Measuring Subjective Wellbeing: A Summary Review of the Literature

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Abstract: The following paper provides an overview of the growing literature on subjective wellbeing or more commonly known as “happiness”. Traditionally, wellbeing has been identified with a single objective dimension: material progress measured by income or GDP. However, it is now widely accepted that the concept of wellbeing cannot be captured solely by GDP: wellbeing is multidimensional encompassing all aspects of human life. One approach to measure multidimensional wellbeing is to use objective indicators to complement, supplement or replace GDP. Another approach is through subjective measures: asking people to report on their happiness and life satisfaction. The paper presents the main findings from the literature on the economic and non-economic determinants of happiness. Although happiness is important in terms of economic theory and policymaking, the paper also shows that happiness indicators possess some limitations as measures of wellbeing. First, should happiness be the ultimate human goal? Second, are happiness indicators a good guide for policymaking? Finally, are happiness measures considered good quality indicators?

Keywords: Happiness; Wellbeing; Indicators; Quality of life.

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I. Introduction

“We must acquire a life style which has as its goal maximum freedom and happiness for the individual, not a maximum Gross National Product.” (Nordhaus and Tobin 1973, p. 509 quoting Paul Erlich)

The above quote could have been written today—it was included instead, about 35 years ago in a pioneering study of what became known as estimates of “green GDP.” It shows that our concern about the limitations of economic growth as a benchmark of wellbeing is not new. But the fact that it could have been written today also shows how important the topic is: to think through the meaning and measurement of wellbeing.

Wellbeing is a notion that people and policymakers generally aspire to improve. However, it is an ambiguous concept, lacking a universally acceptable definition and often faced with competing interpretations.\(^1\) Wellbeing is generally viewed as a description of the state of people’s life situation (McGillivray 2007, p. 3).

Often, wellbeing has been equated with the material position of a country, measured by its Gross Domestic Product (GDP). However, GDP does not capture all the aspects of human life and it was increasingly recognized that new measures were needed. New indicators and datasets were created to capture social and environmental aspects that GDP failed to incorporate. This included indicators measuring education achievements, health outcomes and environmental degradation. More recently, economists have transcended the boundaries of their field incorporating findings from psychology and behavioral sciences into wellbeing research. This has led to an exploding literature on subjective wellbeing, or more commonly referred to as “happiness”.

The following paper explores the growing literature on subjective wellbeing. Part II briefly reviews the main clusters of wellbeing measures, “objective” and “subjective” indicators. It analyses GDP as a wellbeing measure and then moves on to multidimensional measures. Part III analyzes the meaning, importance and determinants of subjective wellbeing. Parts IV and V discuss the main findings from the literature on the economic and non-economic determinants of happiness. Part VI offers some perspectives from developing countries. As a conclusion, part VII offers some limitations on the use of happiness indicators as measures of wellbeing.

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\(^1\) McGillivray and Clarke (2006, p. 3) point out that concepts such as “quality of life, welfare, well-living, living standards, utility, life satisfaction, prosperity, needs fulfillment, development, empowerment, capability expansion, human development, poverty, human poverty, land and, more recently, happiness are often used interchangeability with well-being without explicit discussion as to their distinctiveness.”
II. Measuring Wellbeing

Wellbeing is difficult to define but it is even harder to measure. In general, wellbeing measures can be classified into two broad categories: *objective* and *subjective* measures. The first category measures wellbeing through certain observable facts such as economic, social and environmental statistics. People’s wellbeing is assessed indirectly using cardinal measures. On the other hand, subjective measures of wellbeing capture people’s feelings or real experience in a direct way, assessing wellbeing through ordinal measures (McGillivray and Clarke 2006; van Hoorn 2007).

Traditionally, wellbeing has been identified with a single objective dimension: material wellbeing measured by income or GDP. It then expanded to such measures as income per capita and poverty. The link between income and wellbeing rests on the assumption that income allows increases in consumption and consumption increases utility. Yet there is disagreement on how increases in consumption represent improvements in wellbeing. Moreover, GDP has its measurement flaws and does not capture all the aspects of human life. Thus, instead of relying on a single dimension, wellbeing measurements have progressed to encompass broader dimensions such as social and environmental aspects, and human rights (Sumner 2006). It is now widely accepted that the concept of wellbeing is multidimensional: encompassing all aspects of human life (McGillivray 2007).

a. Objective Measures: One-dimensional Wellbeing

*GDP as a Measure of Utility*

While it is often asserted that economists are primarily concerned with GDP levels and growth, it is important to step back a little and remember that what matters most as an “objective function” is people’s wellbeing. A fundamental assumption of standard economic analysis is that people’s wellbeing increases with consumption (of food, clothing, housing, entertainment, and many other goods and services). It is primarily due to this assumption that GDP—all that is produced, and therefore either consumed or invested by a country in a year—is so often taken as the yardstick of wellbeing and progress. The fact that GDP is the sum of consumption and investment should, by itself, give an indication that GDP may not be the ideal yardstick of wellbeing. If large increases in GDP take the form of growth in investment rather than consumption, then GDP itself does not necessarily mean improved wellbeing.

In more technical language, consumption is the most important (often, the only) argument in the utility function used by economists in order to capture the extent to which consumption translates into the wellbeing of an individual. The distinction between consumption and utility may seem like a technicality, but it is important for reasons that will become apparent later.

Is it valid to assume that more consumption leads to more utility? More systematic evidence on the limitations of using GDP as a yardstick for wellbeing come from more direct indicators of quality of life (Easterlin and Angelescu 2007). Some of these
indicators are objective (increases in nutrition or life expectancy increase quality of life, while increases in crime rates or congestion decrease it), others subjective (self-reported status of wellbeing by people in surveys of happiness, life satisfaction, or prevalence of positive moods).

As far as objective indicators go, growth does usually and eventually translate into higher consumption of goods and services. But most studies suggest that the general conclusion is that while cross-country data shows a correlation between GDP per capita and objective indicators of quality of life (for example, richer countries tend to have higher life expectancy), time series analysis provides very little support for GDP per capita causation of improvements in the objective indicators (for example, in a large number of countries the turning point towards sustained economic growth antecedes by many decades sustained improvements in life expectancy).

A very comprehensive and systematic cross-country and time-series study by William Easterly of the relationship between GDP growth and improvements in objective indicators of wellbeing found that there was only robust indication that GDP growth was the prime cause for the improvement in three out of possible 81 indicators (calorie intake, protein intake, and telephones) (Easterly 1999). In addition, the evidence shows that growth comes accompanied with objective indicators of “bads” that lower quality of life, such as higher levels of pollution and, beyond a certain income threshold, dietary habits that increase obesity. Thus, growth sometimes brings with it the “consumption” of aspects that tend to lower wellbeing.

**GDP Measurement Flaws**

GDP has several measurement flaws. For example, some activities that are included in the GDP estimates are difficult to calculate, for example government services. As these services are given to consumers at a subsidized price, their output cannot be valued at market prices. Moreover, GDP does not take into account changes in asset values which influence a person’s consumption patterns. Externalities such as pollution or the depletion of natural resources are not counted. Finally, GDP does not take into account non-market activates, such as housework or illegal activities, and the value of leisure (Giovannini, Hall and d’Ercole 2007).

**b. Objective Measures: Multidimensional Wellbeing**

Despite GDP’s flaws, given that its data is readily available and reliable, it is still widely used as a proxy for wellbeing (McGillivray and Clarke 2006). However, there is widespread agreement that wellbeing is multidimensional, that it encompasses all aspects of human life. Thus, different approaches have been taken to go beyond the GDP measure, conceptualizing wellbeing in a more holistic way.

One approach has been to construct objective measures to complement GDP, offering social and environmental information beyond the economic stance. Since the 1970s many non-economic indicators have been created to complement GDP. Indicators in areas such
as education, health and nutrition, environment and empowerment and participation have been elaborated to complement GDP. However, the quality and availability of this data makes inter-country comparisons difficult (Sumner 2006; McGillivray 2007).

A second approach is to adjust GDP by monetizing different aspects that are not counted in the GDP measurement, for example, social and environmental factors (McGillivray 2007). The problem with some of these adjustments is that it is difficult to quantify and monetize some of these additional factors. One adjustment to GDP is to allow purchasing power parity among countries. Another further adjustment to GDP is to include differences in income distribution, for example, by providing weighted shares of growth by population groups. As income per capita is a national average, it does not provide the real income picture of the different population subgroups or regions. A third more complex adjustment is for example, to take into account social and environmental factors such as the value of leisure or the damage of pollution. Nordhaus and Tobin (1973) elaborated a Measure of Economic Welfare (MEW) which had three adjustments to GNP: they classified GNP expenditures into consumption, investment and intermediate; added the services of consumer capital, leisure and household work and corrected for “disamenities of urbanization”, subtracting for negative externalities such as pollution and congestion. A more recent adjustment has been made by the World Bank with its estimates of wealth and adjusted net saving (or genuine savings). Adjusted net savings measures the savings rate in an economy after taking into account investments in human capital, depletion of natural resources and damage caused by pollution.²

Yet a third approach to go beyond GDP is to replace GDP by constructing composite measures that would capture the multidimensional aspect of wellbeing. These measures are usually constructed using different components, weighted in some way to form a single index. One of the first attempts to construct a composite index of wellbeing was in 1979 when David Morris from the Overseas Development Council created the Physical Quality of Life Index (PQLI). This index combined infant mortality, life expectancy and adult literacy (McGillivray 2007; Stanton 2007; Sumner 2006). Another example is the well-known and debated Human Development Index (HDI) created in 1990, combining income per capita (in PPP terms), life expectancy at birth, adult literacy and education enrollment ratios.³ Although far from a perfect measure of welfare, some of the HDI’s strengths lie on its simplicity and transparency (UNDP 2007).

Although indices are useful information tools, there are many criticisms and caveats to be taken into account when confronting such measures (McGillivray 2007). Indices tend to oversimplify a very complex reality that cannot be captured in a single index. Moreover, the methodologies used to construct these indices and assessments are not always transparent. Critiques range from the choice of indicators used, to the issue of collinearity amongst indicators, the weights assigned to different categories and the quality of data used to construct the index. Moreover, criticism is also directed on the use of the same methodology for industrial and developing countries alike, when both groups of countries have distinct characteristics and place different weights on issues. Furthermore, indices

² See World Bank’s explanation at: http://go.worldbank.org/3AWKN2ZOY0
can be subject to manipulation by politicians, becoming more of “creative accounting” exercises than objective measures. Finally, indices’ ranks tend to “glorify” the same countries year after year and then are used to “name and shame” others without adding any value (Bandura 2005).

III. Subjective Wellbeing Measures (SWB)

Another approach to measuring multidimensional wellbeing is through subjective measures: self reported happiness and life satisfaction. For many centuries the subject of happiness was the realm of theologians and philosophers but recently it transcended into social sciences, first in psychiatry and since 1950 into mainstream social sciences and economics (Easterlin 2004).

a. The Meaning of Subjective Wellbeing

McGillivray and Clarke (2006, p. 4) state that “subjective wellbeing involves a multidimensional evaluation of life, including cognitive judgments of life satisfaction and affective evaluations of emotions and moods.” Some economists use the phrase “subjective wellbeing” as a synonym for “happiness” but in psychology, happiness is a narrower concept than SWB.

Bruni and Porta (2007, p. xviii) provide some clarification on the differences between happiness and SWB. They point out that “Psychologists distinguish among 1) life satisfaction which is a cognitive element 2) affection, the affective element and 3) subjective wellbeing (SWB), as a state of wellbeing, synthetic of long duration which includes both the affective and cognitive component.” Other explanations which they provide: SWB is comprised by four components i) pleasant emotions ii) unpleasant emotions iii) global life judgment (life evaluation) and iv) domain satisfaction (marriage, health, leisure etc). Happiness on the other hand, is a narrower concept than SWB and different from life satisfaction: although both happiness and life satisfaction are components of SWB, life satisfaction reflects individuals’ perceived distance from their aspirations while happiness results from a balance between positive and negative affect. In this approach, SWB is a synonym of “being happy” (the Aristotelian approach of happiness as eudaimonia) whereas concepts such as “satisfaction” and “happiness” are considered “feeling happy” (a hedonic approach) (Bruni and Porta 2007, p. xviii).

Despite these differences, economists have used the terms “happiness” and “life satisfaction” interchangeably as measures of subjective wellbeing (Easterlin 2004). There is no clear consensus on what “happiness” means. Therefore, instead of trying to define happiness from an outside perspective, economists try to capture it through other means. According to Frey and Stutzer (2002) there are two extreme concepts of happiness (subjective and objective happiness) and ways to capture them and one in the middle—experience sampling measures.
Subjective happiness asks people how happy they feel themselves to be. They result from surveys where people are asked to self-report about how happy they feel, all things considered. Richard Easterlin, Bruno Frey, and others pioneered the economic analysis of happiness data. Today there are several surveys that evaluate happiness. One type of question asks “Taken all together, how would you say things are these days: would you say that you are very happy, pretty happy or not too happy?” (For example, the General Social Surveys). The second type of question asks people to rate their life satisfaction, on a scale from 0 to 10 (for example, the World Values Survey—WVS).4

Objective happiness is a physiological approach which aims to capture happiness through the measurement of brain waves. Yet a third way to capture happiness (experience sampling measures) is through sampling people’s moods and emotions several times a day for a prolonged time (Frey and Stutzer 2002, pp. 4-6).

b. Why is Happiness Relevant for Economic Research and Policymaking?

Happiness can guide policymaking by studying its determinants. For example, certain policies that affect employment and inflation can be evaluated with respect to how they change happiness levels. One can analyze the trade-off in terms of happiness between inflation and unemployment and thus opt for a policy that minimizes the loss of happiness. Institutional conditions can have an impact on happiness, so increasing transparency, accountability and social cohesion maybe desirable from the point of view of increasing subjective wellbeing (Frey and Stutzer 2002).

Happiness research can illuminate economic theory, adding new knowledge. It can advance on the theory of how people make choices and what drives the utility function. Happiness research is also useful to challenge existing views, such as that non-economic variables have no impact on self-reported satisfaction or that work is considered a burden for people (Frey and Stutzer 2002, 2007; Layard 2007).

c. Determinants of Happiness

4 The WVS also asks the question: “Taking all things together, would you say you are: Very happy, Rather happy, Not very happy, or Not at all happy.” [www.worldvaluessurvey.org] The Eurobarometer Survey has questions on life satisfaction and happiness. It asks “On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead? And “Taking all things together, how would you say things are these days - would you say you're very happy, fairly happy, or not too happy these days?” [www.gesis.org/en/data_service/eurobarometer/standard_eb_trend/indexframe_trend.htm]

The Gallup World Poll conducted in 130 countries has elaborated an index of wellbeing based on the following questions: “Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. If the top step is 10 and the bottom step is 0, on which step of the ladder do you feel you personally stand at the present time? Just your best guess, on which step do you think you will stand on in the future, say 5 years from now? Were you treated with respect all day yesterday? Did you smile or laugh a lot yesterday? Did you learn or do something interesting yesterday? Did you experience the following feelings during a lot of the day yesterday?” [www.gallup.com/poll/102259/Denmark-New-Zealand-Canada-Rank-Highest-WellBeing.aspx]
What makes people happy? Although people may define happiness in their own terms, in general people mention similar things that make them happy (Easterlin 2002). Surveys conducted in groups of countries have found that the factors that people mostly mention are everyday life issues, in an extent, that they control (Cantril 1965; Easterlin 2004; Frey and Stutzer 2002). Material conditions and consumption are most prominently mentioned in these surveys. A fulfilling family life, such as being married, having children and getting along with relatives is also an important part. Personal and family health is another determinant. Job satisfaction and personal character are also mentioned. Although international and domestic issues (politics, war, and others) are rarely mentioned as determinants for wellbeing, studies have found that political institutions have an influence on people’s happiness (Frey and Stutzer 2002).

In order to simplify the analysis, we adapt Frey and Stutzer’s organization (2002), whereby the determinants of happiness are divided into economic (i.e. income, unemployment, inflation and inequality) and non-economic (i.e. personality, socio-demographic and institutional factors). The next sections explore the main findings from the happiness literature.

IV. Economic Determinants of Happiness

a. Happiness and Income

Happiness and Income across Time: The Easterlin Paradox

Does higher income lead to more happiness? In 1974 Easterlin showed that, for the United States, individually self-reported happiness increased with individual income, although there were rapidly “decreasing happiness returns” to increases in income. The cross-individual relationship between income and happiness was found to be far from linear, and essentially flat for high levels of income. Although this is consistent with the diminishing returns to increases in consumption that are typically assumed for theoretical utility functions, there is debate on this topic. Thus, Easterlin found clear evidence of a positive effect of income on happiness at the individual level, in-line with the assumptions of standard economic theory—but in contrast with the findings of objective measures of quality of life (Easterlin 1974). However, Easterlin also found in the same study that aggregate national happiness over time was essentially flat, seemingly irresponsive to sustained increases in GDP per capita. This finding is often known as the “Easterlin Paradox,” in that growth in per capita income is not reflected in increasing happiness.

Is the Easterlin Paradox exclusively a U.S. phenomenon? Easterlin’s own update (Easterlin 1995) of his original study as well as numerous studies since then have shown that happiness is essentially flat in most developed countries (Blanchflower and Oswald 2000; Frey and Stutzer 2002). The case of Japan is often used in the literature to counter the hypothesis that a country’s happiness increases as a country makes progress from being a developing country towards becoming a high income country. Japan is a rare case
of a country for which long-term happiness data is available, starting from the late 1950s when it was a relatively poor country with income per capita below $3,000. Japan’s GDP per capita rose more than five-fold from 1958 to 1991, without any change in reported happiness (Easterlin 1995).

Happiness and Income at one Point in Time

What happens when we compare happiness indicators with different income levels across countries at one point in time? Cross-country evidence suggests that the relationship between economic development and happiness is curvilinear: as income per capita increases, happiness increases steeply up to a threshold of $10,000 (Inglehart 2000). From then onwards, levels of happiness are very weakly correlated with further increases in income per capita.

This “threshold” hypothesis states that above some critical level of GDP, income has no effect on happiness. Some supporters of this view explain that income improves happiness only when basic needs are met. But beyond a certain level, income does not matter for happiness (Veenhoven 1991). Inglehart (2000) points out that societies at early stages of development put a very high price on economic growth. However once they move beyond a certain threshold, they demand better quality of life with such concerns as environmental protection, friends and a good family life (Clark, Frijters and Shields 2008). Thus, under this theory, the relationship between income and happiness is curvilinear.

However, other authors challenge this curvilinear relationship. Prolonged time series are unavailable for developing countries but looking again at the case of Japan raises doubts about the curvilinear relationship (Esterlin 1995). He takes the example of Japan, which was a very poor country in 1958, although it was beyond subsistence levels. It advanced from income levels that were lower than or equal to those prevailing in many of today’s developing countries, without impacting subjective wellbeing. In the words of Easterlin, “…the magnitude of Japan’s subsequent advance in living levels does encompass a transformation from a ‘subsistence level’ of consumer durables to plenitude, with no impact on subjective wellbeing” (Easterlin 1995, pp. 40-41).

An important aspect of cross-country evidence is that they include countries in the Former Soviet Union (FSU) which are outliers: they report much lower levels of subjective wellbeing than poorer countries (such as India and Nigeria). Deaton (2008a) shows that even though economic conditions have improved in FSU countries (12 of the world’s 20 fastest-growing economies between 2000 and 2003 are in this group) life satisfaction scores are very low. He finds that “low satisfaction ratings from high-growth countries in these regions largely account for the seemingly paradoxical finding that overall across the 132 nations studied, income growth is negatively related to life

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6 See also Easterlin (2005b) for a critique of generalizing diminishing marginal utility of income for the cross sectional studies.
satisfaction” (Deaton 2008a). In another study Deaton (2008b) finds that the threshold effect explanation of income and happiness is not accurate: the correlation between income and life satisfaction is very high but remains positive and substantial, even among rich countries.

**Responses to the Easterlin Paradox**

As mentioned earlier, the Easterlin Paradox refers to the fact that, despite the increase of income over time, people have not reported increasing levels of happiness. What are some possible explanations for Easterlin’s findings?

**Happiness is based on relative rather than absolute income:** One of the key arguments for the Easterlin Paradox is that happiness depends on relative consumption, in addition to absolute consumption. That is, how much one consumes relative to what the others consume may influence happiness. This was suggested by Easterlin in his seminal 1974 paper as a possible solution to his own paradox, and has become the subject of a large literature that broadly suggests that happiness does depend in part on relative consumption. Raising everyone’s income does not raise everyone’s happiness because when compared to others, incomes have not improved (Easterlin 1995).

One recent study for the U.S. by Dynan and Ravina (2007, p. 230) finds that “… results are consistent with the view that happiness is higher the greater one’s income is relative to one’s neighbors, with the effect concentrated among those with above-average incomes,” that is, relative consumption matters more at higher levels of income. Another recent and innovative paper chooses to measure happiness, or lack thereof, using suicide deaths in the U.S. It shows that interpersonal income differences appear to be a strong driver of suicides in the U.S. (Daly, Wilson and Johnson 2007).

**Happiness adapts to changes in income:** A second type of argument is that people are very poor at predicting ex-ante what will make them happy ex-post (Gilbert 2006). People tend to exaggerate the positive impact of events they think will make them happy as well as the negative effect on happiness of tragic events. Evidence shows that lottery winners are made momentarily happier, but then adjust over time to close to the level of happiness prevailing before the windfall. On the other hand, people that became paraplegic in the short run become unhappy but over time revert to levels of happiness close—yet lower, to those prior to the event that led them to become paraplegic (Brickman, Coates and Jannoff-Bulman 1978).

In psychology, “set-point theory” suggests that individuals have a fixed set-point of happiness in their life which is determined by personality and genetics. Life events have an initial impact on people’s happiness, for example they are happier when they get married or saddened when widowed, but on the lifespan the individual adjusts to these events and returns to his or her given “set-point”. This means that people “adapt” to a large extent to changes in their environment and that they are not very good at “affective forecasting”—the technical term for the Gilbert effect described above (Easterlin 2003).

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7 See also the discussion in Luttmer (2004).
There is some controversy in terms of how much people adapt. Evidence suggests that people completely adapt to income—to pecuniary factors—but there is incomplete adaption to other life events (marriage, unemployment, or widowing) or non-pecuniary factors (Easterlin 2005a). In the case of income, this means that at the beginning people might increase their happiness due to the increase in income but then get accustomed to the increase so happiness remains invariant. An explanation for income adaptation is that people have changing aspiration levels (Frey and Stutzer 2002). The pleasure provided by additional material goods and services (that extra income buys) wears off and this makes people strive for higher aspirations. In consequence, Frey and Stutzer (2002, pp. 78-79) note that: a) the upward adjustment of expectations makes people want to accomplish more and more and they are never satisfied b) wants are insatiable c) greater opportunities provided by higher income may generate higher aspirations and lower subjective wellbeing d) people tend to think they were unhappy in the past and expect to be happier in the future.

Norms and values: Another argument is perhaps more fundamental, but still less studied in terms of how it relates to happiness. It relates to norms, values, and other determinants of happiness that are not captured exclusively by consumption as the sole argument of a utility function. People are happy when they feel they are doing “the right thing,” whether the right thing is determined by ethics, principles, religion, custom, or social context. George Akerlof (2007) has shown how the incorporation of norms in standard utility analysis—by adding arguments to the utility function—dramatically affects the predictions of standard macroeconomic results. Just to provide one concrete illustration, one of the important behavioral determinants is related to altruism, the “warm glow” we feel from giving—or the utility we derive by giving some of our consumption away, a field of study that James Andreoni, among others, has been exploring.

Omitted variables: There are studies that investigate the Easterlin Paradox by incorporating omitted variables that could have accompanied income growth (such as hours worked, pollution and crime) and that a standard model predicts may reduce utility. Di Tella and MacCulloch (2008) take this approach. Using data for 350,000 people in 12 OECD countries during 1975-1997, they find that this strategy deepens the Easterlin puzzle, it does not resolve it. Given the evolution of these variables over time, happiness should have risen even more. They explain that adding the actual impact of other variables besides income leads one to expect happiness levels that are even higher, making the unexplained trend in happiness data larger, than when just changes in income are considered. In other words, introducing omitted variables only worsens the “income-without happiness” paradox.

Rebuttals to the Easterlin Paradox: A very recent paper by Stevenson and Wolfers (2008) contests the Easterlin Paradox altogether. They analyze multiple datasets spanning recent decades and a broader array of countries. Consistent with earlier findings, they conclude that wealthier societies are happier than poorer societies and wealthier members of a given country are happier than the poorer members. But they also find that societies
get happier over time as they become richer. They re-analyze the data, finding that happiness has in fact risen in Europe while the case of the U.S. remains a puzzling outlier. Moreover, they show that as more data has become available (such as extended national time series and additional observations from new countries) evidence has started to accumulate that happiness rises with GDP.

b. Happiness, Unemployment and Inflation

The literature on happiness has expanded to explore how other economic variables such as unemployment, inflation and business cycles relate to happiness. These studies can be an important guide for policymakers. For example, when considering monetary and fiscal policies that will impact inflation and unemployment, they can analyze the magnitude of their effects in terms of reduced happiness.

According to Di Tella and MacCulloch (2006) standard macroeconomic theory assumes that social welfare is reduced both by a higher rate of inflation and by a higher rate of unemployment. This literature has been subject to both a fundamental critique and a question about magnitudes. The fundamental critique is that nominal aspects of an economy like inflation should be of no consequence to rational people (Di Tella and MacCulloch 2006). ⁸

Despite this critique, there is evidence that unemployment and inflation reduce people’s happiness, consistent with welfare theory (Clark and Oswald 1994; Oswald 1997). Inflation—apart from corroding purchasing power—creates feelings of reduced morale and national prestige and exploitation (Di Tella and MacCulloch 2008). Unemployment, aside from the pecuniary loss, is associated with costs such as loss of self esteem, depression, anxiety, and social stigma (Frey and Stutzer 2002). These studies have compared the trade-off between unemployment and inflation in terms of happiness, that is, how much unemployment is equal to a percentage point of higher inflation, or vice versa. It is found that unemployment affects happiness more than inflation, thus the “misery index”, which adds up the rate of unemployment and inflation, distorts the real picture. Life satisfaction is not captured exactly by a simple linear misery function, \( W = W(\pi + U) \). Unemployment is found to have a larger weight (Di Tella, MacCulloch and Oswald 2001).

Di Tella, MacCulloch and Oswald (2001) analyze data from Eurobarometer which surveys 264,710 people living in 12 European countries during 1975-1991 and from the General Social Survey for 26,668 people in the United States in 1972-1994. They find that reported wellbeing is strongly correlated with inflation and unemployment. Individuals are asked in surveys how happy they are with life, and the paper demonstrates that their answers move systematically with their nation’s level of unemployment and inflation. The authors find that unemployment creates more unhappiness than inflation: the tradeoff between unemployment and inflation is 1.66, that is, a percentage point of unemployment creates 1.66 times more unhappiness than a percentage point of inflation.

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⁸ See Shafir, Diamond and Tversky (1997), for a discussion on “money illusion”, the tendency of people to think in terms of nominal rather than real monetary values.
Wolfers (2003) reaches similar results: he finds robust evidence that high inflation and unemployment lowers perceived wellbeing. Moreover, greater macroeconomic volatility also undermines wellbeing. Using data from 500,000 people in 16 European countries for the period 1973-1998 he shows that—after controlling for other variables—both inflation and unemployment reduce happiness. However, his estimates show that the public seems to be more averse to unemployment than in Di Tella, MacCulloch and Oswald’s (2001) calculation. Wolfers attains an unemployment-inflation trade-off close to 5, that is, a percentage point of unemployment causes almost 5 times more unhappiness than a percentage point of inflation. 9

c. Happiness and Inequality

Moreover, there is some evidence that inequality is negatively related with happiness. Alesina, Di Tella and MacCulloch (2001) find that there is a large, negative and significant effect of inequality on happiness in Europe but not in the U.S. They also find that the distaste for inequality is concentrated in some groups in Europe, mainly the left and poor. In the United States inequality generated unhappiness is only for a sub-group of rich, left-wing people. Two explanations are presented: the first is that Europeans prefer equal societies. The second is that the U.S. is a more mobile society, thus the poor know that their current situation is not fixed. The authors favor the hypothesis that inequality affects European happiness because their societies are characterized by lower social mobility than the U.S.—since they did not find preference for equality in Europe amongst the rich or the right.

Graham and Pettinato (2002) analyze subjective wellbeing in 17 Latin American countries and Russia and they find that relative income differences have important effects on how individuals assess their wellbeing. Those in the middle or lower middle of the income distribution are more likely to be dissatisfied than are the very poorest groups. Also, volatility in income flows can have negative effects on perceived wellbeing, even among upwardly mobile individuals.

V. Non-economic Determinants of Happiness

In this section, non-economic determinants of happiness such as socio-demographic and institutional factors are reviewed and main findings from different studies are presented. Studies have found that socio-demographic factors affect happiness and people have an incomplete adaptation to life events. Recent research on institutional variables—such as social capital and democracy—are also found to be associated with happiness. 10

a. Socio-demographic Variables

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9 For a related study see also, Di Tella, MacCulloch and Oswald (2003).
10 See also, Frey and Stutzer (2002); Heliwell (2003); and van Praag, Frijters and Ferrer-i-Carbonell (2003).
Although socio-demographic variables might not be as relevant from an economic standpoint (they cannot be easily controlled, such as age, gender, and marriage) they have an effect on happiness and thus should be included as controls in regression analysis to avoid generating biases in the estimations (Frey and Stutzer 2002).¹¹

More fundamentally, these socio-demographic factors take us back to the discussion of set point theory and adaptation. Many studies have found that people completely adapt to changes in income yet they have an incomplete adaptation to other life events; that is their level of happiness is permanently affected by things such as a severe injury, widowhood and divorce, amongst others (Easterlin 2004).

Health

Contrary to set-point theory, adverse health changes have a lasting negative effect on happiness and adaptation is incomplete to deteriorating health (Easterlin 2004). In the case of severe changes in health, although humans have very strong resilience and can cope (Gilbert 2006, pp. 166-68), people that have suffered a terrible or accident or illness report lower happiness levels than their comparison group (Brickman, Coates and Jannoff-Bulman 1978; Easterlin 2003; 2004; Mehnert and others 1990).¹²

What about health in general over the life cycle? What do persons report about their health? Easterlin (2003) argues that if adaptation were complete to adverse changes in health, then the life course trend in self-reported health should be flat and would also be flat if persons implicitly evaluate their health only by comparison with others of their age. But what do the numbers show? Self-reported health declines throughout the life course. Moreover, he finds that throughout the life cycle those who say they are less healthy also say they are less happy. In cohorts spanning ages from the 20s through the 70s, happiness is on average lower, the poorer the state of self reported health. The conclusion is that adverse health changes have a lasting and negative effect on happiness, and that there is less than complete adaptation to deteriorating health (Easterlin 2003).¹³

However, Deaton (2008b) sends a word of caution on using health satisfaction measures as indicators of wellbeing in international comparisons. He examines the interactions of life satisfaction, health satisfaction from Gallup’s World Poll (132 developing and industrialized countries) in 2006 in conjunction with objective health measures. He shows that health satisfaction is low in Eastern Europe and the countries of the former Soviet Union, which can be partially linked to their recent decline in life-expectancy. However, he also explains that there have been much larger declines in life-expectancy in other parts of the world associated with the HIV/AIDS epidemic (for example, Africa), and people in those

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¹¹ Personality factors—such as genetic predisposition to be happy or people with an optimistic outlook—are also important determinants but are not covered in this note. See Frey and Stutzer (2002, pp. 49-52).

¹² Brickman, Coates and Jannoff-Bulman (1978, p. 924) state: “The results for accident victims appear to be less supportive of adaptation level theory. The accident victims did not tend to take more pleasure in ordinary events and rated themselves significantly less happy in general than controls.”

¹³ Other studies such as Blanchflower and Oswald (2007b), relate blood pressure problems with decreased happiness.
countries do not express the same levels of dissatisfaction with their health as in Eastern Europe and the FSU.

*Family Life*

Studies have also found that marriage raises happiness, across countries. Married people have a higher subjective wellbeing than singles, divorced, separated or widowed. Why is this so? Some explanations are that marriage provides additional sources of self esteem, support and companionship (Frey and Stutzer 2002).

Blanchflower and Oswald (2000) examine wellbeing data on 100,000 randomly sampled Americans and Britons from the early 1970s to the late 1990s and find that a lasting marriage is worth $100,000 per annum when compared to being widowed or separated. They also find that reported wellbeing is greatest among women, married people, the highly educated, and those whose parents did not divorce. Also, second marriages are less happy. Diener and others (2000) using a sample of 59,169 persons in 42 nations, found that relations between marital status and subjective wellbeing to be very similar across the world, taking cultural aspects into account. Heliwell (2003) also finds that married people have higher levels of subjective wellbeing.

All these studies show that people do not fully adapt to their circumstances (as singles, widowed, divorced) as their level of happiness is lower than married people. If they adapted to their circumstances fully, they would not aspire to a happy marriage. Easterlin (2005a) further corroborates this point in a new study. He does a cohort analysis of 1978 and 1994 survey responses of the good life and finds that adaption is incomplete regarding marriage aspirations. He notes (2005a; pp. 517-518): “Especially noteworthy is the fact that among persons who have been single their entire lives and are ages 45 and over, more than four in ten cite a happy marriage as part of the good life as far as they specifically are concerned. If these respondents had typically adjusted their marital aspirations to accord with their actual status, one would hardly expect such a sizeable proportion still to consider a happy marriage to be desirable for them personally. Similarly, among women for whom the prospect of remarriage is quite low (those widowed, divorced, and separated and 45 years and older) almost 6 in 10 say that they view a happy marriage as part of the good life. In marked contrast to the economic domain, adaptation seems to occur only to a limited extent with regard to marriage aspirations.”

Easterlin (2005a) also analyses aspirations in terms of quantity of children, as economists compare the demand for children with the demand for consumer durables. He asks whether having more children increases the desire for family size commensurately (similarly when buying more big-ticket consumer goods, the desires for such goods tend to grow to about the same extent). He does not find the same parallel: “…while income growth over the life cycle is accompanied by persistent growth in aspirations for big ticket consumer goods, income growth is seemingly not associated with growth in desires for either the number or quality of children.” (Easterlin 2005a, p. 519).
When it comes to age, the general belief is that older people are unhappier than younger people. However, recent studies have found that happiness is U-shaped through the life cycle: high amongst the young, reaching a minimum at around 30 or mid 40s (depending on the study) and then lifts back up again (Blanchflower 2008; Blanchflower and Oswald 2007a; Helliwell 2003; Oswald 1997).

The problem with the U-shaped argument is that earlier generations may have been born in particularly good or bad times, thus there may be omitted cohort effects. Thus, Blanchflower and Oswald (2007a) design a test that makes it possible to allow for different birth-cohorts. Using data on approximately 500,000 Americans and Europeans, they find a robust U-shape of happiness in age. Ceteris paribus, wellbeing reaches a minimum during middle age (mid to late 40s). They provide some potential answers to this U-shaped relationship. One possibility is that individuals learn to adapt to their strengths and weaknesses, and in mid-life suppress the aspirations of their youth. Another is that cheerful people live longer than sad people, and that the U-shape in a way traces out in part a selection effect. A third is a comparison effect: people see their friends die so they value what they have during the remaining years.

b. Institutional Variables

There is also evidence that shows that institutions are strongly correlated, across countries, with happiness. The deepness of democracy and the extent of political, economic, and personal freedom correlate strongly with reported happiness across countries (Frey and Stutzer 2002). However, these cross-country correlations should not be taken as a proof of causality.

A study of 6,000 residents of Switzerland shows that taking other things constant, individuals are happier the more developed the institutions of direct democracy and government decentralization in their area of residence (Frey and Stutzer 2000). Veenhoven (2003) studies how freedom in nations can affect the happiness of citizens. He finds that freedom does not always breed happiness. He shows that freedom is positively related to happiness among rich nations, but not among poor nations. Opportunity for free trade is positively related to happiness in poor nations, but not in rich nations. Similarly, the relation between economic freedom and happiness is strongest in nations where capability to choose is lowest.

Other studies take into account variables such as social capital and quality of institutions. For example, Helliwell (2003) analyses measures of subjective wellbeing drawn from three successive waves of the World Values Survey (the first wave in 1980–1982, the second in 1990–1991, and the third in 1995–1997) totaling 87,806 observations and 46 different countries. He finds a positive association between the degree of connectedness—measured by the participation to voluntary organizations—and subjective wellbeing. He also finds a positive association between responsibility—measured as the rejection to cheat on taxes—and subjective wellbeing. In a later paper, Helliwell (2004) also finds
that more social capital and higher levels of trust are also associated with lower national suicide rates. He finds a strong negative correlation between national average suicide rates and measures of life satisfaction. He concludes that social capital does appear to improve wellbeing, whether measured by higher average values of life satisfaction or by lower average suicide rates.

VI. Perspectives from Developing Countries

Most of the studies on happiness have been centered on industrialized countries, as the data is readily available for lengthy time periods. But what do the people living in developing countries self-report in terms of happiness and wellbeing? To this important question, there is still very little that we know systematically to provide a definitive answer. For developing countries, long-run series comparable to those available for developed countries are inexistent.

But recent studies provide bits of somewhat “kaleidoscopic” information. A pioneering study was launched by the World Bank about 10 years ago to hear the voices of the poor, providing narratives of how people living in poverty perceived their own conditions and the deprivations they faced (Narayan and others 2000a;b;c). There are also recent surveys in each region (such as Afrobarometer, Arab Barometer, Asia Barometer and Latinobarometro) that capture people’s attitude on a range of issues, especially on democracy and development. 14

a. Studies on Happiness and Income

Some insights can be drawn from looking at cross-country evidence and at recent results for some important developing countries. For example, results are available for China for the period between 1994 and 2005. During this time, real income per capita in China increased by more than 2.5 times. Consumption of goods increased substantially: ownership of color TVs jumped from 40% to more than 80% of all households, and of a telephone from 10% to 63% (Kahneman and Krueger 2006, p. 15). But reported happiness did not increase, and the percentage of people who reported satisfaction decreased almost 20 percentage points: from close to 80% in 1994 to above 60% in 2005. At the same time, the share of unsatisfied people almost doubled, from slightly more than 20% in 1994 to close to 40% in 2005 (Kahneman and Krueger 2006, p. 16). Thus, it seems that the “income without happiness paradox” is also present in China.

Another study for 17 Latin American countries (using the Latinobarometro data for 1997-2000) and Russia (using the Russian Longitudinal Monitoring Survey RLMS for 1995-1998) shows that these countries share similar patterns as in industrialized countries. For example, wealth is positively correlated with happiness and happiness exhibits a U-

14 See http://www.globalbarometer.net. According to Globalbarometer, the difference between surveys such as WVS and the regional “barometer” surveys is that WVS captures more permanent cultural values while the regional surveys under Global Barometer track emerging political and economic attitudes and on a tighter schedule (every 2-3 years) than the WVS (every 4-5 years).
shaped relationship with age. Being married has a positive relationship with happiness in Latin America just like the developed countries but no relationship in Russia. Latin America does not exhibit gender effects, while in Russia, men are happier than women. The self employed are unhappier in Latin American in contrast to developed countries (Graham and Pettinato 2002, Ch. 4).

b. Personal Assessments

Recent time-series evidence has become available from public opinion surveys in different regions. Surveys from Africa, the poorest region of the world, undertaken by Afrobarometer contain short series (start only in 2000) so it is difficult to speak about trends (Bratton and Cho 2006). But the results are particularly important because since the year 2000 economic performance in the continent has actually been quite good—in absolute terms—especially when compared with the preceding two decades or so. Although assessments of personal living conditions are low to begin with, views of “present living conditions” follow a gradual and steady downward curve, falling monotonously from 31% circa 2000, to 30% circa 2002, to 27% circa 2005. The fall of 4 percentage points is within the sampling error, and cannot therefore be read as a trend. But at least it is valid to assume that perceptions of living conditions in Africa have not improved, despite strong economic growth.

Does this imply that life is becoming more difficult for Africans? The Afrobarometer “indexes of lived poverty” records the frequency with which survey respondents report shortages of basic human needs like food, water, medical care, and cash income at least once during the previous year. The most commonly reported shortage is cash income, which always affected three-quarters or more of all Africans interviewed. This aspect of poverty was followed by shortages of medical care, food, and clean water for household use, consistently in that order. In most cases, shortages of basic human needs were somewhat more frequent circa 2005 than circa 2000. Medical care shortages showed no change during this period. But food and income shortages rose by 3 percentage points and water shortages by 6 points. It is therefore safe to project a continental trend of increasing poverty in relation to access to clean water supplies, but for all other aspects of poverty, it can only be confirmed that average levels are probably holding steady.

c. Household Surveys and Micro Studies

Insights for developing countries also come from household surveys and micro studies, the analysis of which has been pioneered by Angus Deaton and his colleagues at Princeton University, and by Esther Duflo and Abhijit Banerjee, at MIT (Banerjee, Deaton and Duflo 2004; Banerjee and Duflo 2007). They find that the poor generally do not complain about either their health or about life in general, even though they do feel poor. Their levels of self-reported happiness and self-reported health levels are not very low. However, and consistently with the message that emerges from the Afrobarometer

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data on “lived poverty,” the poor do say they suffer from stress, both financial and psychological. In Udaipur, India about 12% say that there has been a period of one month or more in the last year in which they were so “worried, tense, or anxious” that it interfered with sleeping, working, and eating. Levels of stress reported by the poor in South Africa and Udaipur are close to each other, but much lower than those reported in the U.S.

The most frequently cited reason for stress is health problems (29% of responses), followed by lack of food and death (13% each). Over the last year, in 45% of the extremely poor households in Udaipur (and 35% of those living under $2 a day) adults had to cut the size of their meal at some point during the year and in 12% of them, children had to cut the size of their meals. In the extremely poor households under $1 per day, 37% report that, at some point in the past year, the adults in the household went without a meal for an entire day. Cutting meals is strongly correlated with unhappiness, again consistent with Afrobarometer data that suggests that poverty is often perceived most intensively when there are shortages of food.

In conclusion, the poor of the world do not see themselves as being extremely unhappy. This can be explained, in part, by the “adaptation” effect that emerges from the insights that psychology is bringing to the analysis of the determinants of happiness. They do indicate, however, that they are under severe stress, much more so than what is reported by the U.S., where stress levels are often assumed to be high due to the demands of a competitive market economy. Further, despite strong economic growth over the last few years in the world’s poorest region, Africans do not feel better off—and may even be worse off than before the outset of growth. Certainly there has not been much progress from their point of view. This again reinforces the message that growth is important, but far from the only requirement for progress.

VII. Conclusion: Some Limitations of SWB

Although happiness indicators can shed new light for economic research and policy, as a wellbeing measure, it has also received a number of criticisms. We can conclude that both objective and subjective measures are important for measuring wellbeing; none should be used exclusively to make a complete assessment of human welfare.

a. Is Happiness the Ultimate Goal in Life?

Frey and Stutzer (2002) provide an overview of different positions on happiness. Some people believe happiness should be the ultimate goal of life and be the explicit aim of government intervention.16 Other people argue that happiness is only one ingredient of the good life which should be accompanied by human development and justice. Others include companionship and freedom in life’s aims.

16 See, for example, the writings of Layard (2005; 2007).
Amartya Sen has supported happiness as an important aspect of human life. Yet he argues that there are aspects of life that are more important and should come first, such as freedom, justice or rights (Bruni and Porta 2007, p. xxxiii). Thus, happiness is useful as a well-being measure but should be combined with other objective indicators and values. “... Consider a very deprived person who is poor, exploited, overworked and ill, but who has been made satisfied with his lot by social conditioning (through, say, religion, political propaganda, or cultural pressure). Can we possibly believe that he is doing well just because he is happy and satisfied? Can the living standard of a person be high if the life that he or she leads is full of deprivation? The standard of life cannot be so detached from the nature of the life the person leads.” (Sen 1991, pp. 7-8).

b. **Happiness as a Wellbeing Indicator**

Related to the previous point, if happiness is taken as the ultimate goal in life and the sole wellbeing measure, this can be dangerous from a policy standpoint. Consider Deaton’s findings (2008b) on life satisfaction and health outcomes. He finds that HIV prevalence appears to have little or no effect on the fraction of the population reporting dissatisfaction with their health. Thus, if policymakers would be guided by life or health satisfaction reports, then they might be compelled not to act on this urgent issue. And, if they observe the time series of happiness (available for some countries), they might conclude that people in general are satisfied with life, so be complacent to change policies.

Moreover, as Giovannini, Hall and d’Ercole (2007) point out the indicator used to measure happiness is a bounded variable—people are asked to rank their satisfaction on a scale from 0 to 10 or 1 to 10—thus if a society scores very high up, let us say 9 or 10, then, will the policymaker have any incentives to enact any type of policy?

c. **The Quality of Happiness Indicators**

Just as single objective measures (like GDP) or composite indices (such as the HDI) have received numerous criticisms on their measurement and methodology, happiness indicators have some problems in terms of their reliability, validity and comparability across nations. However, these problems can be mitigated by careful survey design or appropriate measurement methods (Frey and Stutzer 2002; van Hoorn 2007).

Van Hoorn (2007) defines the *reliability* of an indicator as its overall quality: its consistency and its ability to give the same results in repeated measurement. For subjective wellbeing, minor differences in circumstances and technical features of the questionnaire affect the reported level of SWB. The author points out that reliability can be observed with the test-retest correlation of the specific measure under scrutiny. In general, the reliability of SWB measures is substantially lower than other microeconomic variables (such as personal income). Studies show that the more advanced measures, such as multi-item questionnaires, produce more reliable SWB scores (Krueger and Schkade 2008).
In terms of validity, a measure has validity if it captures the concept it intends to capture (van Hoorn 2007). The challenge of SWB measures is that they are sensitive to minor life events. However, the literature has found that the errors generally seem to be of a random rather than a structural nature, and thus do not imply that the measure is systematically biased. Using large enough samples or an appropriate survey research design can address possible validity problems.

SWB face yet another challenge with respect to cross-national comparisons. Culture and language can impact SWB ratings which will introduce biases in country-level scores. Although culture plays a role, there are various measurement methods to deal with these distortions, for example the development of a social desirability scale. Overall, cultural differences have been found to be not as strong as to make cross-country comparisons of happiness insignificant (Diener, Diener and Diener 1995; Frey and Stutzer 2002).

References

[www.thenewpublicfinance.org/background/measuring.pdf]


