Spotlight on: Subjective well-being

Editor: Stephen Hicks
Office for National Statistics
A National Statistics publication

National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They are produced free from political influence.

Not all of the statistics contained in this publication are National Statistics because it is a compilation from various data sources.

About us

The Office for National Statistics

The Office for National Statistics (ONS) is the executive office of the UK Statistics Authority, a non-ministerial department which reports directly to Parliament. ONS is the UK government’s single largest statistical producer. It compiles information about the UK’s society and economy, and provides the evidence-base for policy and decision-making, the allocation of resources, and public accountability. The Director-General of ONS reports directly to the National Statistician who is the Authority’s Chief Executive and the Head of the Government Statistical Service.

The Government Statistical Service

The Government Statistical Service (GSS) is a network of professional statisticians and their staff operating both within the Office for National Statistics and across more than 30 other government departments and agencies.

Contacts

This publication

For information about the content of this publication, contact: Stephen Hicks
Tel: 01633 65 6899
Email: nationalwell-being@ons.gsi.gov.uk

Other customer enquiries

ONS Customer Contact Centre
Tel: 0845 601 3034
International: +44 (0)845 601 3034
Minicom: 01633 815044
Email: info@statistics.gsi.gov.uk
Fax: 01633 652747
Post: Room 1.101, Government Buildings, Cardiff Road, Newport, South Wales NP10 8XG
www.ons.gov.uk

Media enquiries

Tel: 0845 604 1858
Email: press.office@ons.gsi.gov.uk

Copyright and reproduction

© Crown copyright 2011
You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence.

To view this licence, go to:
www.nationalarchives.gov.uk/doc/open-government-licence/

or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU
email: psi@nationalarchives.gsi.gov.uk

Any enquiries regarding this publication should be sent to: info@statistics.gsi.gov.uk

This publication is available for download at:
www.ons.gov.uk
On 25 November 2010 the Prime Minister asked the Office for National Statistics (ONS) to ‘devise a new way of measuring well-being in Britain’ (Number10, 2010). The aim of the national well-being project is to address the limitations of GDP as a measure of the country’s progress by developing a wider suite of indicators of economic development, the state of the environment and the quality of people’s lives. These indicators could be used to inform the public about the nation’s well-being and ‘lead to government policy that is more focussed not just on the bottom line but on all those things that make life worthwhile’ (Number10, 2010).

One important strand of this work which is underway at ONS is the development of questions on subjective well-being for inclusion in the Integrated Household Survey (IHS) from April 2011 with first annual ‘experimental’ estimates becoming available in Summer 2012. Subjective well-being is about how people think and feel about their own well-being and increasingly it has been recognised that it is important to measure this alongside more objective measures.

In light of ONS’ commitment to measure subjective well-being this ‘spotlight on’ aims to provide some background to subjective well-being measurement. It is structured as follows:

- **‘Measuring national well-being’** introduces the concept of national well-being and explains the differences between objective well-being and subjective well-being
- **‘Differences and changes in overall subjective well-being estimates’** explores differences in overall subjective well-being between countries and trends in subjective well-being in the UK over time
- **‘Factors associated with individual’s subjective well-being’** looks at how different factors are associated with subjective well-being at the individual level
- **‘Domain specific subjective well-being’** looks at how measures of subjective well-being can be specific to areas that impact on people’s lives
- **‘Measuring subjective well-being’** examines how subjective well-being can be measured and sets out ONS’ proposals for measuring subjective well-being

**Key points:**

- Subjective well-being is one approach to understanding the well-being of the nation. There are other ways of measuring National Well-being, but better measures of subjective well-being will help provide a fuller picture of the nation’s well-being.
- Subjective well-being can be measured, but there are a variety of ways to do this and ONS’ approach will be to capture these different methods in a way that is appropriate for our household surveys.
- There are a variety of factors that are associated with individual’s subjective well-being but the relationship at the aggregate level between overall subjective well-being estimates and Gross Domestic Product is less clear.
1. Measuring national well-being

Economic growth has long been considered an important goal of government policy. However, it has been recognised that to get a full picture of how the country is doing we need to look beyond GDP and consider how to measure national well-being and progress more widely.

National well-being is a multi-dimensional concept and in order to understand how best to measure national well-being a shared understanding of what it means needs to be developed. On 25 November 2010 the National Statistician launched a national debate on well-being, with an online consultation (closing on 15 April 2011) and events around the country, to consult with people, organisations and businesses across the UK, as well as central and local government, to ask what matters most in people's lives and what is important for measuring the nation's well-being.

In the interim we can use understanding gained from previous research to break well-being down into three broad areas (Stiglitz, Sen and Fitoussi, 2009):

- **Economy** with more of a focus on consumption than production within the National Accounts framework by looking at income, expenditure and wealth at the household level and giving more prominence to the analysis of the distribution of income, consumption and wealth
- **Quality of life** which includes domains such as material living standards, health, education, personal activities including work, political voice and governance, social connections and relationships, the environment and insecurity (both economic and physical)
- **Environment and sustainability** which includes clear indicators of our proximity to dangerous levels of environmental damage (such as those associated with climate change or the depletion of fishing stocks) as well as the sustainability of well-being more broadly.

All three areas are connected and need to be looked at together to provide the fullest picture of national well-being. Work has already been undertaken by ONS to address measurement within these three areas. Chiripanhura (2010) presented analysis of the well-being implications of alternative National Accounts aggregates (other than GDP) and looked at the differences between mean and median income arguing that median analysis gives a better indication of the level of economic well-being of the 'typical' household as the income distribution is positively skewed (Chiripanhura, 2011). These papers start to address the CMEPSP’s report recommendation to improve measures of the economy within the existing National Accounts framework. ONS have also responded to CMEPSP’s recommendation that measures of the stock of human capital be developed by estimating the UK’s stock of human capital by applying a lifetime labour income methodology to data from the UK Labour Force Survey (Jones and Chiripanhura, 2010). ONS has been publishing Environmental Accounts since 2002: these provide data on the environmental impact of UK economic activity, the use of resources from the environment in the economy and associated taxes and subsidies. In addition, the UK has an extensive range of social indicators regularly reported in Social Trends and other publications.

However, there is further work to be done including:

- developing an understanding of what National well-being means
- identifying existing measures and developing measures where there are gaps
- exploring ways to use and present existing and new measures effectively
Objective and subjective well-being

The measurement of National Well-being can be considered by two broad approaches. The **objective well-being** approach is based on assumptions about basic human needs and rights and usually consists of a list of requirements which are thought to contribute to well-being. These requirements range from adequate food and water to physical health and education to safety and social relationships. Following this approach an assessment of national well-being or progress can be achieved through analysis of objective indicators of the extent to which these requirements are satisfied (Guillén-Royo and Velazco, 2005; Dolan, 2011). These objective indicators could fall under any of the three areas. For example:

- Economy – GDP, household income, household wealth and the income distribution
- Quality of life - the proportion of children in education, educational attainment, life expectancy and crime rates
- Environment and sustainability - air pollution, water quality and fish stocks

Objective well-being measures are well established in the literature, however, this approach is essentially paternalistic: it assumes that certain things are good or bad for well-being and these are included in any indicator set and although there may be a model underpinning the choice, there is the danger that what is measured becomes what matters rather than what matters being measured. GDP is one objective measure that has been used as a proxy for well-being. It can be argued that an increase in GDP increases people’s income and allows people to satisfy their wants. There are also links between GDP and some objective indicators, for example, healthy life expectancy, but for other indicators the picture is more mixed (Thomas & Evans, 2010). The challenge remains about how best to use objective indicators to make an overall assessment of the well-being of the nation given that they can move in different directions over time.

The **subjective well-being** approach on the other hand aims to capture directly what people think and feel about their own well-being (Waldron, 2010). Subjective well-being is an umbrella term which captures 'life satisfaction and satisfaction with life domains such as marriage, work, income, housing and leisure: feeling positive affect (pleasant emotions and moods) most of the time: experiencing infrequent feelings of negative affect (such as depression, stress and anger); and judging one’s life to be fulfilling and meaningful' (Diener and Biswas-Diener, 2002:2). This definition is useful as it demonstrates that there are different approaches to measuring subjective well-being which not only include people’s views on life satisfaction and emotional experiences but can also include measures that capture purpose and meaning (see section 5 for further details).

Subjective measures allow for differences in peoples values and preferences. One person may rate their life satisfaction by placing emphasis on their salary while another person may place more emphasis on their social relationships (Waldron, 2010). Despite some outstanding methodological issues associated with these measures, they provide important additional information over and above objective measures on the quality of people’s lives. There is increasingly strong support for considering subjective well-being as a necessary complement to objective indicators (Guillén-Royo and Velazco, 2005). Indeed recommendation 10 of the Stiglitz report (Stiglitz, Sen and Fitoussi, 2009:16) states that:
Measures of both objective and subjective well-being provide key information about people’s quality of life. Statistical offices should incorporate questions to capture people’s life evaluations, hedonic experiences and priorities in their own survey.

One example of an area where objective and more subjective measures have been used in in the area of crime. Comparing people’s perceptions of crime with actual crimes rates highlights the importance of considering subjective and objective well-being measures together, as shown in Figure 1.

**Figure 1**  
**Perceived and actual likelihood of being a victim of crime: by crime type**

England and Wales  
Percentages

![Graph showing perceived and actual likelihood of being a victim of crime by crime type](image)

Sources: British Crime Survey (Home Office, 2009; 2010)

Figure 1 shows that the perceived likelihood of being a victim of crime in 2008/09 and 2009/10 was considerably higher than the actual likelihood of being a victim for burglary, car crime and violent crime. However, while perceived likelihood of being a victim of crime decreased between 2008/09 and 2009/10 actual likelihood remained the same.

This demonstrates that the relationship between objective and subjective measures can be complex and introduces some further issues for consideration for the development of a well-being indicator set. What is more important actual crime rate or fear of crime? The quality of people’s lives is not only affected directly be crime, through loss or suffering, but also indirectly as fear of crime or perceived levels of crime may alter peoples’ daily routines (ONS, 2009). In developing an indicator set to measure national well-being it will be important to consider the suitability of both subjective and objective measures.
2. Differences and changes in overall subjective well-being estimates

The following two sections look at estimates of subjective well-being in more detail. While there are a number of ways to measure subjective well-being (as discussed in section five) currently measures of overall life satisfaction and happiness are the most common in subjective well-being literature because they are most prevalent in international and national surveys (Waldron, 2010), including the World Values Survey\textsuperscript{vi}, Standard Eurobarometer\textsuperscript{vii} and the British Household Panel Survey (BHPS)(now part of Understanding Society)\textsuperscript{viii}, and because of the comprehensibility and appeal of life satisfaction to policymakers (Donovan and Halpern, 2002). Most of the analysis of subjective well-being at a national level has examined the relationship between GDP and life satisfaction or happiness and falls into two groups: analysis of differences between countries and analysis of changes within countries over time.

Comparing across countries

Research into the relationship between subjective well-being and GDP has had mixed results. Richard Easterlin was one of the first modern economists to study the relationship between GDP and happiness in the 1970s. He and other early researchers in the field suggested that while there appeared to be a relationship between aggregate levels of subjective well-being and GDP this relationship appeared to break down once countries reached a certain level of economic development (Allin, 2007; Jones and Evans, 2010, Stevenson and Wolfers, 2008).

However, more recently Stevenson and Wolfers (2008) found that, using recent data on a broader array of countries and a different measure of economic development, a clear positive relationship between average levels of subjective well-being and GDP per head across countries is established with no evidence of a satiation point beyond which wealthier countries have no further increases in subjective well-being. They argued that national income has a powerful effect in explaining variations in subjective well-being between countries. Stevenson and Wolfers (2008) suggested that earlier findings were due to the quality of internationally comparable subjective well-being data available at the time.

The important difference in this analysis is that Stevenson and Wolfers (2008) used the logarithm of GDP rather than GDP in currency. A strong argument can be made for using logarithm\textsuperscript{viii} of GDP as a rise of $100 does not have the same meaning for a country with GDP of $30,000 per head as it does for a country with GDP of $1,000 per head but a doubling of GDP might have a similar impact on both (Kahneman and Deaton, 2010). The logarithm of GDP can be used to take account of this. Also early studies found a curvilinear relationship between GDP and subjective well-being suggesting a more natural starting point might be to represent well-being as a function of the logarithm of income rather than absolute income (Stephenson and Wolfers, 2008). Log scales (to base 10) are used in this paper.

Figure 2 shows the relationship between GDP and life satisfaction and GDP and happiness across countries.
Figure 2  GDP per head\(^1\) and life satisfaction\(^2\) and happiness\(^3\) across countries, 2005

**Sources:** *World Values Survey 2005-2008 Wave\(^x\)*, *World Bank\(^y\)*

1 Data are for 2005 in 2005 constant prices using PPP. PPP GDP is GDP converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. Data are to log 10.

2 Respondents were asked ‘All things considered, how satisfied are you with your life as a whole these days?’ Figures presented are the proportion of people rating themselves as 7,8,9 or 10 on a scale of 1-10 where 10 is ‘Satisfied’ and 1 ‘Dissatisfied’.

3 Respondents were asked ‘Taking all things together, would you say you are…’ Figures presented are the proportion of people rating themselves as ‘very happy’ or ‘quite happy’ on 4-point scale.

4 GDP data are UK but World Values Survey data are Great Britain only.

Figure 2 shows that while there appears to be a positive relationship between GDP and life satisfaction there are some interesting variations. For example, while Morocco and Indonesia had relatively similar levels of GDP in 2005 (3,500 and 3,200 $ PPP per head respectively\(^x\)) only 21 per cent of people in Morocco reported high levels of life satisfaction compared to 61 per cent of people in Indonesia. Meanwhile Hong Kong had a relatively high level of GDP per head (35,700 $ PPP) and yet the proportion of people reporting higher life satisfaction was relatively low (49 per cent). These findings support the idea that ‘there is more to life than GDP’. For the UK in 2005 GDP stood at 32,700 $ PPP and 80 per cent of people in Great Britain reported high levels of satisfaction. Australia and Sweden also had GDP of around 32,700 $ per head. The proportion of people reporting high levels of life satisfaction was lower in Australia than Great Britain (76 per cent) and higher in Sweden (85 per cent).

There also appears to be a positive relationship between GDP and happiness but the relationship appears to be less strong than that between GDP and life satisfaction and there appears to be less variation in happiness. While much of the economics literature tends to treat measures of life satisfaction and measures of happiness interchangeably they capture somewhat different concepts and are treated as distinct in the psychology literature. This finding supports the argument that the two measures should be treated as distinct.

As with life satisfaction there are a number of examples where countries with similar levels of GDP have different levels of happiness. For example, in 2005 Vietnam had a lower level of GDP than Moldova (2,100 $ PPP per head and 2,400 $ PPP per head respectively) but 92 per cent of people in Vietnam rated themselves as ‘Very happy’ or ‘Quite happy’ compared to just 52 per cent of...
people in Moldova. In Great Britain, 94 per cent of people rated themselves as ‘Very happy’ or ‘Quite happy’. The proportion of people rating themselves as ‘Very happy’ or ‘Quite happy’ was lower in Australia than Great Britain (at 92 per cent) but higher in Sweden (96 per cent).

**The UK over time**

While there is some evidence pointing to a relationship between economic development and subjective well-being between countries the evidence on changes within countries over time is less clear.

**Figure 3** GDP per head, Household Disposable Income (HDI) per head,¹ and life satisfaction² over time

United Kingdom
Indices (1973=100)

Sources: Office for National Statistics, Eurobarometer

1 As with Figure 2 the logarithm of GDP and HDI is used.
2 Respondents, aged 15 or over, were asked ‘On the whole are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead?’ Figures presented are the proportion of people ratings themselves as ‘Very satisfied’ or ‘Fairly satisfied’ and are from the Spring Eurobarometer where available.

**Figure 3** shows that log GDP per head and log HDI per head both trended upwards between 1973 and 2009. While life satisfaction also seems to have increased but to a lesser extent and there has been more variability in reported life satisfaction, with no clear indication that the peaks and troughs in life satisfaction correspond with movement in the measures of economic development. For example, the biggest increase in reported life satisfaction was between 1995 and 1996 with an increase of 5 percentage points in the proportion of people in the UK reporting themselves as ‘Very satisfied’ or ‘Fairly satisfied’ (from 84 per cent to 89 per cent). Between 1995 and 1996 both GDP
Spotlight on: Subjective well-being

per head and HDI per head also increased. However, between 1994 and 1995 both GDP and HDI per head increased yet the proportion of people in the UK reporting themselves as ‘Very satisfied’ or ‘Fairly satisfied’ fell by 4 percentage points (from 88 per cent to 84 per cent). It is not clear how this fits with cross-national findings that there is a relationship between GDP and life satisfaction and happiness.

Other factors which may contribute to differences between countries and changes within countries over time

Differences in subjective well-being between countries, including some of the outliers seen in Figure 2, may be driven by non-economic factors, such as political and social arrangements. For example, the quality of a country’s governance has been found to help explain national difference in well-being, other factors being controlled for (Donovan and Halpern, 2002). It may also be that there are more suitable indicators of economic performance with which to explore the relationship between economic performance and subjective well-being, for example household expenditure and household wealth. Households have the choice of allocating more resources to consumption to improve material well-being in the short-term or increasing savings and wealth accumulation to improve possible long-term material well-being. Rather than looking at household income it may be also be useful to look at household consumption and wealth (Chiripanhura, 2010). There is also the issue of how equally income and wealth are distributed throughout the population (Chiripanhura, 2010); a rise in average income in one country may be unequally shared across groups, leaving some households relatively worse-off than others, while in another country the rise could be more evenly distributed. This could impact on the relationship between economic development and subjective well-being. The Stiglitz report (Stiglitz, Sen and Fitoussi, 2009) recommended that more prominence be given to the distribution of income, consumption and wealth and Chiripanhura (2011) recommended that median rather than mean measures be used as mean analysis is influenced by extreme observations at the top end of the distribution, resulting in the mean exceeding the median.

Stevenson and Wolfers (2008) found that, while Japan and some countries in Europe have seen rising subjective well-being coinciding with economic growth, in the United States ‘Americans have experienced no discernible increase in happiness over the past thirty-five years (and indeed, happiness among U.S women has declined)’ despite a period of economic growth. They argue that this can be explained by the unequal distribution of the fruits of the economic growth the US has seen over this period as between 1972 and 2005 average real household income grew by only 15 to 20 per cent in each of the three bottom income quintiles while the fourth quintile experienced growth of nearly 30 per cent and the top quintile growth of 59 per cent. Over this time period, the top two quintiles of the household income distribution experienced mild growth in happiness while happiness actually declined for the bottom three quintiles.

This highlights the importance of looking at a broad range of indicators and examining inequalities when attempting to determine the country’s progress.
3. Factors associated with individual’s subjective well-being

The following section looks at the factors which have been found to be related to subjective well-being at the individual level. What is presented here is not an exhaustive literature review but reproduces an overview of the findings (for more information see Dolan (2011), Donovan and Halpern (2002) OECD (2007)).

Life satisfaction has been found to be related to demographic variables such as gender and age. Women have generally been found to report higher levels of life satisfaction than men and young and old people have been found to be more satisfied than the middle aged. Studies have also found that married people have higher levels of life satisfaction and happiness than those who have never been married and those who are divorced, separated or widowed.

Self-reported health has been found to have one of the strongest associations with life satisfaction. However, interestingly, objective health status shows a much weaker relationship with life satisfaction suggesting that self-reported health may be biased upwards by a positive outlook on life. As with the crime example shown in Figure 1 this shows the importance of looking at both objective and subjective measures. For employment there has been found to be a positive relationship between job satisfaction and overall life satisfaction and it has also been found that being unemployed (objective status) has been found to have a damaging effect on life satisfaction with the loss of life satisfaction associated with unemployment being far greater than that caused purely by loss of earnings.

Cross-sectional evidence suggests that income has a modest correlation with life satisfaction and it may be relative income rather than absolute income that is more important; an individual’s rank in the income distribution or in their peer group may be more important than the level of income (Clark and Oswald, 1996). One possible explanation for this finding is that, once a certain level of income is reached, at which basic needs, such as food, clothing and shelter are met, it is relative rather than absolute income that becomes important as people ‘want to keep up with the Joneses or if possible to outdo them’ (Layard, 2005:45).

Figure 4 shows that in England in 2010 the proportion of people reporting higher levels of life satisfaction was higher for women than men (62 per cent and 57 per cent respectively), for people who are working than those not working (61 per cent and 57 per cent respectively) and for those in higher as compared to lower socio-economic grades (64 and 56 per cent respectively).
Life satisfaction:¹ by sex, employment status and socio-economic grade, 2010

England
Percentages²

<table>
<thead>
<tr>
<th>Sex</th>
<th>Employment status</th>
<th>Socio-economic grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>Working</td>
<td>ABC³</td>
</tr>
<tr>
<td>Women</td>
<td>Not working</td>
<td>C2DE³</td>
</tr>
</tbody>
</table>

Source: Omnibus Survey, Defra (2010)

¹ Respondents, aged 16 or over, were asked ‘All things considered, how satisfied are you with your life as a whole nowadays?’.

² Percentage of people rating themselves as 8, 9 or 10 on a scale of 0 to 10 where 10 is ‘extremely satisfied’

³ Socio-economic grade is based on employment categories where A = Higher managerial, administrative, professional e.g. Chief executive, senior civil servant, surgeon, B = Intermediate managerial, administrative, professional e.g. bank manager, teacher, C1 = Supervisory, clerical, junior managerial e.g. shop floor supervisor, bank clerk, sales person, C2 = Skilled manual workers e.g. electrician, carpenter, D = Semi-skilled and unskilled manual workers e.g. assembly line worker, refuse collector, messenger, E = Casual labourers, pensioners, unemployed.

Life satisfaction has also been seen to be associated with activities people undertake in their spare time. People who exercise, play sport, participate in voluntary activity or work in the garden reporting higher levels of life satisfaction than those who do not.

It is important to note here that there are difficulties determining cause and effect. For example, research has generally found a positive association between volunteering and subjective well-being but it is not clear whether volunteering improves subjective well-being or whether those with greater subjective well-being are most likely to volunteer in the first place. One study found that when exposed to a cold virus those who had reported a higher level of life satisfaction at baseline were less likely to come down with a cold and quicker to recover if they did become sick (Cohen et al., 2003).

One surprising finding from subjective well-being research is the relatively small and short-lived effect of life events and changes in circumstances on reported life satisfaction (Dolan, 2011; Stevenson and Wolfers, 2008; Kahneman and Krueger, 2006). Extreme examples of which are the findings that long-term paraplegics do not report themselves as very unhappy, nor do lottery winners report themselves as particularly happy (Brickman, Coates and Janoff-Bulman, 1978). This may be explained by what is termed set-point theory and adaptation.
Research has found that an individual’s personality has the strongest influence on their subjective well-being (OECD, 2007; Kahneman and Krueger, 2006). Given this finding one would therefore expect an individual’s subjective well-being to be somewhat stable over time and this has indeed been shown to be the case with most people’s subjective well-being fluctuating around a ‘set point’ (Thomas and Evans, 2010). A recent New Scientist article argued that subjective well-being levels are relatively similar across studies as there is an optimum level of subjective well-being (around 7 or 8 out of 10) at which we flourish as positive emotions allow us to handle life’s ups and downs but being too positive can make us gullible and more likely to make careless decisions (Jones, 2010).

It has also been suggested that the way people interpret or answer questions about happiness or life satisfaction might change in line with changes in other factors such as income. This is known as adaptation and is supported by the finding that the level of income that an individual considers to be ‘sufficient’ is primarily determined by their current income (van Praag and Ferrer-i-Carbonell, 2004).

However, research has suggested that some changes in circumstances, such as unemployment, have a more long-term effect on life satisfaction (Lucas et al., 2004).
4. Domain specific subjective well-being

The previous sections have focussed on measures of overall life satisfaction and happiness but subjective well-being can also be specific to areas that impact on people’s lives. For example, the BHPS asks a number of ‘domain’ specific satisfaction questions covering satisfaction with health, income, house/flat, partner, job, social life, amount of leisure time and use of leisure time.\textsuperscript{xv} Research has looked at the correlation between domain specific and overall life satisfaction. As mentioned above, both self-reported health and job satisfaction are related to overall satisfaction. Peasgood (2008) also found that partner satisfaction and social life satisfaction had the biggest correlation with overall life satisfaction.

On launching the national well-being debate the National Statistician stated that ‘we want to develop measures based on what people tell us matter most’. The information presented above could help inform the development of the national well-being indicator set alongside the results of the debate which allows people to comment on what things in life matter to them and which of these things should be reflected in measures of national well-being.

The BHPS also asks people to rate how important different domains are to their lives. Table 1 shows that health is considered the most important of the domains. ‘Health has an important influence on wellbeing; it has the ability to affect all aspects of a person’s life. Without the correct support, many illnesses can constrain one’s accessibility, employment, financial situation, social life and happiness. Many wellbeing indexes incorporate a health domain with measures such as private and public expenditure on health; self reported general health and limiting long-term illness’ (ONS, 2009). While money is considered least important only 1.6 per cent of people rated money as 1 out of 10, ‘Not important’, compared to having children which 7.3 per cent of people rated as ‘Not important’.

Table 1 Importance of difference domains of life,\textsuperscript{1} 2008/09

<table>
<thead>
<tr>
<th>United Kingdom</th>
<th>Percentages\textsuperscript{2}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>81.3</td>
</tr>
<tr>
<td>Good friends</td>
<td>76.3</td>
</tr>
<tr>
<td>Good partnership</td>
<td>75.8</td>
</tr>
<tr>
<td>Being independent</td>
<td>60.2</td>
</tr>
<tr>
<td>Having children</td>
<td>56.5</td>
</tr>
<tr>
<td>Owning own home</td>
<td>50.9</td>
</tr>
<tr>
<td>Having a good job</td>
<td>39.1</td>
</tr>
<tr>
<td>Money</td>
<td>13.2</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Respondents, aged 16 or over, told I'm going to read you a list of things that people value. For each one I'd like you to tell me on a scale from 1 to 10 how important each one is to you, where '1' equals 'Not important at all', and '10' equals 'Very important'.

\textsuperscript{2} Percentage of people rating item as 9 or 10 on a scale of 1 to 10 where 10 is 'very important'

\textsuperscript{3} Data obtained from www.iser.essex.ac.uk/survey/bhps/documentation/volume-b-codebooks/index-terms
5. Measuring subjective well-being

So far this ‘spotlight on’ has looked at existing survey measures of subjective well-being which are predominantly about overall life satisfaction and happiness. This final section will look at the general approaches to measuring subjective well-being in more detail and set out ONS’ proposals for subjective well-being questions for the IHS.

Evaluation, experience and ‘eudemonic’ measures

There are a number of different types of subjective well-being measure; these can be categorised as evaluative, experience or ‘eudemonic’. xvi

**Evaluation** measures aim to assess a person’s thoughts about their life overall or domains of their life (Kahneman and Deaton, 2010; Dolan, 2011). They relate to the cognitive part of subjective well-being, an information based appraisal of one’s life (Diener, 1994). An example of this is the common life satisfaction questions already looked at in earlier sections. An alternative is the Cantril’s Self-Anchoring Scale in which respondents rate their current life on a ladder scale for which 0 is ‘the worst possible life for you’ and 10 is ‘the best possible life for you’. Kahneman and Deaton (2010) argue that this is a purer measure of life evaluation than the more common life satisfaction measures which take the form ‘how satisfied are you with … your life overall, your health, your job, etc.’ and are used in number of surveys such as the BHPS.

**Experience** measures aim to assess the emotional quality of an individual’s experience – the frequency, intensity and type of affect felt in any moment, for example, happiness, sadness, anxiety or excitement (Kahneman and Deaton, 2010; Dolan, 2011). These have been collected via diary based methods: for example the Experience Sampling Method (ESM) and the Day Reconstruction Method (DRM) where respondents report feelings at different times in the day whilst undertaking events. However, it is possible to use more general social surveys to collect an approximation to these measures by asking respondents about their feelings for a fairly short reference period. The General Health Questionnaire (GHQ12), which is used in a number of surveys including the BHPS, contains a number of experience measures such as ‘have you recently...been feeling unhappy or depressed?…been feeling reasonably happy, all things considered?’

The third type of measure follow ‘eudemonic’ theories which argue that people have underlying psychological needs, such as having meaning to their life, control over life and connections with others (Ryff, 1989), which contribute towards well-being independently of any pleasure they may bring (Hurka, 1993). Eudemonic measures can take the form of questions such as ‘overall, how much purpose does your life have’ and ‘does your life have meaning’ (Dolan, 2011). This approach to subjective well-being is also sometimes labelled the ‘functioning’ or ‘psychological’ approach to well-being and has drawn on Self-Determination Theory (SDT).

ONS’ proposals for measuring subjective well-being

The Stiglitz report (Stiglitz, Sen and Fitoussi, 2009) argued that subjective well-being encompasses different aspects each of which should be measured separately to develop a comprehensive understanding of people’s subjective well-being. Indeed, ONS’ approach will be to reflect these
different aspects of subjective well-being. The Integrated Household Survey (IHS) is a large scale composite household survey which includes the Annual Population Survey (APS), Living Costs and Food Survey (LCF), the General Lifestyles Survey (GLF), the English Household Survey (EHS) and the Life Opportunities Survey and currently yields a sample survey of 450,000 respondents. For questions on subjective well-being, which will be asked of respondents aged 16 and over without accepting responses by proxy, it is estimated that around 200,000 adults will be answer the subjective well-being questions each year from April 2011. The IHS also aims to produce precise estimates at a lower geographic level than is possible in other ONS social surveys and the expectation is that sub-regional estimates for subjective well-being will be available from this source.

When considering which questions ONS should include in the IHS the first stage was to look at what questions have been used before in other surveys both in the UK and abroad. In September 2010, ONS published a paper that outlined the many questions that are already asked on existing surveys (Waldron, 2010). Following this, ONS commissioned Professor Paul Dolan, Professor Richard Layard (LSE) and Dr Robert Metcalfe (University Oxford) to look at the role of subjective well-being measurement in public policy and make recommendations to the ONS about what questions should be asked (Dolan 2011). The launch of the National Debate and the establishment of the Measuring National Well-being Advisory Forum has allowed ONS to gain further advice on the questions. For example, Professor Felicia Huppert from the University of Cambridge has been involved in making recommendations for the eudemonic question that ONS plan to include in the Integrated Household Survey (IHS) from April 2011. We were able to run questions in the December Opinions Survey. We have also undertaken some cognitive testing with regards to the placement of the questions in the IHS which has also given provided some useful information regarding respondents’ understanding of the questions.

The questions that will be added to the IHS from April 2011 and the estimates derived from them in summer 2012 will not in the first instance have National Statistics status but rather will be labelled ‘experimental statistics’. Experimental statistics are those that are undergoing development but are published to involve users and stakeholders in their development and as a means to build in quality at an early stage. This includes international stakeholders: Eurostat and the OECD both have work programmes looking at subjective well-being measurement. ONS is keen, where possible, not only to meet national needs but also to ensure requirements for international comparability are met. This also provides the opportunity for ONS to undertake further evaluation and development of these estimates as we go forward, taking into account the various dimensions of statistical quality and looking at the methodological issues associated with subjective well-being questions.

When considering which questions to include on the IHS, the ONS has had to be mindful of the fact that the constituent surveys within the IHS collect important information that is relied on by a range of users and questionnaire space is at a premium. It was always envisaged that the IHS could carry only a small set of subjective well-being questions from April 2011. For this reason, it was decided that the IHS should carry a core set of overall monitoring questions rather than detailed questions that could be asked to gauge levels of subjective well-being.
The ONS has decided to include four overall subjective monitoring questions on the IHS from April 2011 and these are:

- Overall, how satisfied are you with your life nowadays?  
  *(on a scale of 0-10, where 0 is not at all satisfied and 10 is completely satisfied)*

- Overall, how happy did you feel yesterday?  
  *(on a scale of 0-10, where 0 is not at all happy and 10 is completely happy)*

- Overall, how anxious did you feel yesterday?  
  *(on a scale of 0-10, where 0 is not at all anxious and 10 is completely anxious)*

- Overall, to what extent do you feel the things you do in your life are worthwhile?  
  *(on a scale of 0-10, where 0 is not at all worthwhile and 10 is completely worthwhile)*

To supplement the IHS the ONS plans to use the Opinions Survey. The Opinions Survey is a smaller survey with around 1,000 adults responding each month. We will carry the core questions each month but also allow for further questions to be added, for example life satisfaction by domain, as well as further experience and eudemonic based measures. There is unlikely to be space to ask all the different questions relating to the different approaches to well-being every month, but this could be overcome by rotating different questions from month to month as necessary. Life satisfaction by domain would include satisfaction with personal relationships, physical health, mental well-being, work situation, financial situation, the area where people live, time to do the things people like doing and the well-being of respondents’ children.

The Opinions Survey also offers flexibility that the IHS can not, and ONS intend to use this survey as a vehicle for further testing of subjective well-being questions in parallel to their introduction in April 2011 into the IHS. This is likely to include split level trials in order to test how scaling, the order and placement of questions and nuances in wording as well as the mode of interviewing can affect the estimates.

**Rationale for question choice**

ONS have settled on the use of a life satisfaction question in the IHS to reflect the evaluative approach as these are well used and established both within the UK and internationally. The question we are asking is a simplified version of questions that have been asked in other surveys (for example the World Values Survey, European Social Survey, British Household Panel Survey, and DEFRA's Public Attitudes and Behaviours towards the Environment Omnibus Survey).

Across different surveys in the UK and abroad there are instances when evaluative (and eudemonic) measures do not have an explicit time frame of assessment. For example, a common question is ‘how satisfied are you with your life overall’ but the BHPS also uses ‘would you say that you are more satisfied with life, less satisfied, or feel about the same as you did a year ago?’. The use of time frame constraints is an important difference as some respondents may find it difficult to evaluate their life satisfaction when no specific time frame is given due to the considerable burden on memory (Waldron, 2010; Dolan, 2011). Without a time frame the context may also exert more of an influence on responses. ONS is proposing to use ‘nowadays’ in the life satisfaction question. This has been used in other surveys and although this leaves the respondent
to make a judgement about how to interpret this, it does limit the reference period to more recent times rather than thinking about the whole of a person’s life course up to that point.

An alternative evaluative measure is the Cantril ladder of life question which has been argued is less affected by people’s emotional state. However, the question is fairly lengthy and requires the respondent to think conceptually, which has lead ONS to conclude that we would not include it in the Integrated Household Survey from April 2011.

In terms of an experience measure ONS has concluded that it is necessary to include both a positive and negative ‘affect’ question in the IHS. ONS will use the time frame of ‘yesterday’ in order to approximate to the DRM time use approach. The adjective ‘happiness’ has been chosen as it is a widely used for positive affect questions appearing in the DRM and Gallup-Healthways data. ‘Anxious’ is widely used as an indicator or poor mental well-being, for example it is used in the European Social Survey and in the EQ-5D well-being measure (Dolan 2011). However, ONS is aware that other adjectives could be used and as part of the development work using the Opinions Survey ONS will test alternative wording, for example, enjoyment, contentment, stress, worry, anger, tired and sad.

For an overall eudemonic measure ONS has chosen to look at one that provides information on how much meaning and purpose people get from the things that they do in their lives. Developing an overall question for this approach to measuring well-being has been more challenging because often a larger question set is used to pick up the dimensions in this area. The question that we have chosen is adapted from the European Social Survey which asks about what people do in their lives that is valuable and worthwhile. The question has been reworded to fit with a 0-11 scale and a similar question was tested on the December Opinions Survey. ONS has decided though, not to include the words ‘valuable and worthwhile’ but to instead use just ‘worthwhile’ as this conflates what could be considered by respondents as two separate concepts which may cause confusion.

Other candidates for eudemonic measures could be a question about personal relationships and one around autonomy. The new economics foundation (nef 2011) have proposed for that ONS include a question on loneliness and one on control over the important things in people’s lives. However, loneliness is an emotion that has specific causes – i.e. lack of personal relationships – and therefore would not appear to be a ‘pure’ negative affect question. Also asking about how lonely someone feels in a household interview could be potentially more sensitive than the other well-being questions. This is because the respondent may well respond whilst in the presence of other household members who may be surprised to learn that they are lonely despite the fact that they have people living with them. The reporting could therefore be biased upwards and before introducing such a question ONS would want to be sure that it did not have a negative impact on the respondent or on the quality of data that would be provided. The control question that has been proposed is also likely to be cognitively demanding and we have not tested it to see how easily it could be answered. Therefore, at this stage, ONS will not be including it in the IHS from April 2011.

Different surveys use different scales for responses (Stevenson and Wolfers, 2008). For example, the BHPS asks respondents ‘How dissatisfied or satisfied are you with.....your life overall’ with responses on a scale of 1 to 7 where 1 is ‘Not satisfied at all’ and 7 is ‘Completely satisfied’, values in between 1 and 7 are not labelled except 4 ‘Not satisfied/dissatisfied’. However, the Eurobarometer asks respondents ‘On the whole are you very satisfied, fairly satisfied, not very
satisfied or not at all satisfied with the life you lead?’ Differences in scaling and labelling of scale points may affect how people respond and makes it difficult to compare across sources.

ONS has also decided that on the IHS a 11 point scale from 0-10 where 0 is ‘not at all’ and 10 is ‘completely’ will be used for all the questions. The basis for this decision was to ensure that the scales between the questions were consistent, to help respondents, but also to aid analysis across the separate questions. Also 11 point scales of this nature are commonly used across other surveys of interest, particularly in international surveys and this will aid comparisons with these estimates.

Responses to evaluative questions could be determined in part by the respondent’s current mood and by the immediate context. This was demonstrated by Schwarz (1987) who found that reported satisfaction with life was substantially higher for a group of participants who discovered a coin on a copy machine prior to completing the questionnaire. Reported satisfaction or happiness has also been shown to be affected by earlier questions in a survey (Stevenson and Wolfers, 2008; Kahneman and Krueger, 2006). The importance of question ordering needs to be taken into consideration when designing questionnaires and any changes year to year could affect the ability to examine changes in subjective well-being over time as some of the observed change could be due to ordering effects. However, the idiosyncratic effects of recent, irrelevant events, such as the coin example, are likely to average out in representative population samples (Kahneman and Krueger, 2006) and this is likely to be particularly the case with a large scale sample (OECD, 2007). The positioning in the IHS of the subjective well-being questions is an important aspect that needs to be considered further and ONS has undertaken cognitive testing from which we will be able to decide the best place for these questions to be added on the IHS.
References


Thomas, J., and Evans, J. (2010). There’s more to life than GDP but how can we measure it? Available at www.statistics.gov.uk/StatBase/Product.asp?vlnk=14692&Pos=1&ColRank=1&Rank=208


Notes

i See www.ons.gov.uk/about/consultations/measuring-national-well-being/index.html

ii OECD (2001: 18) define human capital as ‘the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.’ This is a broad definition, encompassing a range of attributes (such as knowledge, skills, competencies and health conditions) of individuals.

iii See www.statistics.gov.uk/StatBase/Product.asp?vlnk=3698&Pos=6&ColRank=1&Rank=272

iv National well-being could be considered as a simple aggregate of the well-being of the individuals’ of that nation. This involves arbitrarily assigning values to qualitative categories according to their rank order. For example, a response of ‘not at all happy’ is given a value of 1, ‘not very happy’ a value of 2, ‘quite happy’ a value of 3, and ‘very happy’ a value of 4. This assumes that the difference between ‘not at all happy’ and ‘not very happy’ is the same as the difference between ‘not very happy’ and ‘quite happy’. An alternative involves reporting the proportion of the population reporting themselves as, say, ‘quite happy’ or ‘very happy’. This approach has the advantage that it yields a natural scaling (from 0 to 100) and is directly interpretable. One difficulty is that this approach may lead changes in the dispersion of happiness to be interpreted as changes in the average level of happiness. To minimize this possible confound, one typically chooses a cut-off near the median response. This approach was adopted for this paper but it may be necessary to explore the impact of using different approaches in the future.

v The World Values Survey has carried out five waves of surveys, from 1981 to 2007, in 97 countries. The surveys aim to capture pervasive changes in what people want out of life and what they believe. For more information see www.worldvaluessurvey.org/

vi The standard Eurobarometer was established in 1973. Each survey consists of approximately 1,000 face-to-face interviews per Member State. Reports are published twice yearly. For more information see http://ec.europa.eu/public_opinion/archives/eb_arch_en.htm

vii The British Household Panel Survey (now part of Understanding Society) is a longitudinal study of households and individuals in Britain which has been running since 1991. The main objective of the survey is to further understanding of social and economic change at the individual and household level and to identify, model and forecast such changes, their causes and consequences. For more information see www.esds.ac.uk/longitudinal/access/bhps/L33196.asp

viii The logarithm (or log) of a number to a given base is the power to which the base must be raised in order to produce that number. For example, the logarithm of 1000 to base 10 is 3, because 10 to the power of 3 is 1000: \(10^3 = 1000\).

ix Data obtained from www.wysevsdb.com/wvs/WVSAnalyze.jsp?Idioma=I

x Data obtained from http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD/countries?display=default

xi \(10^{3.54}\) and \(10^{3.51}\)

xii Data obtained from www.statistics.gov.uk/StatBase/TSDTimezone.asp?vlnk=bb&Pos=1&ColRank=1&Rank=272
xii Data obtained from http://ec.europa.eu/public_opinion/cf/index.cfm?lang=en

xiii Households are ranked according to their income and then divided into five groups of equal size. The bottom fifth, or bottom quintile group is then the 20 per cent of households with the lowest incomes.

xiv Peasgood (2008) argued that domain specific satisfaction measures may be more reliable than overall life satisfaction measures because they are relatively straightforward judgements so life satisfaction could be measured as an aggregate of various domains, rather than being measured separately. This would, however, require a system of weighting where domains are given different weights depending on their importance.

xv For more information on measures of subjective well-being see ONS (2010), Dolan (2011) and Donovan and Halpern (2002).