

Agenda

Advancing economics in business

Happiness is...? Are you happy, and should policy-makers care?

How happy are you? Is this a question you can give a meaningful response to? There is a growing trend among governments and international organisations to measure well-being. What insights can such data provide about what makes people happy, and how happiness determines their behaviour, and can such analysis help to improve policy decisions and appraisal?

According to traditional economics, people seek to maximise their own utility by making optimal decisions in purchasing goods and services and allocating their time. As explored in recent *Agenda* articles, however, what makes people happy may not always follow this traditional model.¹ Happiness is a complex concept—it is inherently subjective, and incorporates all manner of internal feelings and responses to external factors. People also care about factors such as how their circumstances compare with those of others, and they may be motivated by things other than money.

Scaling this up to an economy-wide or macro level, the traditional orthodoxy is that national income—as measured by gross domestic product (GDP)—is a good indicator of the overall economic health of a country. GDP captures the market value of the goods and services produced by society, and government policy is often aimed at securing economic growth. It has been recognised, however, that economic growth may not be suitable if it leads to ‘externalities’ not accounted for in the measure of GDP, such as climate change or air pollution. Similarly, if GDP growth is at the expense of people’s underlying happiness, a country with higher GDP per capita may not necessarily be ‘better off’.

Policy-makers are increasingly taking on board lessons from psychology and behavioural economics to account more explicitly for the trade-offs between seeking economic growth and factors such as work/life balance, sense of community and the state of the environment—which can all contribute to people’s underlying happiness. This has contributed to the growing interest in wider measures of well-being that incorporate non-market activity, and therefore also the requirement for data on happiness.

In February 2011, following a period of consultation, the UK Office for National Statistics (ONS) announced its intention to collect new well-being data as part of its Integrated Household Survey (see box below).² This interest in wider measures of well-being is not limited to the UK. It is also being addressed by the European Commission,³ the Stiglitz Commission⁴ and the OECD.⁵ The European Commission has indicated that the recent financial crisis has been one stimulant of this interest in well-being, and that one response to the crisis should be to look beyond GDP.

One of the problems with understanding happiness is that it is not an objectively measurable factor in the same way that factors such as (say) income or height are. It is difficult to conduct controlled experiments about (non-transitory) happiness. The main approach to measurement is through surveys that ask individuals to self-report their own life satisfaction. Most surveys ask respondents to rank their happiness along some fixed scale (such as from 1 to 7), although it may be inherently difficult for individuals to turn a feeling into a quantitative number.

Collecting happiness data

From April 2011, the ONS will include the following questions in its survey of UK households.

- Overall, how satisfied are you with your life nowadays?
- Overall, how happy did you feel yesterday?
- Overall, how anxious did you feel yesterday?
- Overall, to what extent do you feel the things you do in your life are worthwhile?

Source: Office for National Statistics (2011), op. cit.

On a practical level, then, it is possible to collect some form of happiness data, but is this data actually meaningful? In order to conduct any economic analysis of happiness data, it is necessary to assume that:⁶

- it is possible for humans to express their happiness by answering questions;
- there is (at least) ordinal interpersonal comparability (see below); and
- there is a relationship between answers to happiness or life-satisfaction questions and the economic concept of utility.

Can you express how happy you are?

Stated responses have been widely used in psychological, sociological and economic research. Stated happiness has in general been taken to be a reasonable proxy for 'actual' happiness. This assumption is based on a high correlation between stated happiness responses and objective happiness measures including brain activity, heart rate, blood pressure, the frequency of smiling, and others' assessments of an individual's happiness.⁷

A further concern is the risk that people may respond according to their 'animal spirits', creating wide variability in people's responses that cloud their true long-term satisfaction. The precise wording, or framing, of the question has an important role here.

In general, therefore, three types of happiness question can be asked. These are questions based on self-evaluation (generally life-satisfaction questions), those based on experience (generally short-term questions of the 'how happy are you?' format), and eudemonic measures (relating to psychological needs, such as life purpose). The type of question that is suitable will depend on the context. For example, correlation with an external factor such as income has been found to be greater for a measure of 'life satisfaction' than for a short-term measure such as 'experienced happiness'.⁸ Correlation statistics provide a measure of the direction and closeness of association between two variables.

Other evidence that there is consistency in people's medium-term responses comes from experiments on the reliability of self-reported subjective welfare measures. In one example, a sample of women were interviewed and then re-tested at a later date.⁹ The study found that there was some consistency over time in responses to well-being measures, although less than for other information such as income. The correlation between life-satisfaction responses taken two weeks apart was found to be 0.59. This finding implies that there is some consistency in life-satisfaction responses by individuals over time.

Interpersonal comparability

Happiness is an inherently subjective quality—a characteristic that could prohibit any interpersonal analysis. For example, one individual's 'very happy' response might be equivalent to another's 'moderately happy'. Similarly, even if comparisons can be made, they may be 'ordinal' or 'cardinal'. Can we say simply that person x is happier than person y (an ordinal measure), or can we give a firmer measure of how much happier they are (a cardinal measure)?

This is a significant problem, but the collection of detailed data, such as that proposed in the Integrated Household Survey, offers one possible solution. This type of micro-level panel data provides repeated observations from the same individual. It allows econometric analysis to be conducted, which can control for personality traits that might affect responses (eg, via fixed- or random-effects analysis).¹⁰

Correspondence from happiness and economic notions of utility

The evidence presented so far suggests that happiness data does convey reliable information. This raises questions, however, about the interpretation of the data. In order to use happiness data to understand consumer decisions, the relationship between happiness and the more economic concept of 'utility' needs to be explored.

A utility function is a representation of consumer preferences. Economists use utility functions when studying consumption because these characterise how individuals make consumption decisions, and allow predictions about how buyer behaviour might change in response to price or other circumstantial changes. By maximising utility, an individual is engaging in preference satisfaction and hence incurring happiness.

Utility maximisation determines individuals' consumption choices. The actual choices made by individuals reveal information only about their relative preferences, not about their absolute levels of utility. When using information on actual behaviour, it is therefore not possible to discriminate between theories that predict the same behavioural patterns but postulate different utility levels. Could happiness data be used to proxy utility?

Blanchflower and Oswald (2004) state that responses to happiness questions can be interpreted as empirical measures that approximate the theoretical notion of 'utility'.¹¹ The response given is reported well-being, which is a function of actual well-being, plus some random error. This random error component might capture the subjectivity of reporting, since individuals will interpret the scale differently, as well as other difficulties in communicating human happiness.

In addition to the study of individual behaviour, utility functions may be useful for understanding wider social preferences. The components of a utility function are generally the public and private goods and services that an individual consumes. However, people also have preferences over other factors, which do not necessarily involve making a 'consumption choice' by spending money. Indeed, many things that make us happy do not relate to purchasing goods. Such factors can include income inequality, a sense of security, a sense of community, the level of democracy, the 'joy' of children, and social preferences. Non-materialistic and non-individualistic components to utility are therefore also possible.

Although happiness surveys therefore cannot always provide information about preferences over individual consumer goods, they can indicate preferences that might be useful for policy appraisal or monitoring social progress.

Using happiness data

The UK ONS indicates that there are three broad uses for the data that it will collect: informing policy design, policy appraisal, and measuring progress. The remainder of this article presents some thoughts on what this might mean in practice.

Policy design and appraisal

Understanding happiness and the factors that motivate people can allow policy-makers to design optimal incentive regimes. *Agenda* has previously reviewed the implications of psychology and happiness for incentives.¹² This includes appreciating that there are other, non-financial, incentives that may be appropriate for supplementing mechanisms such as price regulation or performance-related pay.

Additionally, since public sector budgets are limited, especially in the current economic climate, it is important to evaluate which schemes make the best use of government expenditure. One element of this is understanding to what extent individuals value publicly provided goods. Happiness data can be used to provide insights into the value of goods or resources that have no market price and are not directly traded, such as national defence.

Several methods have been used to provide a valuation for these goods. One is to value the characteristics of a specific good using observed market prices of other goods (this is known as the hedonic value method). For instance, the value of the publicly provided good may be capitalised into wages or property prices. Suitable prices are, however, not always available.

An alternative to using observed data is to ask people directly how much they value certain public goods or policies. Typically, this is done by asking how much an individual would be willing to pay to retain the provision of a good or service (this is known as the contingent valuation method). Such surveys can, however, suffer from problems such as protest responses, whereby people deliberately misreport their valuation in order to influence the policy-makers.

Happiness measures can be used as an alternative approach in order to help with policy appraisal. By examining the relationship between a specific public good, or policy change, and life satisfaction, it can be possible to identify the marginal utility of the public good and in turn its value.¹³ For instance, happiness data may indicate the extent to which individuals value crime reduction, and hence the relative merits of law and order expenditure.¹⁴ Another possibility is that happiness data might reveal preferences over social factors, such as income distribution. This could provide justification for intervention in these distributions if it transpires that individuals actually derive utility from social equality (eg, for fairness reasons) or, conversely, from inequality (eg, for reasons of social mobility). This type of analysis may also provide evidence that 'soft' policies, and not just the pursuit of income growth, might help to increase happiness. These include policies such as sponsoring community activities, or increasing flexible working hours to promote family time.¹⁵

Measuring progress

A further reason for the interest in understanding happiness relates to concerns about the suitability of GDP as a measure of national progress. The motivation for this is that, despite long-term trend growth in GDP in developed countries, happiness measures have not shown significant progress (see the discussion of the Easterlin Paradox in the box below).

There are several options for measuring social progress. Measures such as GDP indicate preference satisfaction; GDP captures the market value of the goods and services produced by society and, as such, could provide a well-being measure because market transactions imply preference satisfaction (transactions occur only when individuals prefer to make them rather than not). Since GDP includes only these market activities, however, it may not actually be suitable as a measure of well-being.

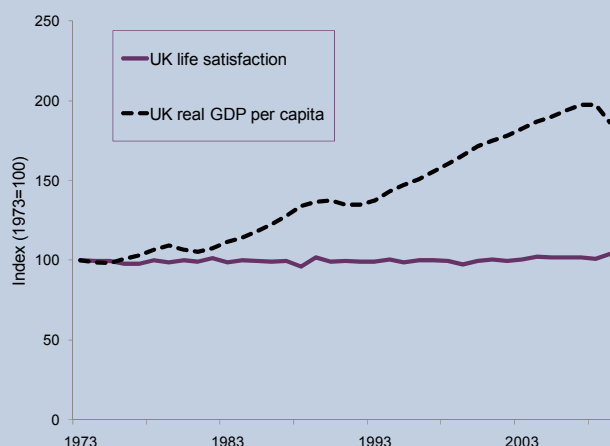
Alternatives exist; for instance, Bhutan has included a gross national happiness target as a national goal since 1972.¹⁶ A further alternative would be to choose prescribed objective measures of social progress, such

**Does getting richer make you happier?
(The Easterlin Paradox)**

Microeconomic theory and intuition suggest that utility should increase with income. Empirical evidence, however, has raised the ‘Easterlin Paradox’.¹ The paradox is that, despite significant economic growth over time in developed countries—leading to higher incomes—happiness data does not appear to show associated sustained rises in happiness or life satisfaction.

The paradox is particularly surprising because the same effect is not found when examining a society at a fixed point in time. This analysis usually shows a clear and positive correlation between income and happiness.²

One of the most common explanations given by those who accept that the paradox exists is that it is relative incomes, rather than individual absolute incomes, that matter for happiness. Under this explanation, people care about their rank in the income distribution or their relation to the mean income. This explanation fits the data—it explains that the richest are the happiest in



society, and that if growth occurs equally across the whole of society, there may be no net happiness gain overall. The original paradox was found in developed countries, which also fits with the idea that absolute income is important up to some subsistence level,³ but it is relative income that is the more important thereafter.

Notes: ¹ Easterlin, R. (1974), 'Does Economic Growth Improve the Human Lot? Some Empirical Evidence', pp. 89–125, in P.A. David and M.W. Reder (eds), *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, New York: Academic Press. ² Aside from the original Easterlin paper, see also, for instance, Veenhoven, R. (1993), *Happiness in Nations: Subjective Appreciation of Life in 56 Nations 1946–1992*, Erasmus University Rotterdam; and Layard, R. (2005), *Happiness: Lessons from a New Science*, New York: Penguin. ³ One suggestion is that this level is \$20,000. See Marmot, M. (2004), *Status Syndrome: How Your Social Standing Directly Affects Your Health and Life Expectancy*, London: Bloomsbury Publishing.

as those indicators targeted in the UN's Millennium Development Goals (eg, education and reduced hunger).¹⁷ Interactions will exist between these kinds of measures, and different countries might find that different measures are the most appropriate for them.

Conclusions

Money is important to individuals, and economic growth is important to society. The micro-economic foundations that suggest that more money always makes us happier are, however, being increasingly questioned by psychology and behavioural economics. If economic growth comes at the expense of other

factors, such as leisure time or environmental sustainability, then GDP per capita may give an incomplete picture of well-being.

It is difficult—but not impossible—to measure happiness. Looking ahead, there is therefore likely to be less controversy around collecting data per se, but about how it is then used by governments to formulate policy. This is likely to require a delicate approach when implementing policies that are expected to increase happiness, so as not to simply 'tell' people what makes them happy. Lessons from policy appraisal will help to inform this balance.

¹ See Oxera (2010), 'Behavioural Economics and Remedy Design', *Agenda*, November; and Oxera (2007), 'When Economics Met Psychology: Rethinking Incentives', *Agenda*, March.

² UK Office for National Statistics (2011), 'People Asked to Rate "Life Satisfaction" as new Well-being Questions Revealed', press release, February.

³ European Commission (2009), 'GDP and Beyond: Measuring Progress in a Changing World', Communication from the European Commission to the Council and the European Parliament, August.

⁴ Stiglitz, J., Sen, A. and Fitoussi, J. (2009), 'Report by the Commission on the Measurement of Economic Performance and Social Progress', Commission on the Measurement of Economic Performance and Social Progress (the Stiglitz Commission), September 14th.

⁵ The OECD organises regular World Forums on the topic of measuring the progress of societies. See http://www.oecd.org/pages/0,3417,en_40033426_40033828_1_1_1_1_1,00.html.

⁶ These criteria are attributed to Ferrer-i-Carbonell, A. (2005), 'Income and Well-being: an Empirical Analysis of the Comparison Income Effect', *Journal of Public Economics*, **89**, pp. 997–1019.

⁷ For a summary of the evidence supporting this assumption, see Konow, J. and Earley, J. (2008), 'The Hedonistic Paradox: is Homo Economicus Happier?', *Journal of Public Economics*, **92**, pp. 1–33.

⁸ Kahneman, D., Krueger A., Schkade, D., Schwarz, N. and Stone, A. (2006), 'Would you be Happier if you were Richer? A Focusing Illusion', *Science*, **312**:5782, pp. 1908–10.

⁹ Krueger, A. and Schkade, D. (2008), 'The Reliability of Subjective Well-being Measures', *Journal of Public Economics*, **92**, pp. 1833–45.

¹⁰ Fixed and random-effects analyses make assumptions about the persistency of unobserved individual specific effects. In a fixed-effects model, the unobserved individual-specific element does not change over time, and can be estimated within the model. In contrast, a random-effects analysis assumes that the individual-specific factor is not constant but changes in some random manner. For further details on panel data models, see Wooldridge, J.M. (2001), *Econometric Analysis of Cross Section and Panel Data*, Cambridge, MA: MIT Press.

¹¹ Blanchflower, D. and Oswald, A. (2004), 'Well-being Over Time in Britain and the USA', *Journal of Public Economics*, **8**, pp. 1359–86.

¹² Oxera (2007), 'When Economics met Psychology: Rethinking Incentives', *Agenda*, March.

¹³ This technique is based on including the public good in question in a micro-econometric life-satisfaction function. Estimating such a function provides estimates of the marginal utility of the good and the marginal utility of income from which the compensating and equivalent surpluses can be calculated.

¹⁴ This can help to evaluate specific schemes, such as initiatives to reduce knife crime. See, for instance, Oxera (2010), 'Cutting Edge or Blunt Instrument? Using Economics to Analyse Crime', *Agenda*, December.

¹⁵ See, for instance, Layard, R. (2005), *Happiness: Lessons from a New Science*, New York: Penguin.

¹⁶ See <http://www.bhutan.gov.bt/government/gnh.php>.

¹⁷ See <http://www.un.org/millenniumgoals/>.

If you have any questions regarding the issues raised in this article, please contact the editor, Dr Gunnar Niels: tel +44 (0) 1865 253 000 or email g_niels@oxera.com

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