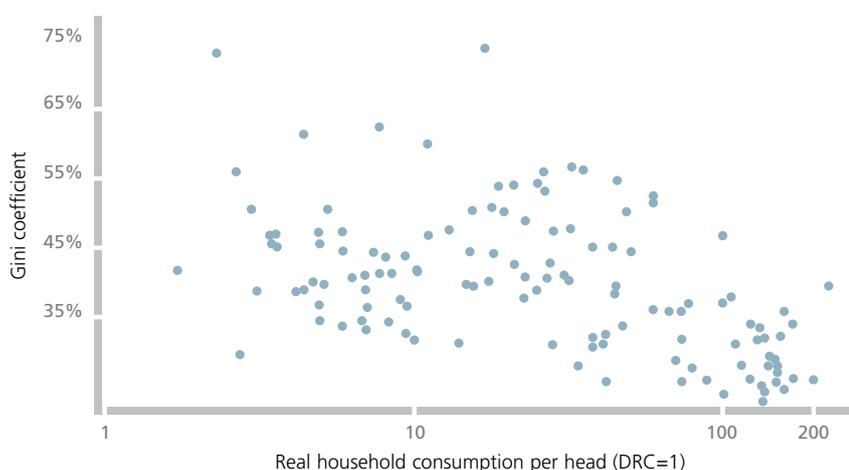
Source: Oulton (2012); **Notes:** 126 countries.

available for consumption. John Stuart Mill, for example, wrote this in his *Principles of Political Economy*, first published in 1871:

'A people may be in a quiescent, indolent, uncultivated state, with all their tastes either fully satisfied or entirely undeveloped and they may fail to put forth the whole of their productive energies for want of any sufficient object of desire. The opening of a foreign trade, by making them acquainted with new objects or tempting them by the easier acquisition of things which they had not previously thought attainable, sometimes works a sort of industrial revolution in a country whose resources were previously undeveloped for want of energy and ambition in the people: inducing those who were satisfied with scanty comforts and little work, to work harder for the gratification of their new tastes and even to save and accumulate capital, for the still more complete satisfaction of those tastes at a future time.'

Let's perform a simple thought experiment. Imagine that over the 220 or so years since the Industrial Revolution began, *process* innovation has taken place at the historically observed rate but that there has been no *product* innovation in *consumer* goods (though I allow product innovation in *capital* goods).

UK GDP per capita has risen by a factor of about 12 since 1800 (Maddison, 2003). So people today would have potentially vastly higher incomes than they did then. But they can only spend their incomes on the consumer goods and services that were available in 1800.

In those days, most consumer expenditure was on food (at least 60% of the typical family budget), heat (wood or coal), lighting (candles) and clothing (mostly made from wool or leather). Luxuries like horse-drawn carriages were available to the rich and in my imaginary world, they would now be available to many more people. But there would be no cars, refrigerators, washing machines or dishwashers, no radio, cinema, TV or internet, no rail or air travel and no modern healthcare such as antibiotics and antiseptics.

How many hours a week, how many weeks a year and how many years out of an expected lifetime would the average person be willing to work? My guess is that in this imaginary world, people

would work a lot less and take a lot more leisure than real people do today.

After all, most consumer expenditure nowadays goes on products that were not available in 1800 and a lot goes on products not invented even by 1950. Today, only about 10% of the family budget goes on food – and even within the food basket, many items (such as microwave-ready chicken tikka masala, the UK's national dish) were not available in 1800.

In summary, people's choices between labour and leisure demonstrate that they value higher consumption in an absolute sense, not just a relative sense. So rising GDP per capita would be in accordance with people's desires and preferences. Philosophers and social critics may object that the average person's desires and preferences are trivial, ill informed and misguided (an attitude which can be traced back at least as far as Plato's *Republic*). But in a democracy, people's preferences should be respected.

Further reading

Richard Easterlin (1974) 'Does Economic Growth Improve the Human Lot? Some Empirical Evidence', in *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz* edited by Paul David and Melvin Reder, Academic Press.

Robert Fogel (2004) *The Escape from Premature Hunger and Death, 1700-2100: Europe, America and the Third World*, Cambridge University Press.

Angus Maddison (2003) *The World Economy: Historical Statistics*, OECD.

Nicholas Oulton (2004a) 'A Statistical Framework for the Analysis of Productivity and Sustainable Development', CEP Discussion Paper No. 0629 (http://cep.lse.ac.uk/pubs/download/dp0629.pdf).

Nicholas Oulton (2004b). 'Productivity versus Welfare: or, GDP versus Weitzman's NDP', *Review of Income and Wealth* 50(3): 329-55.

Nicholas Oulton (2012) 'The Wealth and Poverty of Nations: True PPPs for 141 Countries', CEP Discussion Paper No. 1080 (http://cep.lse.ac.uk/pubs/download/dp1080.pdf).

Betsey Stevenson and Justin Wolfers (2008) 'Economic Growth and Subjective Wellbeing: Reassessing the Easterlin Paradox', *Brookings Papers on Economic Activity*.

Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi (2009) *Report by the Commission on the Measurement of Economic Performance and Social Progress* (www.stiglitz-sen-fitoussi.fr).

Martin Weitzman (1976) 'On the Welfare Significance of National Product in a Dynamic Economy', *Quarterly Journal of Economics* 90: 156-62.

Edward Wolff, Ajit Zacharias and Thomas Masterson (2012) 'Trends in American Living Standards and Inequality', *Review of Income and Wealth* 58(2): 197-232.

Rising GDP per capita is in accordance with people's desires and preferences