HAPPINESS AND PUBLIC POLICY: WHAT WE KNOW AND WHAT WE NEED TO KNOW FURTHER

Akhmad Akbar Susamto

Department of Economics, Faculty of Economics and Business,
Universitas Gadjah Mada

Abstract

This paper reviews findings from empirical researches on happiness and evaluates the extent to which these findings can be synthesized to guide economic policy. Unlike other studies on the similar topic, this paper focuses on the connections between empirical findings, the way they are interpreted, and the policies that have been recommended. From the review, it can be concluded that despite sound arguments calling for government involvement, more information is needed to determine the appropriate policy to improve the happiness of the society. Directions for future empirical researches are therefore suggested.

Keywords: Happiness; Life satisfaction; Economic policy

JEL Classification:

This paper is a part of my thesis at the Department of Economics, Monash University. I am grateful to my supervisors Y.K. Ng and V.L. Mui for their comments and suggestions on the very earlier draft of the paper. Any shortcomings and errors are my own responsibility.

HAPPINESS AND PUBLIC POLICY: WHAT WE KNOW AND WHAT WE NEED TO KNOW FURTHER

Provided that happiness or life satisfaction data are valid, reliable and comparable (see e.g. Frey and Stutzer, 2002a, 2002b; Kahneman and Krueger, 2006; Di Tella and MacCulloch, 2006), economists have linked them to a range of variables in both micro and macroeconomic contexts. This is particularly noticeable for researches considering happiness or life satisfaction as a dependent variable and seeking to establish factors that possibly affect the subjective wellbeing of the society.

The results have, in turn, provoked debates of whether government should be involved to help improving happiness. On the one hand, it has been argued that more government involvement is needed (e.g. Frank, 1999, 2005; Layard, 2005a, 2005b; Ng, 1987, 2005). On the other hand, there is doubt over the effectiveness of government involvement to advance wellbeing (e.g. Coyne and Boettke, 2006; Wilkinson, 2007; Johns and Ormerod, 2007).

This paper aims to review findings from empirical researches on happiness and evaluate the extent to which they can be synthesized to judge economic policy. Thus, instead of directly joining the above policy debate, this paper takes another approach and focuses on the connections between empirical findings, the way they are interpreted, and the policies that have been recommended. From the review, it can be concluded that, despite sound arguments calling for government involvement, much more information is needed to determine the appropriate policies to improve the happiness of the society.

The remaining of this paper is organized as follows. Section one summarises empirical findings on happiness. Section two provides interpretations that have commonly been given to the findings. Section three presents the recommended policies, whereas in section four, critical points about such policies are highlighted. Finally, section five provides the conclusion.

1. Findings on Happiness

The use of happiness or life satisfaction data is established on the belief that measures obtained from survey answers are not only valid and reliable (see e.g. Frey and Stutzer, 2002a, 2002b; Kahneman and Krueger, 2006 for summary), but also comparable between individuals (Di Tella and MacCulloch, 2006). In other words, data derived from answers given by respondents to questions like, "Taken all together, how happy would you say you are: very happy, quite happy, not very happy, or not at all happy?" or, "All things considered, how satisfied are you with your life these days?" are approximately correct to represent their true wellbeing and, as parts of a large number of sample, can be compared to the answers of others.

Empirical researches conducted by economists on subjective wellbeing relate happiness or life satisfaction mostly to income or economic growth (e.g. Easterlin, 1995; Oswald, 1997; Blanchflower and Oswald, 2004). The standard question is whether the former associates positively with the latter, in cross-sectional and time-serial analyses. In term of comparison focus, these researches capture at least two different classes, namely individuals within the same country and individuals across different countries or nationalities.

For individuals within the same country, the most common finding of the researches is what so called “happiness paradox”. Though at a particular moment, people with more income are, on average, happier than those with less, but overtime, increasing the income of all members of these groups does not necessarily increase their happiness (e.g. Easterlin, 1974, 1995; Oswald, 1997; Blanchflower and Oswald, 2004). Once a certain minimum threshold has been achieved, the effects on happiness of income growth become very weak or even insignificant.

Easterlin (1974) provided the first evidence. Using the United States AIPO Poll data between 1946 and 1970, he reported positive cross-sectional relationships between happiness and income. Yet, despite tremendous economic growth over the period, he found almost no change in average happiness, implying a weak time serial relationship between the two variables.

Repeating his research with General Social Survey (GSS) data, Easterlin (1995) finds that, during 1972 to 1990s, the effect on happiness of economic growth is also nearly insignificant. Using the same GSS data source for 1972 to 1998 period and Eurobarometer data from 1975 to 1986, Blanchflower and Oswald (2004), even find that despite continuous economic growth and rising material prosperity, happiness is flat in Britain and drop slightly in the United States.

For individuals across different countries, it has been found that people living in a richer economy are, on average, happier than their counterparts who live in a poorer area (Inglehart 1990; Veenhoven, 1991; Frey and Stutzer, 2002a). This is applicable even after the international differences in the cost of living are controlled using exchange rates and purchasing power parities. Higher income offers extra opportunities and options to those living in richer economy, of which individuals in poorer countries must relinquish at least to a certain level.

In consonant with income, empirical researches on happiness or life satisfaction also recurrently relate subjective wellbeing to unemployment. Results from both single (e.g. Clark and Oswald, 1994; Winkelmann and Winkelmann, 1998; Woittiez and Theeuwes, 1998) and cross-country (e.g. Blanchflower, 1996, 2001; Di Tella, MacCulloch and Oswald, 2001) studies show that unemployed individuals are indeed significantly less happy than their counterparts holding an assured job. In Clark and Oswald (1994), joblessness is evenly described as more depressing than any other single negative characteristic such as separation or divorce.

The scope to which unemployment persists in an economy and the extent to which job-loss is experienced, however, seem to have effects on individuals' unhappiness. Using 1991-1996 British Household Panel Survey (BHPS) data, Clark (2003) finds that unemployed persons living in high-unemployment regions are less unhappy than those living in other areas. Similarly, using 11 waves of German Socio-Economic Panel data, Clark, Georgellis and Sanfey (2001) find that the negative happiness effects of current unemployment are weaker for those with higher levels of past unemployment than those with less experience in being without a job.

The other variable repeatedly analyzed in the researches is inflation. Keeping socioeconomic characteristics and unemployment rate constant, it was found that inflation associates negatively with happiness (e.g. Di Tella, MacCulloch and Oswald, 2001, 2003; Wolfers, 2003; Blanchflower, 2007). However, when it comes to the choice between unemployment and inflation, the results suggest that the former is worse for happiness than the latter. Using figures from World Database of Happiness, Blanchflower (2007) for instance estimates that one percent increase in unemployment rate lowers happiness by at least one and a half times as much as a one percentage point increase in the rate of inflation.

The relationship between happiness and institutions, while limited, has also been examined (e.g. Frey and Stutzer, 2000; Dorn et al., 2005). Using 6,000 residents of Switzerland interview data, Frey and Stutzer (2000) provide evidence that "formal" institutions in the form of democracy and the degree of government decentralization have positive and significant effects on individual happiness. In the same way, with 1998 International Social Survey Programme (ISSP) data covering 28 countries, Dorn et al. (2005) report that democracy relates significant and positively to happiness. Fischer, Bjornskov and Dreher (2008), nonetheless, suggest that these results may differ across phases of a country's economic development. Just as Veenhoven (2000) ever indicates that economic freedom is more strongly correlated with happiness in poor countries with a low general education level, whereas freedom in politics contributes to happiness in rich countries with a high level of education.

2. Interpretations

Modern economics takes it for granted that wellbeing rises monotonously with economic achievements. Individuals are, for example, assumed to have higher utility if they earn a thousand dollars instead of 500 dollars income or drive a new series of BMW instead of an old lemon-used car. Nonetheless, as shown in findings above, the relationship between happiness and economic achievements may not be so simple. Two most common explanations attributed to this issue are that people are concerned more on relative comparison rather than absolute condition (e.g. Easterlin, 1974, 1995, 2001; Oswald, 1997) and that they adapt to the on going situation (e.g. Loewenstein and Schkade (1999) for a recent review).

Relative comparison matters for one's happiness because an increase in average income, both "in real terms" or in terms of "commodity purchasing power", leads to what might be called "secondary inflation" (Hirata, 2001). When the increase in average income takes place, the value of income decreases with respect to Sen's

(1980) functionings, particularly in social contexts where positional goods are involved.

Positional good refers to any product or service which is valued mostly, or even exclusively, for its relative superiority in comparison to substitutes. Since its availability is absolutely limited either because of congestion or fixed supply (Hirsch, 1976), competitions for positional good are zero-sum games. Thus, standing up at a football match improves one's view if only nobody else before him or her stands up. By the same token, despite all effort to increase income, there would be only one person in a society to win the richest position.

However, even in the absence of positional goods, an increase in average income may still lead to secondary inflation (Hirata, 2001). This is to the extent that the latest is also dependent on people's life styles in social interactions. For example, the availability of mobile phone makes it essential for a job interviewee to own one in order to retain his or her "communicability". Likewise, as the average level of education becomes higher over the time, people have to pay more to afford the same functioning, i.e. scholarly educated experts.

The other reason relative comparison matters for one's happiness is that there exists frame-of-reference effects (see, Frank, 1997). This is to the bound that the kind of goods or services necessary or appropriate to an individual depends on what kind of goods or services consumed by his or her reference groups. While secondary inflation is the rate of income growth required to maintain one's level of functionings, the frame-of-reference effect alters the set of functionings that will maintain an individual’s level of happiness. Thus, whereas secondary inflation is a primarily external allocative effect, the frame-of-reference effect is rather internal or psychological (Hirata, 2001). For example, the existence of mobile multimedia services makes it essential for the individual to spend more income on the services in order to not miss “something” in daily life. Similarly, as all families in the individual’s neighborhood provide their houses with internet connections, his or her aspiration to pursue the same trend is likely to increase and enjoyment from any given facility is to decrease.

It is significant to note that secondary inflation and the frame-of-reference effects both do not unavoidably necessitate envy. Secondary inflation can be discerned from enviousness because it merely raises the requirements for the upkeep of a given set of functionings. In this case, people are not concerned directly by what others consume, but just about not becoming worse off in terms of functionings. Frame-of-reference effects, though directly related to people’s awareness on the consumption of others, can still be relief from envy because unhappiness may be caused more by, for instance, failure to “keep up with the Joneses” (Ljungqvist and Uhlig, 2000; see further in Hirata, 2001).

The importance of relative comparison itself has long been emphasized by past economists. In 1899, Veblen already coined the term of conspicuous consumption –a term used to depict the behavioral characteristic of the rich people exploiting their wealth to demonstrate social power. Through his relative income hypothesis, Duesenberry (1949) translated Veblen's philosophy and provided a more precise economic tool to explain the effects on consumption and saving of relative income.

The importance of relative comparison for happiness has also been tested by recent economists (e.g. Clark and Oswald, 1996; McBride, 2001; Luttmer 2005). Using data on 5,000 British workers, Clark and Oswald (1996) report that satisfaction levels relate inversely to comparison wage rate. Luttmer (2005), after controlling for absolute income, concludes that, in the United States during 1987-1988 and 1992-1994, the effect of neighbors' earnings on one's happiness is negative and significant. Nevertheless, it should be noted that the effects of absolute income cannot totally be neglected. Testing the importance of absolute income versus relative income on happiness, Ferrel-i-Carbonell (2005) proves that the effects of these variables all matter for happiness. Using experimental data, some economists (e.g. Johansson-Stenman, Carlsson and Daruvala, 2002; Alpizar, Carlsson and Johansson-Stenman, 2005) also substantiate similar results.

Different from relative comparison, adaptation refers to the reduction of hedonic responses to a constant stimulus (Frederick and Loewenstein, 1999). The effects of adaptation impinge on one's happiness through two distinctive processes, namely psychophysical adaptation and cognitive adaptation. The former denotes sensory experience adaptation where the sensory response itself is altered (Hirata, 2001), whilst the latter refers to adaptation that involves a reassessment of an invariant perception.

Examples for psychophysical adaptation include a case when an individual steps from a building into bright sunshine. A number of purely physiological adaptation processes take place, making it possible for him or her to see normally over luminance intensities that vary by a factor of over one million (Frederick and Loewenstein, 1999). Likewise, when a family first moves to an urban area near to a noisome river, the members of the family will find that the smell is very offensive. However, as time passes, their nasal sensation of it diminishes and they even become virtually unmindful of the problem.

Meanwhile, examples for cognitive adaptation include a case when a society experiences a dramatic increase in inflation level, say 10 percent worse. After a few months living under the new rate of inflation, a 0.5 increase in price index will appear much less important to the members of the society that it did before. Similarly, when a person first buys a multi-million dollar yacht, he or she will find him or herself very excited. However, the more frequent the yacht is used, the less excitement the person will experience. Thus, here adaptation consists in the different evaluation of the same perception, and not in the change of the sensory discernment.

Recent empirical analyses confirm that adaptation matters for happiness (e.g. Stutzer, 2004; Easterlin, 2005; Oswald and Powdthavee, 2006). Using British Household Panel Survey (BHPS) data between 1996 and 2002, Oswald and Powdthavee (2006) provide longitudinal evidence that individuals who become disabled go on to exhibit recovery in mental wellbeing.

Besides, there are also evidences that the effects of adaptation are different across different life domains and constituents of domains. Adaptation is, for instance, reported to occur proportionately with respect to current material attainments, but less than complete with respect to health, marriage and divorce (Wu, 2001; Lucas et al., 2003; Easterlin, 2005).

After all, the significance of adaptation is salient as it relates to the fact that people experience what so-called “biased foresight”. For the first case, people tend to underestimate the extent to which they will adapt to new circumstances (Loewenstein and Schkade, 1999). When making decisions about how to allocate resources, individuals seize their habit and aspirations as fixed at present levels, neglecting the possibility that both of these variables may change because of adaptation. Consequently, they may consume too much in early periods of their live and save less for the future (Loewenstein, Donoghue and Rabin, 2005). For the second case, people are apt to overstate the relevance of a particular aspect of life to happiness just because attention is concentrated on it (e.g. Schkade and Kahneman, 1998; Kahneman, 1999). When a serious accident victim predicts his or her own happiness as a paraplegic, judgments may not so much be based on the state of being paraplegic, but rather on the painful (transitional) situation of becoming paraplegic and on the initial frustration at his or her misfortune. Similarly, the predicted happiness from having a new mansion may be exaggerated to the degree that the initial excitement and the thrill of novelty are overstated, whilst the increased maintenance costs and anxiety for security are ignored.

3. Policies Recommended

Insights from researches on happiness reviewed so far produce numerous implications to economic policy. For example, it has been argued that more government involvement is needed to improve the happiness of the society (e.g. Frank, 1999, 2005; Layard, 2005a, 2005b; Ng, 1987, 2005). Since happiness depends more on relative comparisons rather than on absolute conditions, the pursuit of happiness in society can be self-defeating (Layard, 2005a, b; Frank, 1999, 2005). From an individual's point of view, effort to increase consumption and to achieve higher position in social comparison is "a thing of natures". However, from the viewpoint of the society, the efforts made by individuals will only result in a game without any net-benefits. Similarly, as happiness depends on the way people adapt to their on going situations, it is very likely that the actually achieved happiness level will be systematically lower than the one they expect. From the current point of view, decision on the intertemporal allocation of resources might be optimal. Yet, the occurrence of adaptation implies the possibility that such maximizations do not bring to the optimal, welfare maximizing, results. Government is therefore suggested to make necessary arrangements to help bring about the desired end.

One route that has been proposed to improve happiness is the taxation of consumption. For Frank (1999, 2005), the reason happiness does not improve in spite of economic growth is that people spend their income mostly on positional-conspicuous consumption to which they adapt very quickly. Consumption tax is hence momentous not only to help freeing them from the grip of luxury fever, but also to alter the way income is allocated. Consumption tax increases the relative costs of positional-conspicuous consumption and makes other forms of consumption relatively more attractive. Subsequently, as individuals in general consume less, the need for positional-conspicuous consumption is reduced further to the extent that people's consumption depends on what others consume.

The other route that has been proposed to improve the happiness of the society is the taxation of income. The additional works done by an individual do not only raise his or her consumption units, but also affect the average level of consumption faced by other members of the society. As it is a competition, the more he or she engages in relative comparison, the more others will fall back. Individuals thus have incentives to increase their income and spending, and consequently, increasing the total "pollution" from the rivalry. Government needs therefore to induce people to choose their hours of work solely on the basis of absolute value of consumption (Layard, 2005a). Income tax can serve a key role to end such competitions and maintain a tolerable balance between work and life.

Besides, income tax can also be used as an instrument to foster redistribution and help closing the relative gap between various income groups (Layard, 2005b; Radcliff, 2001). The extra happiness of the very wealthy individuals derived from conspicuous consumption does not compensate the extra happiness loss of the poor persons, who suffer not only from relative comparison but also from absolute material shortage. Hence, progressive taxation for the very wealthy, in combination with a more generous welfare spending, may help improving aggregate happiness of the society.

Moreover, relative comparison and adaptation can lead individuals to overvalue private consumption and undervalue the provision of public goods including environmental quality (Frank, 1999; Ng and Wang, 1993). Thus, taking account of inefficiencies stemming from the mutually offsetting effects of relative competition and the environmental disruption effects of much production and consumption activities, the diversion of spending from the private to the public sectors may be more welfare enhancing (Ng, 1987, 2005).

Finally, an ultimate route that has been recommended to improve the happiness of the society is government (direct) intervention to individuals' life. In view of the fact that relative comparison extends beyond taxable market transactions, some kinds of regulation might be conducive to the interest of the society (Frank, 1999; Layard, 2005b). Layard (2005b) for example, emphasizes the important role of the quality of social relationships, trust, homogeneity and security in the workplace. Government is hence recommended to change the rules of the game in such a way that social life can be well-situated, for example, through less geographical mobility, more homogenous community and flexible hours at work. Likewise, he notes that divorce is a major cause of unhappiness and children of broken homes are more prone to depression in adulthood. Government needs therefore to try to make family life more manageable through, among others, counseling, paid maternity/paternity leaves and compulsory parenting classes.

4. Points to Examine Further

Nevertheless, while arguments for government involvement are intuitively appealing, there have been so far little empirical evidences supporting the policies recommended. For example, it has not been resolved whether the taxation of consumption always relates positively to happiness. Despite Frank's (1999, 2005) assumption that the tax will make positional-conspicuous consumption primarily of less important, it may well be the case that individuals put more weight on maintaining their relative position, and hence they all reduce the income spent on other forms of consumption, such as health care. Thus, rather than restrain positional-conspicuous consumption, the tax may reduce the consumption of goods which provide a healthy life.

Likewise, it has not been elucidated if the rate of income tax associates linearly with subjective wellbeing. Whether the impacts of the tax will be different for those with high income aspirations and those who can voluntarily adapt to whatever their standard of living is also remain unclear. Moreover, the way tax collection is organized may also affect the relationship between income tax and happiness. For example, people may favor the same tax liabilities when it is directly debited to their paycheck each month, rather than having to pay the liabilities out of their cash receipts. While the former is likely considered forgone revenues because they are paid with income the individuals never disposed of, the latter might be regarded as a loss because it is an out-of-pocket expenditure.

The other issue needs to be probed empirically is the possibility that, once the proper increase in tax had been imposed, some kinds of leisure which would supposedly be substituted for income-generating-activities produce just another “relative competition”. While individuals are reported to be less concerned with relative time for leisure (Layard, 2005b), they might be concerned with, for instance, their relative performance in playing golf with friends, accomplishment in hosting dinner parties for neighbors, and ability in expressing affection to family members.

The relationship between tax progressivity and happiness is also keen to be examined farther. This is particularly true as the effect of inequality might diverse and progressive tax can intuitively lead to either a decrease or an increase in relative competition. On the one hand, it seems logical to expect that a more progressive tax system decreases relative competition. As income distribution becomes more equal, it would be harder for an individual to separate him or herself from the group, and the gains from competition are just smaller. On the other hand, it is also likely that an increase in progressivity increases relative competition. Since the individual is closer to beating a rival in a positional race, he or she might be encouraged to try harder. Evidence reported in Alesina, Di Tella and MacCulloch (2004) indicates that the effect on happiness of inequality is different for the poor in Europe and the poor in the United States. More precisey, Dynan and Ravina (2008) show that although inequality does negatively affect happiness in the United States, it only does so after a certain limit within the income distribution has been attained. The effect of inequality on happiness is stronger for those whose group has above-average income than for those whose group has below-average income.

Moreover, it has not been resolved whether bigger government expenditure size implies higher level of happiness. Evidence in Bjornskov, Dreher and Fischer (2007a) controversially show the opposite result, leaving economists in a quandary over the relationship between the size of government expenditure and happiness. Whether such a relationship is affected by the quality of governance and the structure of government expenditure has also not yet been resolved, including the probable effects of the percentage of expenditure allocated on certain types or functions of public sector activities (such as wages and salaries, health expenses and military spending).

In term of benefit, it needs to be probed whether people adapt differently to publicly provided goods or services. If the goods or services provided by government have more lasting effects than do the private things people buy with their own income, then the diversion of spending from the private to public sectors might be supportive for happiness. However, if the effects are just the same or even less lasting, then the reason for government expenditure increase will depend entirely on the possible benefit from the potential reduce of relative comparison.

On top of that, one issue that needs to be addressed is the effect on happiness of government (direct) intervention in citizens' life. This is especially so since people in general feel terrible when they are suppressed and, conversely, experience much better feeling when they have control over their own life (Helliwell, 2003; Inglehart et al., 2007). Nevertheless, as Kahneman once asserts, if individuals do not know what is going to make them better off, then the idea that people can be fully trusted to do what will give them happiness becomes questionable. In this context, a further empirical question would be, to what extent (and in what form) freedom has to be sacrificed for the sake of a greater happiness and should it be different for different people (such as those who assert independence and those who uncritically conform to the customs).

5. Concluding Remarks

This chapter has reviewed findings from empirical researches on happiness and evaluated the extent to which they can be synthesized to guide economic policy. From the review, it can be concluded that, despite sound arguments calling for government involvement, much more information is needed to determine the appropriate policies to improve the happiness of the society.

Future empirical researches should address how the taxation of consumption and the taxation of income relate to happiness. Likewise, future researches should take into account how government expenditure size relates to happiness. Whether such a relationship is affected by the quality of governance, the structure of government expenditure and the way people adapt to publicly provided goods or services is too keen to be examined. Finally, future researches should also try to answer the question on the extent and form of government (direct) intervention that is appropriate for happiness.

Since early stages have just began, it is important for economists to retain themselves from making final judgements and not be too nimble to infer certain policy conclusions on happiness.

Bibliography

Alesina, A., R. Di Tella and R. MacCulloch, 2004, “Inequality and happiness: Are Europeans and Americans different?” *Journal of Public Economics*, vol. 88(9-10), p. 2009-42

Bjornskov, C., A. Dreher and JAV Fischer, 2007, “The bigger the better: Evidence of the effects of government size on life satisfaction around the world,” *Public Choice*, vol. 130, p. 267-92

Blanchflower, D.G. and A.J. Oswald, 2004, “Well-being over time in Britain and the USA,” *Journal of Public Economics*, vol. 88(7-8), p. 1359-86

Blanchflower, D.G., 1996, “Youth labor markets in 23 countries: A comparison using micro data,” *CEP Discussion Papers 0284*, London

Blanchflower, D.G., 2001. "Unemployment, well-being, and wage curves in eastern and central Europe," *Journal of the Japanese and International Economies*, vol. 15(4), p. 364-402

Blanchflower, D.G., 2007, “Is unemployment more costly than inflation?” *NBER Working Papers 13505*, Washington

Clark, A.E., Y. Georgellis and P. Sanfey, 2001, “Scarring: The psychological impact of past unemployment,” *Economica*, vol. 68(270), p. 221-41

Clark, A.E. and A.J. Oswald, 1994, “Unhappiness and unemployment,” *Economic Journal*, vol. 104 (424), p. 648-59

Clark, A.E. and A.J. Oswald, 1996, "Satisfaction and comparison income," *Journal of Public Economics*, vol. 61 (3), p. 359-81

Clark, A.E., 2003, "Unemployment as a social norm: Psychological evidence from panel data," *Journal of Labor Economics*, vol. 21(2), p. 289-322

Coyne, C.J. and P.J. Boettke, 2006, "Happiness and economics research: Insights from Austrian and Public Choice Economics," in Y.K. Ng and L.S. Ho (eds.), *Happiness and Public Policy: Theory, Case Studies, and Implications*, New York: Palgrave Macmillan, p. 89-105

Dynan, K.E. and E. Ravina, 2007, "Increasing income, external habits, and self-reported happiness," *American Economic Review*, vol. vol 97(2), p. 226-31

Di Tella, R., R.J. MacCulloch and A.J. Oswald, 2001, "Preferences over inflation and unemployment: Evidence from surveys of happiness," *American Economic Review*, vol. 91(1), p. 335-41

Di Tella, R., R.J. MacCulloch and A.J. Oswald, 2003, "The macroeconomics of happiness," *Review of Economics and Statistics*, vol. 85(4), p. 809-27

Di Tella, R. and R.J. MacCulloch, 2006, "Some uses of happiness data in economics," *Journal of Economic Perspectives*, vol. 20(1), p. 25-46

Dorn, D., JAV Fischer, G. Kirchgässner and A. Sousa-poza, 2005, "Is it culture or democracy? The impact of democracy, income, and culture on happiness," *University of St. Gallen Dept. of Economics Working Paper Series 2005 2005-12*, St. Gallen

Easterlin, R.A., 1974, "Does economic growth improve the human lot? Some empirical evidence," in P. David and M. Reder (eds.), *Nations and Households in Economic Growth*, New York: Academic Press, p. 89–126

Easterlin, R.A., 1995, "Will raising the incomes of all increase the happiness of all?" *Journal of Economic Behavior and Organization*, vol. 27, p. 35–47

Easterlin, R.A., 2001, "Income and happiness: towards a unified theory", *Economic Journal*, vol. 111, p. 465–84

Easterlin, R.A., 2005, "A puzzle for adaptive theory," *Journal of Economic Behavior and Organization*, vol. 56(4), p. 513-21

Ferrer-i-Carbonell, A., 2005, "Income and well-being: An empirical analysis of the comparison income effect", *Journal of Public Economics*, vol. 89, p. 997-1019

Fischer, JAV., C. Bjornskov and A. Dreher, 2008, "Formal institutions and subjective well-being: Revisiting the cross-country evidence," *Stockholm School of Economics Working Paper Series in Economics and Finance 699*, Stockholm

Frank, R.H., 1997, “The frame of reference as a public good,” *Economic Journal*, vol. 107(445), p. 1832-47

Frank, R.H., 1999, *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*. New York: Free Press

Frank, R.H., 2005, “Positional externalities cause large and preventable welfare losses,” *American Economic Review*, vol. 95(2), p. 137-41

Frederick, S. and G. Loewenstein, 1999, “Hedonic adaptation”, in D. Kahneman, E. Diener, and N. Schwaz (eds.), *Well-Being: Foundations of Hedonic Psychology*, New York: Russell Sage Foundation Press, p. 302–29

Frey, B.S. and A. Stutzer, 2000, “Happiness, economy and institutions”, *Economic Journal*, vol. 110(466), p. 918-38

Frey, B.S. and A. Stutzer, 2002a, “What can economists learn from happiness research?” *Journal of Economic Literature*, vol. 40, p. 402-35

Frey, B.S. and A. Stutzer, 2002b, *Happiness and Economics: How the Economy and Institutions Affect Human Wellbeing*, Princeton: Princeton University Press

Helliwell, J.F., 2003, “How’s life? Combining individual and national variables to explain subjective well-being‘, *Economic Modelling*, vol 20, p. 331-60

Helliwell, J.F., 2006, “Wellbeing, social capital and public policy: What's New?” *Economic Journal*, vol. 116(510), p. C34-45

Hirata, J., 2001, *Happiness and Economics*, Thesis submitted to the Department of Economics, Maastricht University, Maastricht

Hirsch, F., 1976, *The Social Limits to Growth*, Cambridge, MA: Harvard University Press

Inglehart, R., R. Foa, C. Peterson and C. Welzel, 2007, *Development, Freedom and Happiness*, Mimeo

Inglehart, R.F., 1990, *Culture Shift in Advanced Industrial Society*, Princeton: Princeton University Press

Johansson-Stenman, O., F. Carlsson and D. Daruvala, 2002, “Measuring future grandparents' preferences for equality and relative standing”, *Economic Journal*, vol. 112, p. 362-83

John, H. and P. Ormerod, 2007, *Happiness, Economics and Public Policy*, London: The Institute of Economic Affairs

Kahneman, D. and A.B. Krueger, 2006, “Developments in the measurement of subjective well-being,” *Journal of Economic Perspective*, vol. 20(1), p. 3-24

Kahneman, D., 1999, “Objective happiness”, in D. Kahneman, E. Diener, and N. Schwaz (eds.), *Well-Being: Foundations of Hedonic Psychology*, New York: Russell Sage Foundation Press, p. 3-27

Layard, R., 2005a, “Rethinking public economics: The implications of rivalry and habit,” in L. Bruni and P.L. Porta (eds.), *Economics and Happiness: Framing the Analysis*, Oxford: Oxford University Press, p. 147-69

Layard, R., 2005b, *Happiness: Lessons from a New Science*, New York: The Penguin Press

Loewenstein, G., T. O'Donoghue and M. Rabin, 2003, “Projection bias in predicting future utility,” *Quarterly Journal of Economics*, vol. 118(4), p. 1209-48

Loewenstein, G. and D. Schkade, 1999, “Wouldn’t it be nice: Predicting future feelings,” in D. Kahneman, E. Diener, and N. Schwaz (eds.), *Well-Being: Foundations of Hedonic Psychology*, New York: Russell Sage Foundation Press, p. 85-108

Lucas, R.E., A.E. Clark, Y. Georgellis and E. Diener, 2003, “Reexamining adaptation and the set-point model of happiness: Reactions to changes in marital status”, *Journal of Personality and Social Psychology*, vol. 84(3), p. 527-39

Luttmer, EFP, 2005, “Neighbors as negatives: Relative earnings and wellbeing,” *Quarterly Journal of Economics*, vol. 120(3), p. 963-1002

McBride, M., 2001, “Relative-income effects on subjective well-being in the cross-section,” *Journal of Economic Behavior and Organization*, vol. 45, p. 251–78

Ng, Y.K. and J. Wang, 1993, “Relative income, aspiration, environmental quality, individual and political myopia: Why may the rat-race for material growth be welfare-reducing?” *Mathematical Social Sciences*, vol. 26(1), p. 3-23

Ng, Y.K., 1987, “Relative-income effects and the appropriate level of public expenditure,” *Oxford Economic Papers*, vol. 39(2), p. 293-300

Ng, Y.K., 2005, “Public policy implications of behavioural economics and happiness studies,” in Y.K. Ng and L.S. Ho (eds.), *Happiness and Public Policy: Theory, Case Studies, and Implications,* New York: Palgrave Macmillan, p. 237-52

Oswald, A.J. and N. Powdthavee, 2006, “Does happiness adapt? A longitudinal study of disability with implications for economists and judges,” *IZA Discussion Papers 2208*, Berlin

Oswald, A.J., 1997, “Happiness and economic performance,” *Economic Journal*, vol. 107, p. 1815–31

Radcliff, B., 2001, “Politics, markets, and life satisfaction: The political economy of human happiness,” *American Political Science Review*, vol. 95(4), p. 939-52

Stutzer, A., 2004, “The role of income aspirations in individual happiness,” *Journal of Economic Behavior and Organization*, vol. 54, p. 89-109

Schkade, D. A. and D. Kahneman, 1998, „Does living in California make people happy? A focusing illusion in judgments of life satisfaction,” *Psychological Science*, vol. 9, p. 340-46

Veenhoven, R., 1991, “Is happiness relative?” *Social Indicators Research*, vol. 24(1), p. 1-34

Veenhoven, R., 2000, “Freedom and happiness: A comparative study in 44 nations in the early 1990’s,” in E. Diener and E.M. Suh (eds.), *Culture and Subjective Wellbeing*, Cambridge, MA: MIT Press, p. 257-88

Wilkinson, W., 2007, “In pursuit of happiness research: Is it reliable? What does it imply for policy?” *Policy Analysis*, vol. 590, p. 1-41

Winkelman, L. and R. Winkelman, 1998, “Why are the unemployed so unhappy? Evidence from panel data”, *Economica*, vol. 65(257), p. 1-15

Woittiez, I. and J. Theeuwes, 1998, “Well-being and labour market status,” in S. Jenkins, A. Kapteyn and B. Van Praag (eds.), *The Distribution of Welfare and Household Production: International Perspectives*, Cambridge: Cambridge University Press

Wolfers, J., 2003, “Is business cycle volatility costly? Evidence from surveys of subjective well-being,” *International Finance*, vol. 6(1), p. 1-26

Wu, S., 2001, “Adapting to heart conditions: A test of the hedonic treadmill,” *Journal of Health Economics*, vol. 20, p. 495-508