

## Chapter 4: Subjective Wellbeing Measures to Inform Public Policies

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### Summary

Modern nations employ standard social and economic indicators in order to allocate limited resources and to measure their societies' well-being. Despite the fact that these *objective* measures provide valuable information to assess public policies, they have important limitations. Fortunately, these problems may be tackled by complementing them with *subjective* well-being indicators. Subjective measures reflect people's own evaluations of the quality of their lives, and are more directly related to societies' well-being. Therefore, they may assess different aspects that can't be obtained through traditional and objective measures, helping policy makers to obtain a more accurate picture of the well-being of both individuals and nations. Several examples are provided to support these claims.

### Introduction

One of the most important duties for government is to increase people's quality of life through the provision of public goods. However, resources are limited and policy makers need to allocate them in the most efficient way. To fulfil this goal, many countries are currently using standard economic forms of cost-effectiveness or cost-benefit analysis to evaluate their policies. Despite this procedure having a lot of benefits, it is useful only when inputs and outputs can be estimated accurately in monetary terms (e.g., in the transport or work sectors). However, the economic activities in areas such as health, social care, the environment, and child welfare do not provide an accurate method to estimate the cost and benefits involved in the transactions. Thus in these cases, new methods need to be developed for evaluating public policies (Helliwell, Layard and Sachs, 2012).

Leading scholars have proposed to judge policies by the changes they produce in people's well-being (Diener et al., 2009). This method may help to align better the metric of traditional cost-benefits analysis with measures that truly represent the change in people's quality of live (Helliwell, Layard and Sachs, 2012).

However, this new alternative leads to a second problem: how can well-being be measured? Economists assume that well-being may be assessed through changes in Gross Domestic product (GDP), which would be a good proxy for it.

According to standard economic theory, individuals are rational decision-makers who always know what they want, and derive their utility (or well-being) mainly through the consumption of goods and services. Therefore, if GDP per capita increases, people on average will have higher incomes. This situation would allow individuals to increase their consumption and therefore their well-being. However, the traditional assumption about the link between income and well-being has been questioned in recent years (Easterlin 1974; 1995; 2003; Helliwell, Layard and Sachs, 2012; Stiglitz, Sen and Fitousi, 2010). Sachs (2012), for example, states that this assumption has several limitations. First, we are not always rational thinkers. We are a complicated mix of emotions and rational thought (Kahnemann, 2011). Second, higher average incomes do not imply necessarily higher well-being. For example, despite the fact that the GDP in the US is three times higher now than in the 1960s, the average life satisfaction levels have remained almost unchanged over the last 50 years (Sachs, 2012). Third, the increase in the US production has destroyed a great deal of our natural environment, leading us to a climate change crisis that may be irreversible in some years ahead (International Energy Agency, 2012). Fourth, social psychology research has consistently found that individuals who give great importance to income and material rewards, end up with a lower level of well-being and a higher level of mental problems (Dittmar et al., 2012; Kasser and Kanner, 2004). Thus it is a serious problem when government and policy makers give too much importance to production and economic growth instead of promoting more intrinsically motivating aspirations. Fifth, and finally, despite the fact that several countries have shown important improvement in the levels of affluence in recent decades, this issue has created its own set of afflictions. For instance, there are increasing levels of obesity, diabetes, eating disorders, and addictions, together with decreasing levels of community involvement and social trust (Sachs, 2012). All of these are examples of the dangers of focusing public policies mainly on economic growth, acquisition and material standards.

Therefore, it is extremely necessary a change in several destructive behaviour which are leading the world to financial, economic, social and environmental disasters. It is necessary to move from a paradigm based mainly on income and GDP, to a new model of development that better represents real changes in people's quality of life. However, it is almost impossible to get a change unless nations change the way they are measuring their economic performance, because what we measure affects what we do (Stiglitz, Sen and Fitousi, 2010). Thus, the world urgently needs to modify the way progress has been measured. A shift in the measurement system is a real priority. It is imperative a shift in emphasis from measuring economic growth to measuring what really matter: people's well-being and happiness (Helliwell, Layard and Sachs, 2012; Layard, 2011; Stiglitz, Sen and Fitousi, 2010). Yet there is no single measure that can

capture the complexity of the whole society. Thus, the goal is to build a set of metrics that better capture the most important factors that make a person's life worth living. The challenge is to complement our traditional economic measures of well-being with measures which reflect people's inner feelings and life evaluations.

Fortunately, most individuals agree that nations should pursue the happiness of their citizens. Novel research has supported these claims, pointing out the need for using happiness and subjective indicators to complement standard economic measures (Diener et al., 2009; Helliwell, Layard and Sachs, 2012).

A growing body of evidence has shown that a subjective experience of happiness can be objectively measured and related to the characteristics of an individual and the society. The most universally accepted standard framework for assessing happiness is through subjective well-being's measures (SWB; Diener, Emmons, Larson and Griffin, 1985).

Asking people about their subjective states provides key information for policy makers and governments (Layard, 2011; Sachs, 2012). Well-known institutions have supported this claim. For example, the Stiglitz Commission (Stiglitz, Sen and Fitousi, 2010, p.18) recommended that the statistical offices of the world should "incorporate questions to capture people's life evaluations, hedonic experiences and priorities in their own surveys". In addition, on 13/07/2011 a resolution of the United Nations (United Nations, n.d., p.1) invited Member States "to pursue the elaboration of additional measures that better capture the importance of the pursuit of happiness and well-being in development with a view to guiding their public policies".

The most important advantage of SWB measures for advising public policies is its subjective nature (Helliwell and Wang, 2012). Subjective questions allow people to talk about the quality of their own lives, reflecting their own histories, personalities and preferences. They reflect what people think is important and desirable, not what experts or governments think should define a good life. In other words, it is a direct personal judgment.

Despite the fact that economists have modern tools to contribute to the cost-benefit analysis, public economics theory needs radical changes. Public economics "fails to explain the recent history of human welfare and it ignores some of the key findings of modern psychology", in particular those that help understanding what make people happy (Layard, 2006, p.24). Therefore, in addition to standard measures of economic and social progress, governments should begin the systematic measurement of happiness and SWB to inform public policies in order to lead societies to the most desirable states. By

measuring SWB at the same time as traditional economic variables, societies can assess its real progress, and not just its material living standards (Diener, 2009).

### **Traditional social and economic indicators**

Governments need to monitor their nations' well-being. However, well-being is a complex and multidimensional construct that includes several different domains (Stiglitz, Sen and Fitoussi, 2010). Social and economic indicators are the most common *objective* measures that policy makers employ to monitor quality of life.

#### *Social indicators*

Crime rates, literacy, labour force participation, pollution, community vitality, and school performance are examples of social indicators. They allow societies to assess diverse well-being domains. However, despite providing key information for assessing the progress of a country, they have important limitations when used to evaluate peoples' and nation's well-being. Diener et al. (2009) point out the following concerns:

First, an important question arises as to when a country must decide which domains need to be monitored and which are the most important ones. This leads to further questions, such as: Who is the most appropriate person/institution to decide? How should the different domains be weighed? Which is more important, education or health? Should we spend more money on the army or in the internal police? To solve these problems, several methods have been proposed. However, no matter who takes the final decision, there will be always *external* participants involved. Therefore, some specific individuals or groups will decide, and this will always leave room for disagreements.

Second, objective lists of indicators assume that a finite set of domains should be included. However, when should governments stop collecting the indicators? Who should decide how much information we need? Are all the domains that are normally included important to overall well-being? Are some important domains consistently ignored? Who should decide about the way to measure the different domains correctly? These are all important concerns regarding objective measures.

Third, it is possible to face cultural problems. For example, not everyone values spirituality or community involvement to the same degree. If the differences are substantial, the results from national account systems will be biased and they will not properly reflect the well-being of the population.

Fourth, and finally, several measurement concerns may arise. First, despite the fact that some concepts might seem straightforward, they are several times difficult to define and measure. For example, it is easy to define corruption, but may be extremely hard to assess it. Second, the optimal level of some indicators is not always clear. For instance, how much volunteering work is needed in a society?

Most of the limitations mentioned above are due to the fact that objective indicators will always reflect a set of specific values, which belong to those involved in the measurement process. Thus, we may never achieve a perfect list and so additional criteria are needed to complement these traditional indicators. Further, SWB measures may help to complement the information provided by objective indicators, supplementing existing list-based accounts and making them more useful. Subjective measures reflect in a deep way how people evaluate their lives and the society they are living in. Such measures give us insights directly from the individual's perspective, avoiding external opinions, and providing the weights necessary to aggregate measures of quality of life. By using them, therefore, we may understand a wide range of aspects about what make someone's life worth living, which is a key advantage for policy makers and national governments (Diener et al., 2009; Helliwell, Layard and Sachs, 2012).

#### *Economic indicators*

Nations collect different kinds of economic indicators (e.g., GDP, inflation rates, employment, and poverty rates). Among them, GDP is the most widely used variable for measuring aggregate well-being. Standard economic theory hypothesizes that utility (or well-being) depends on the consumption of goods and services. Hence, if the level of income (or GDP per capita) increases, people will be able to buy more products, which in turns will lead to higher levels of utility. This is the main reason why economists assume that GDP changes reflect the progress in societies, and this measure has become the most popular economic indicator for assessing the well-being of nations (Sachs, 2012).

Despite GDP being the most widely used measure of economic activity and having been employed consistently to measure well-being, it only assesses market production. National income statistics were developed more than 70 years ago to provide a measure of the level of the market-based economic activity, but not for providing us with relevant information about how people evaluate their lives. For example, neither GDP nor the markets inform the government about people's sense of meaning or realization (Stiglitz, Sen and Fitoussi, 2010).

GDP therefore shows the following limitations when used as a proxy of wellbeing (Stiglitz, Sen and Fitoussi, 2010; Diener et al., 2009):

First, if societies face large income inequalities, GDP may not give an accurate picture. An increase in GDP does not imply that everyone is better off. For example, if inequalities increase enough relative to the increase in per capital average GDP, it is possible to observe a higher GDP, even if most citizens are worse off.

Second, objective economic indicators may not be capturing specific issues that affect peoples' quality of life. For example, GDP ignores several negative externalities related to the environment such as water and air pollution. GDP may increase through different activities that affect the environment, such as mining activities. However, when we take into account the depletion of resources and the negative effects on health and the environment, the citizens may end up worse off.

Third, different factors that affect people's quality of life positively (e.g., love, social capital, virtue and spirituality) cannot be incorporated into national economic accounts.

Fourth, there are some economic activities with economic value that have not been incorporated into the GDP accounts, but that they do improve our standard of living (e.g., housework, hobbies and volunteer work).

Fifth, black market activities are not included in the GDP accounts.

Sixth, prices may not always exist for some goods and services.

Seventh, GDP measures sometimes capture the increasing effect on the production of specific activities, but ignore the detrimental effects of such activities. For example, delinquency may increase the production of jails (and therefore may increase GDP), but it may be reflecting societal problems which mirror lower levels of well-being.

In addition to all the above-mentioned limitations, there is a key negative impact of using GDP as the main proxy for a nation's progress. Due to governments and policy makers stressing the importance of income and material standards as a pathway to foster societies' well-being, materialism has become a prominent problem for people's quality of life (Kasser and Kanner, 2004). Several studies have documented an increasing tendency to give great importance to the pursuit of extrinsic life goals (e.g., fame, money and image) instead of pursuing intrinsic aspirations (e.g., self-development, community

involvement and affiliation) as a pathway to happiness and well-being (Kasser and Ryan, 1993; 1996). However, it has been shown that this trend (called materialism) is highly correlated with several cognitive and affective problems, leading to lower levels of subjective well-being and various mental problems across nations (Dittmar, 2008; Dittmar et al., 2012).

Economists have recognized the limitations of the objective economic indicators. To tackle these problems, they have developed new and modern tools (e.g. revealed preferences and willingness to pay methods). However, these novel approaches tend to start from the same traditional assumptions (e.g., human rationality, link between utility and well-being, etc.). As a result, they show similar problems to those of the traditional indicators (Dolan, 2008).

All the information presented above leads to the conclusion that the traditional social and economic indicators need to be complemented with measures of well-being that truly represent people's own experiences. Different scholars have pointed out that subjective well-being indicators may be part of the solution (Diener et al., 2009; Helliwell, Layard, Sachs, 2012). Such indicators may provide a more accurate picture about how people evaluate their lives, thus enabling a more efficient use of the traditional measures.

### **Subjective wellbeing: Concept and dimensions**

Subjective well-being is the scientific term given to the word happiness (Diener, 2009). It reflects whether people believe and feel that their lives are desirable, satisfying and rewarding. It normally consists of three central elements: satisfaction with one's life; frequent experience of positive affect; and the absence of negative affects (Diener, Suh, Lucas and Smith, 1999). However, the Organization of Economic Co-Operation and Development (OECD, 2013) has added recently the eudaimonic dimension – a sense of purpose in life and good psychological functioning. Therefore, SWB mirrors the individual's own evaluation of his/her life and. The construct is only evaluated as "good" if people think there is a match between their own ideals and their quality of life (Diener et al., 2009).

SWB covers a wide range of individual self-reports of affects and life evaluations. These self-reports have been questioned regarding what the data mean and whether they are useful. However, research has consistently shown that not only SWB measures are reliable, valid and can be used to compare individuals, nations and cultures (Diener et al., 2009; Helliwell and Wang, 2012). They also provide unique and valuable information for advising public policies (Dolan, 2008; Diener et al., 2009; Helliwell, Layard and Sachs, 2012).

### **Using subjective wellbeing indicators to inform public policies**

Traditional economic and social indicators provide key information for government and policy makers. However, as shown above, they present several limitations to mapping people's and nations' quality of life. Fortunately, these limitations may be addressed through the incorporation of subjective measures to national accounts of well-being.

The use of SWB indicators has (at least) the following advantages when they are employed to inform public policies (Diener et al., 2009; Helliwell, 2008; Helliwell and Wang, 2012):

First, their main advantage is precisely their subjective nature. They reflect an individual's own perceptions and feelings about their quality of life, without been limited to assessments by others. They reflect what people think is important and desirable, and not what experts or governments think is a good life. They are therefore a direct personal and democratic way to evaluate people's judgments and reflect many other aspects of life that are not captured for traditional economic indicators such as GDP.

Second, as traditional objective indicators need specific criteria for weighting the different domains (e.g., to ascertain which one is the most or the least important), several concerns always arise regarding the best way to proceed. However, subjective measures avoid this important limitation. They reflect an overall evaluation of life where all the important aspects (conscious and unconscious) are already considered, and therefore they do not need external judgements. They provide a common metric that can be employed to compare outcomes across domains and across people. It is extremely useful when facing trade-offs such as having to decide between whether to spend extra funding on health or on education.

Third, and finally, they may help policy makers to modify risk behaviours (e.g., drugs abuse). Due to the fact that subjective evaluations of an individual's own life influence their behaviours, an understanding of such evaluations may help governments to lead societies toward more desirable states.

Therefore, SWB measures may be extremely useful for policy makers to complement traditional objective indicators and for addressing the limitations of the later measures. By using SWB measures, economic measures can be balanced with measures of subjective well-being in order to ensure that economic growth will lead to broad improvements across life domains, and not just to higher incomes (Diener, 2009).



## **Policy examples using subjective wellbeing measures to inform public policies**

Several examples have been found in the literature showing how subjective measures can be used in the real world to improve the quality of the policy decisions. Seven of them will be provided in this chapter.

### ***Social capital and trust***

Among the most important determinants of happiness are the quantity and quality of social relations in a community, normally referred to in the literature as social capital. They include the relationships with our family, friends and the community (Layard, Clark and Senik, 2012).

Trust plays a key role in building social capital. Therefore, trust above all between citizens, work places, and institutions strongly affects the individual and societal levels of happiness and well-being (Powdthavee, 2008; Meier and Stutzer, 2008). These are key findings to explain why life satisfaction has not risen in the US and UK, while it has improved considerably in Denmark and Italy. Levels of trust have fallen substantially over time in the former countries, but have risen in the latter ones (Layard, 2011; Layard, Clark and Senik, 2012).

Economic growth may bring several benefits to the inhabitants of a country, especially to developed nations where most of the population live in poverty (Helliwell, Layard and Sachs, 2012). However, we also know that systematic increases in GDP and globalization without the right policies to protect the people have contributed to generating detrimental effects on the quality of social relationships, to the weakening of a sense of community, and therefore negatively affecting people's well-being. Thus, it is extremely important to have the right account systems to monitor this trends and SWB may be of great help (Stiglitz, Sen and Fitoussi, 2010).

One way of monitoring these effects is through subjective measures of well-being. If societies are evaluated only in terms of GDP, it will never be possible to understand completely how individuals and societies are performing. However, if we complement traditional indicators with happiness measures we can obtain a better picture. For instance, by using subjective measures, nations can understand the key associations between trust and social capital and fear, distrust, family infidelity and reduced social engagement. Therefore, subjective measures may help governments and policy makers to protect societies against undesirable states and improve the well-being of individual, families, communities and nations (Layard, Clark and Senik, 2012).

### ***Moral debates***

How can societies decide about the legalization of prostitution and gambling? Reasonable arguments can be made for and against these issues. However, the values of individuals or small groups are always involved, which may raise several concerns regarding the appropriateness of the specific decisions and policies. In these cases, SWB indicators – which reflect people’s own values and life goals – are a democratic and fair way to decide. By asking people directly, there is no need for external judgements, and this way may provide useful insights in order to decide on the most desirable actions for policy makers to follow (Diener et al., 2009).

### ***Learning about the danger of materialism and advertising***

Every day we are bombarded with thousands of messages telling us how important income and material possessions are for our own happiness and well-being (Kasser and Kanner, 2004). However, researchers have consistently found that the higher the materialism – a strong relative importance attached to material rewards – the higher the individual’s mental problems and the lower people’s life satisfaction, vitality and positive emotions (Dittmar et al., 2012; Kasser and Ryan, 1993; 1996).

Advertising plays a key role in this problem. Despite the fact that some advertising provides valuable information, a lot of them make people to need things that they previously didn’t need. The result is making individuals want more and be less satisfied with what they have. These effects are especially dangerous for children below the age of 12 (Layard, Clark and Senik, 2012). Parents face intolerable pressures to buy, and children start from very early ages to think that they need material rewards to be happier. Every country should learn from these findings in order to implement public policies to protect young populations (Layard, 2009).

According to standard economic theory, consumption is one of the key elements for economic growth and progress. Therefore, if advertising and consumer culture increase people’s spending, it would lead to a higher level of GDP, and well-being. However, again, if societies evaluate their well-being solely through economic indicators, they will never be able to see the whole picture. In the case of materialism, it would be almost impossible to understand the risk associated with giving great importance to money and economic indicators without using SWB measures.

Thus, learning about the dangers of materialism through subjective measures may help governments to take better decisions (Diener et al., 2009). By complementing standard economic indicators with subjective measures of

quality of life, governments may evaluate different policies to ameliorate the negative effects of strong material aspirations on people's well-being.

### ***Health***

Resources are limited and medical care always needs to be rationed, through different mechanisms. A common strategy to allocate scarce resources is through traditional economic cost-benefit or cost-effectiveness analyses.

Health economists have developed several methods to evaluate the quality of life associated with different diseases. These methods often follow economic approaches to assess nonmarket goods. *Revealed preferences* are one such method. It assesses the amount of money that an individual currently spends in the market to correct his/her health problems. However, because market behaviour cannot always be observed for avoiding health-related problems, the *willingness to pay* method has become one of the most popular (Diener et al., 2009; Dolan, 2008). Within this framework, economists recommend measuring health improvements by asking the general public "to imagine themselves in different states of health and then to think about how many years of life they would give up or what risk of death they would be willing to accept in order to be in full health" (Dolan, 2008, p.69). However, several problems arise with these strategies. First, who is the appropriate respondent for the surveys (general public, medical practitioners, or people affected by disease)? Different participants may provide completely different answers, many of them based only on stereotypes or misinformation (Diener et al., 2009). Second, preferences are not a very good guide to future experiences. When answering, participants will be focused on their state of health. Yet even if people have a health problem, there are many other aspects that determine their quality of life and that will not be affected by a disease (e.g. family, friends, work, etc.). People are not able to see these other aspects when answering the questions (Dolan, 2008). Therefore, despite the useful information that these modern *hypothetical decision methods* may provide, their limitations need to be addressed. To solve these problems, Dolan (2008) suggests looking for more direct measures of experiences, such as SWB measures. The procedure will start, therefore, by asking participants firstly to describe their health; then, to control for some factors that are known to be associated with SWB (income, marital status, etc.); finally, to estimate the effect that different health states have on subjective well-being. Once the effect of the disease on people's life satisfaction is estimated, it may be possible to calculate how much income would be necessary to give people with a disease the same life satisfaction as people without that illness. Groot, Maassen and van den Brink (2007) suggest that if the disease could be treated for less than the estimated amount of money, society would be facing a good trade-off. This method can also be employed to analyse different

treatments for the same disease. Methods that show the highest increase in SWB (keeping the costs constant) should be selected.

Therefore, through assessing the improvement in quality of life produced for different interventions, SWB measures may provide a useful metric to evaluate health spending, allowing policy makers to allocate resources efficiently.

### *Externalities*

The production and exchange of market goods may affect – positively or negatively – people not directly involved in the transactions. This effect is called *externality* (Ayres and Kneese, 1969). Its basic causes are that “whereas the costs and benefits of economic activity are social, the laws of private property bestow the privileges and benefits on particular individuals while imposing only a part (and often a small part) of the social costs on these same individuals” (Hunt and d’Arge, 1973, p.151).

Economists have developed several methods to value the externalities effects, but none of them are perfect (Hunt and d’Arge, 1973). For instance, suppose that a government is planning to build a new airport. How can the effects of airport noise on the quality of life of people living in the affected area be evaluated? A traditional economic method normally employed is to compare the prices of houses located in areas with different aircraft noise, under the assumption that price differences would reflect the change in quality of life. However, these market-based assessments have several limitations. For example, price markets must adjust rapidly to allow valid comparisons, but housing market prices tend to move very slowly due to market restrictions, price controls, or other factors. Second, buyers may underestimate the effect of airport noise, and so prices may not reflect appropriately the negative effect on peoples’ quality of life. Decisions are based on perceived impact rather than on objective standards. Therefore, despite the fact that some traditional economic methods may help to understand peoples’ prediction about the noise, they fail when estimating the real effects.

Fortunately, happiness research has addressed these limitations and SWB measures may be employed to complement traditional procedures.

In a key study, Van Praag and Baarsma (2004) compared self-reported life satisfaction measures of people living in areas with different airport noise. They showed that it is possible to assess the monetary value of the airport noise damage as the sum of hedonic house price differentials and a residual cost component. The residual costs component was estimated from the effect on life satisfaction. This novel method not only provides an accurate estimate of the effect of noise, based on experience utility (Kahneman, Kahneman and Tversky,

2003), but also gives policy makers important information about different possible alternatives to compensate people affected by the externalities. For example, it is possible to determine the amount of money to be paid. The procedure is simple. First, the effect of noise on life satisfaction needs to be evaluated. Then, using the known association between income and life satisfaction it would be possible to determine a reasonable amount of money to compensate the neighbours in the affected area.

Helliwell and Huang (2011) proposed the *compensating differentials* method to estimate externalities effect. They recommend to start by assessing the effect of the externalities on life satisfaction. Then, using the well-known association between income and life satisfaction, to measure the equivalent change in income due to the external effects. This procedure may be extremely useful for policy makers trying to decide how to compensate the population for economic activities where they are not directly involved.

Frey, Luechinger and Stutzer (2004) also showed that it is possible to assess the influence of different government policies (e.g., building a highway) even if the market does not provide the necessary information. They proposed to measure the impact of the government actions on the quality of life of the affected area through SWB indicators. After evaluating the latter effect, they compared the effect of money on SWB in order to estimate the final effect of the noise externality on income.

Finally, Luechinger and Raschky (2009) studied how to apply SWB measures for assessing natural disasters, They compared this method with traditional methods to evaluate the losses caused by floods disasters in 16 European countries between 1973 and 1998. They found that life satisfaction data provided enough information to be used as an additional tool in the area of non-market valuation.

In summary, several public goods and services (e.g., better roads, day centres for the elderly, public squares, and parks) produce costs or benefits that are not easily captured through traditional economic and social indicators, but they may improve or diminish the citizens' quality of life substantially. Therefore, measuring cost and benefits through their change in people's SWB may help policy makers to set up different options in order to mitigate the negative effects of externalities, and to allocate resources to the most convenient cost-effective alternative (Diener et al., 2009).

### ***Unemployment***

For those who lose their jobs, unemployment has serious financial implications. Under the economic assumption that income is related to utility, job loss should

lead to lower levels of well-being. However, the main impact of unemployment on well-being goes beyond the loss of income (Stiglitz, Sen and Fitousi, 2010). It produces a loss of social status, self-esteem, workplace social life, and confidence, and diminishes other factors that matter for a good quality of life (Layard, Clark and Senik, 2012).

Working has non-pecuniary benefits such as sharing experiences and being in contact with people outside the family, having goals and purposes that transcend the individual, personal status and identity, and the enforcement of activity (Jahoda, 1988). Unemployment destroys all these benefits (Layard, Clark and Senik, 2012).

Unemployment also produces detrimental effects not only on family members, but also in communities where people live (Diener et al., 2009). For instance, Catalano, Dooley, Novaco, Wilson and Hough (1993) found that unemployment may increase the violence in communities.

Unemployment also matters for employees. The effects of extreme job insecurity and of unemployment have a serious detrimental effect on those who are still working (Green, 2011). It has been found that the loss to the other employees is twice as great as the loss to the unemployed themselves when the whole population is talking into account (Helliwell and Huang, 2011).

In a meta-analysis, Paul (2005, in Diener et al., 2009) found that unemployment was strongly associated with mental health problems, and that the losses cannot be only by the loss of money. Paul's meta-analysis also confirmed that the negative effects are greater for working-class employees, for countries with higher income inequalities, and for nations with lower levels of unemployment protection. This study gives important recommendations for public policies aimed at protecting people's well-being (Diener et al., 2009).

Therefore, standard economic measures regarding unemployment are incomplete as they focus solely on the loss of income. For example, reforms in the work place may lead to market efficiency and economic growth, but may also lead to lower job satisfaction and therefore to a reduction in SWB (Stiglitz, Sen and Fitousi, 2012). However, incomplete traditional measures may be improved by complementing them with SWB indicators. SWB measures may give us a more accurate picture of the problems associated with the job loss, advising policy makers about how to determine the best alternatives to help people recover from unemployment, both psychologically and economically. Studying peoples' judgements about their lives may give us important insights into the underlying process that regulates the association between well-being

and unemployment, in order to create policies to protect workers, their families and their communities from the negative effects of job loss (Diener et al., 2009).

### ***Tax structures***

Governments require resources in order to take care of the responsibilities that citizens have given to them (e.g. education, health, justice). Taxation is the most common source of income. However, the question about what is the best tax structure always arises. For example, which is the best structure? A progressive or a proportional tax system? Decisions are normally based on empirical and theoretical evidence regarding the maximum amount of money that governments can obtain through different tax systems (Stiglitz, 1988). However, it has been shown that a tax burden also has psychological effects on people's well-being (Cullis and Lewis, 1997; Layard, Clark and Senik, 2012).

Happiness research tends to support progressive tax structures, with two arguments (Layard, 2009; 2011). First, we know that life satisfaction is positively correlated with income. However, we also know that every additional dollar brings less and less life satisfaction (decreasing marginal utility). Thus, the same taxation produces less cost to higher incomes than to lower ones. Second, progressive taxes are justified due to the negative effect that the pursuit of higher levels of income has on well-being. Decreasing aspirations and materialism may lead to a happier society.

Thus, public policies need to pay attention to SWB measures when deciding on the most appropriate tax structure. SWB may help policy makers to set up the optimal tax structure that will maximize the well-being of the people. The loss of well-being may be calibrated for different level of taxation to find the taxation level that will maximize SWB in a nation. Using SWB measures may help to collect money in an efficient manner at the same time as supporting economic growth and equitable distributions (Diener et al., 2009).

### **Concerns regarding subjective wellbeing measures**

In this chapter we have highlighted the advantages of using SWB measures to inform public policies. However, several clarifications need to be made.

First, just as traditional objective social and economic indicators present limitations, so do SWB measures (Dolan, 2008). Therefore, although it is extremely important to understand more about happiness, such measures will be of little help unless they can be combined with other sources of relevant information (Helliwell and Wang, 2012). For example, the OECD's recent accounting for well-being included many other variables (apart from SWB indicators) to monitor the progress in societies. Thus, "Objective and subjective

indicators of wellbeing are both important” (Stiglitz, Sen and Fitousi, 2010, p.15).

Second, SWB is based on people’s values and ideals (Diener et al., 2009). Therefore, an important concern regarding its use relates to the possibility that individuals’ preference may be manipulated (Diener et al., 2009). For example, if underprivileged people are not aware about the existence of better life conditions, they will not have a preference for these objectively better states. If preference does not exist, both groups may show similar SWB levels even though richer citizens may have better objective living standards than poor people. Therefore, a negative incentive may have governments to manipulate people’s preferences and/or knowledge. This is another reason to argue that SWB cannot be the only method for evaluating public policies. The best approach is to consider objective and subjective indicators in order to protect societies from the above-mentioned possibilities of preference manipulation.

Third, it has been stated that people may answer surveys and self-reports strategically in order to influence public policies. Individuals may change their responses in order to attract the attention of government and resources (Diener et al., 2009). This concern is common in behavioural science research, because people may change their opinions to influence the results of the studies. However, there are some methods to avoid such problems. For example, carefully developed surveys may hide the main purpose of the study. In addition, if policy makers regularly test a large number of participants, it appears to be difficult for small groups to succeed in manipulating surveys (Diener et al., 2009).

Despite the above-mentioned limitations, SWB concerns are different from the social and economic measures problems. Further, it is extremely important to complement them with the existing traditional well-being indicators in order to obtain a more accurate picture of the societies concerned (Diener et al., 2009; Dolan, 2008).

## **Conclusion**

Modern nations usually employ standard social and economic indicators to allocate limited resources and to measure societies’ well-being. Traditional economists and policy makers have assumed that all the activities in societies (consumption, production, externalities, etc.) may be measured in terms of monetary cost and benefits, but that also the objective indicators – especially GDP – reflect the desirable aspects which a nation wants to achieve. However, two main concerns arise. First, not all market activities may be measured in terms of money. Second, despite the fact that traditional measures of progress provide useful information to government, business, communities, and



individuals, they show only a few aspects of the quality of life for people and nations (Diener et al., 2009; Stiglitz, Sen and Fitousi, 2010).

Therefore, standard measures of progress need to be complemented with measures that better represent changes in quality of life: measures of people's wellbeing and happiness (Helliwell, Layard and Sachs, 2012; Layard, 2011; Stiglitz, Sen and Fitousi, 2010). Novel research has supported these claims, pointing out the need for using happiness and subjective indicators to complement standard economic measures (Diener et al., 2009; Helliwell, Layard and Sachs, 2012). By complementing classical objective indicators with subjective measures of the quality of life, policy makers can obtain a more accurate picture of the well-being of both individuals and societies (Diener et al., 2009).

Several examples have been provided to demonstrate that SWB indicators may be extremely useful for governments when trying to decide the best policy actions (Diener et al., 2009). Thus, governments should start systematically collecting a wide range of measures reflecting peoples' SWB in order to lead nations to the most desirable estates.

## References

- Ayres, R. U. and Kneese, A. V., 1969. Production, consumption, and externalities. *The American Economic Review*, 59(3), 282-297.
- Catalano, R., Dooley, D., Novaco, R., Wilson, G. and Hough, R., 1993. Using the ECAdata to examine the effect of job layoff on violent behaviour. *Hospital and Community Psychiatry*, 44, 874-887.
- Cullis, J. G. and Lewis, A., 1997. Why people pay taxes: from a conventional economic model to a model of social convention. *Journal of economic psychology*, 18(2), 305-321.
- Diener, E. and Seligman, M. E. P., 2004. Beyond money: toward an economy of well-being. *Psychological Science in the Public Interest*, 5, 1-31
- Diener, E., 2009. *The collected works of Ed Diener*. The Netherlands: Springer.
- Diener, E., Emmons, R., Larsen, J., & Griffin, S., 1985. The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Diener, E., Helliwell, J. and Kahneman, D. eds., 2010. *International differences in well-being*, Oxford, Oxford University Press.
- Diener, E., Lucas, R., Schimmack, U. and Helliwell, J., 2009. *Well-being for public policy*. Oxford: Oxford University Press.

- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. E., 1999. Subjective wellbeing: three decades of progress. *Psychological Bulletin*, 125, 276-302.
- Dittmar, H., 2008. *Consumer culture, identity, and well-being: the search for the 'good life' and the 'body perfect'*. European Monographs in Social Psychology Series, Hove & New York: Psychology Press.
- Dittmar, H., Bond, R., Kasser, T. and Hurst, M., 2012. The Relationship between Materialism and Personal Well-Being: A Meta-Analysis. Manuscript submitted for publication.
- Dolan, P., 2008. Developing methods that really do value the 'Q' in the QALY'. *Health economics, policy and law*, 3(1), 69.
- Dolan, P., Peasgood, T. and White, M., 2008. Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29(1), 94-122.
- Easterlin, R. A., 1974. Does economic growth improve the human lot?. *Nations and Households in Economic Growth*, 125.
- Easterlin, R. A., 1995. Will raising the incomes of all increase the happiness of all? *Journal of Economic Behaviour & Organization*, 27(1), 35-47.
- \_\_\_\_\_. 2003. Explaining happiness. *Proceedings of the National Academy of Sciences*, 100(19), 11176-11183.
- Frey, B., Luechinger, S. and Stutzer, A., 2004. *Valuing public goods: the life satisfaction*
- Green, F., 2011. Unpacking the misery multiplier: How employability modifies the impacts of unemployment and job insecurity on life satisfaction and mental health. *Journal of health economics*, 30(2), 265-276.
- Groot, W., Maasen and van den Brink, H. M., 2007. Optimism, pessimism and the compensating income variation of cardiovascular disease: A two-tiered quality of life stochastic frontier model. *Social Science & Medicine*, 65(7), 1479-1489.
- Helliwell, J. F. and Huang, H., 2011. Well-being and trust in the workplace. *Journal of Happiness Studies*, 12(5), 747-767.
- Helliwell, J. F., 2008. *Life satisfaction and quality of development*. National Bureau of Economic Research, working paper No.14507.
- Helliwell, J.F, Layard, R. and Sachs, J. eds., 2012. *World Happiness Report*. New York: The Earth Institute, Columbia University.
- Helliwell, J.F, Layard, R. and Sachs, J., 2012. Some policy implications. In: J.F. Helliwell, R. Layard and J. Sachs, eds. *World Happiness Report*. New York: The Earth Institute, Columbia University.
- Helliwell, J.F. and Wang, S., 2012. The state of world happiness. In: J.F. Helliwell, R. Layard and J. Sachs, eds. *World Happiness Report*. New York: The Earth Institute, Columbia University.

- Hunt, E. K. and d'Arge, R. C., 1973. On lemmings and other acquisitive animals: Propositions on consumption. *Journal of Economic Issues*, 337-353.
- International Energy Agency, 2012. *Tracking Clean Energy Progress*, Energy Technology Perspectives 2012 excerpt as IEA input to the Clean Energy Ministerial, viewed 30/04/2012, from [http://www.iea.org/papers/2012/Tracking\\_Clean\\_Energy\\_Progress.pdf](http://www.iea.org/papers/2012/Tracking_Clean_Energy_Progress.pdf)
- Jahoda, M., 1988. Economic recession and mental health: Some conceptual issues. *Journal of Social Issues*, 44(4), 13-23.
- Kahneman, D., 2011. *Thinking, fast and slow*. Farrar, Straus and Giroux.
- Kahneman, D., Kahneman, D. and Tversky, A., 2003. Experienced utility and objective happiness: A moment-based approach. *The psychology of economic decisions*, 1, 187-208.
- Kasser, T. and Kanner, A. D., 2004. *Psychology and consumer culture: The struggle for a good life in a materialistic world*. Washington, DC, APA.
- Kasser, T. and Ryan, R.M., 1993. A dark side of the American dream: Correlates Of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410-422.
- \_\_\_\_\_. 1996. Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 280-287.
- Layard, R., 2006. Happiness and public policy: a challenge to the profession. *The Economic Journal*, 116(510).
- \_\_\_\_\_. 2009. Afterword: The greatest happiness principle: its time has come. In: S. Griffiths and R. Reeves, eds. *Well-being: How to lead the good life and what government should do to help*.
- \_\_\_\_\_. 2011. *Happiness: Lessons from a New Science*. 2<sup>nd</sup> ed. New York: The Penguin Press.
- Layard, R., Clark, A. and Senik, C., 2012. The causes of happiness and misery. In: J.F. Helliwell, R. Layard and J. Sachs, eds. *World Happiness Report*. New York: The Earth Institute, Columbia University.
- Luechinger, S. and Raschky, P. A., 2009. Valuing flood disasters using the life satisfaction approach. *Journal of Public Economics*, 93(3), 620-633.
- Meier, S. and Stutzer, A., 2008. Is volunteering rewarding in itself? *Economica*, 75(297), 39-59.
- OECD, 2011, *OECD Better Life Initiative*. Compendium of OECD well-being indicators, Organization of Economic Co-Operation and Development.
- \_\_\_\_\_. 2013, *OECD Guidelines on Measuring Subjective Well-being*, Organization of Economic Co-Operation and Development Publishing.

- Powdthavee, N., 2008. Putting a price tag on friends, relatives, and neighbours: Using surveys of life satisfaction to value social relationships. *Journal of Socio-economics*, 37(4), 1459-1480.
- Sachs, J., 2012. Introduction. In: J.F. Helliwell, R. Layard and J. Sachs, eds. *World Happiness Report*. New York: The Earth Institute, Columbia University.
- Stiglitz, J. E., 1988. *Pareto efficient and optimal taxation and the new welfare economics*.
- Stiglitz, J. E., Sen, A. and Fitoussi, J., 2010. *Mismeasuring Our Lives: Why GDP Doesn't Add Up*, New York, N.Y.: New Press
- United Nations, n.d. *UN General Assembly Resolution A/65/L.86*, view on 02/05/2013 from <http://www.un.org/depts/dhl/resguide/r65.shtml>
- Van Praag, B. and Baarsma, B. E., 2004. Using happiness surveys to value intangibles: the case of airport noise. *The Economic Journal*, 115(500), 224-246.