# Hierarchical Needs, Income Comparisons and Happiness Levels

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BY

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**Abstract**

The cornerstone of the hierarchical approach is that there are some basic human needs which must be satisfied before non-basic needs come into the picture. The hierarchical structure of needs implies that the satisfaction of primary needs provides substantial increases to individual happiness compared to the subsequent satisfaction of secondary needs. This idea can be combined with the concept of comparison income which means that individuals compare rewards with individuals with similar characteristics. These two notions could provide additional explanations of empirical findings indicating a positive relationship between income and happiness up to certain level of income.

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## 1. Introduction

The study of happiness and well-being and their relationship with economic variables was a relatively neglected research issue for most academic economists. With a few notable exceptions such as Easterlin (1974) and Scitovsky (1976), the dominant attitude of the economics academic community was that happiness was the subject matter of other social sciences, and mainly of psychology. However, in the last decade, an increasing number of economists have started to study the concept of happiness at both the microeconomic and the macroeconomic level. The recent increase of academic articles and books on happiness and economics is a clear manifestation of this current interest (see for instance, Alesina, Di Tella, & Mac Culloch, 2004; Frey & Stutzer, 2000; Kenny, 1999; Oswald, 1997; and for a general review of the literature, Frey & Stutzer 2002a**,** 2002b, and Layard, 2005a).

One of the most important topics of happiness research is the study of the relationship between income and happiness levels. There have been many empirical studies which examine this relationship in many countries using a variety of micro**-** and macro**-**level data. There have also been studies that concentrate on international comparisons of happiness levels. One relatively common empirical finding is that substantial increases in real per capita income do not correspond to equivalent increases of individual happiness. Furthermore, some findings suggest that there is a negative correlation between real income and happiness levels (see for instance, Blanchflower & Oswald, 2004; Easterlin, 1974, 1995; Lane, 2000; Oswald,

1997; Wright, 2000). These empirical findings, termed usually as the happiness or the Easterlin paradox, are difficult to explain given that for most economists income has a constant positive impact on reported happiness Bruni, 2002, 2004; Phelps, 2001). As one would expect, a number of explanations have been suggested for this paradox. However, one might get an additional insight from the concepts of hierarchical needs and of comparison income.

Human needs hierarchy is an old idea but its modern version originates from work in psychology (mainly Maslow, 1954). Its basic notion is that there are primary and secondary needs and that the secondary needs become important once the primary ones have been satisfied. It can be argued that income increases for lower income levels satisfy mostly basic needs. Thus, hierarchy might explain why additional increases in income do not have significant effects on reported happiness levels.

The concept of comparison income is another idea which can also contribute to an explanation of the happiness paradox (Clark & Oswald, 1996). The main thrust of the comparison income argument in the context of happiness research is that individuals do not extract much happiness from their absolute income but from their position relative to other people's incomes. Thus, raising everybody's income might not result in an increase of general happiness.

This chapter discusses the role of the above two notions in providing explanations for the observed happiness paradox and also of studies showing a positive relationship between income and happiness up to a certain level of income. With these in mind, the second section of the present work discusses

the empirical aspects of the relationship between income and happiness. The next section provides a brief presentation of the proposed explanations of the income - happiness paradox. Sections 4 and 5 examine the hierarchical formulation and the concept of comparison income and also the way that they can contribute to the better understanding of the income - happiness relationship. A concluding section closes the chapter.

## 2. Income and Happiness

Before we proceed to an examination of the relationship between income and happiness, a short discussion of the terms that are usually employed in the relevant literature is necessary. In economic theory the term “utility” has no psychological meaning, but it refers to individual preferences. Thus, a utility function is a numerical representation of a preference ordering. However, in the recent literature on happiness and economics, the term “utility” is again related to the original Benthamite meaning of utility which refers to pleasure and satisfaction. In this sense, the term “total utility” is equivalent to the term “life satisfaction” that is more common in psychology (Clark and Oswald, 1996).

Furthermore, “life satisfaction” is often used interchangeably with “happiness”**,** although it has been argued that the former has an advantage over the latter, because it emphasizes the subjective nature of the concept (Easterlin, 2001).

“Subjective well-being” is also another term perceived as synonymous to the previous two, but it is not only used for satisfaction with one's entire life

as a whole, but also for specific discomforts and passing moods (Veenhoven, 2000). In empirical work, reported subjective well-being is taken as a proxy measure for individual welfare and of happiness (Studger & Frey, 2010).

Thus, in this chapter the terms “total utility”, “life satisfaction”, “subjective well-being**”,** and “happiness” are used interchangeably as it is the case in most recent studies. Finally, we also follow the standard definition in the relevant literature which conceives happiness as the degree to which someone evaluates positively the overall quality of his or her present 'life as a whole' (Veenhoven, 2000).

Given that for many years most economists were not interested in concepts like well-being and happiness, research on happiness and its relation to economic variables was conducted by a few economists who were oriented towards the study of the social dimensions of economic growth. The pioneering work of R. Easterlin in 1974 which dealt with the relationship between income, happiness and economic growth, is a representative example of this minority attitude (see also Easterlin, 2004). Gradually though and especially in the last decade, the interest of economists in happiness has increased dramatically. There are three main reasons for this. The first has to do with the rise of positive psychology and its impact on other social science fields and thus on economics (see for instance, Snyder & Lopez, 2002). Another reason was the realization that in final analysis, the purpose of economic growth is the presumed overall increase in happiness levels. Finally, another reason that helped the promotion of happiness research was the realization that government intervention can help increase overall happiness by reducing unemployment and inequality levels (see also Layard,

2005a). Thus as one would expect, the focus of happiness research by economists is the study of the relationship between income and happiness.

Traditionally, most economists believe that income has a positive impact on happiness and this is taken as obvious and common fact. There is almost universal agreement that the main aim of economics and economic policy is the raising of incomes so as to ultimately achieve higher levels of individual and aggregate happiness. This can also explain the emphasis on economic growth, given that the increase of incomes is attained through economic growth. Thus, the standard treatment found in many economic texts, is to assume that life satisfaction or happiness (U) is a function of income (y) and that life satisfaction is raised by income:

$$U = U(y) \text{ with } dU/dy > 0 \qquad (1)$$

Many economic texts use the notions of total utility and life satisfaction interchangeably and do not provide a theoretical reason for the above relation (Atkinson & Stiglitz, 1980). In spite of its wide acceptance until recently, few economists had argued that the there is no straightforward relationship between the two constructs (see for instance, Frank, 1999; Scitovsky, 1976). Furthermore, it has been maintained that the relation between objective (income) and subjective well-being involves complicated methodological assumptions and requires interdisciplinary work in order to be understood properly (see Gasper, 2005).

Given the above, there have been a large number of empirical studies examining the income – life satisfaction relationship within a single country at

a given moment in time but also across time and countries. Most studies start from the post war period and concentrate on the US and European countries. In the last few years, other countries are also the subject of empirical investigation (see for instance, Kenny, 2005). As these specialist studies began to proliferate, two general findings have emerged. The first one suggests that the relationship between income and happiness at a particular point in time and country is positive. This implies that higher income individuals, on average, report higher levels of happiness. Given that this relationship has been tested using simple and multiple regressions from various datasets, most specialists accept it as robust (for a review see Clark, Frijters**,** & Shields, 2008). This also supports the standard theoretical approach regarding the two variables.

The second category of findings**,** however, was not in the direction of the theoretical expectations. In particular, many studies have indicated that increases of income over time do not correspond to equivalent increases in reported happiness (see Layard, 2005b). Furthermore, the income - happiness correlation across developed countries is very problematic revealing weak or zero income effects on happiness (Frey & Stutzer, 2002b). Clearly, the second set of findings is difficult to be reconciled with the first and with the standard theory, and for this reason it has been called the “paradox of happiness” (Bruni, 2002).

One of the first studies to identify the paradox was Easterlin’s (1974), and for this reason it is also known as the “Easterlin paradox”. Easterlin’s study is based on post World War II US time series data and shows that although real per capita income has risen dramatically, there is no definite

trend on self-reported happiness level. This finding also holds for more recent studies. More specifically, many studies indicate that there has been no improvement in happiness in the US for over almost half a century although real income per capita more than doubled (Easterlin, 1995; Maddison, 1991). The findings for Japan are even more strange given the tremendous rise in real income. Although Japanese income increased by almost five times, there was no improvement in mean subjective well-being (Easterlin, 1995; Inglehart & Rabier, 1986). Similar results hold true for many European countries. There is almost no trend in a period where real income per capita rises within all these countries from 25 to 50% (Blanchflower & Oswald, 2004; Easterlin, 1995; Kenny, 1999). The following figure presents the trend of life satisfaction in nine European countries.

----------Figure 1 about here----------

However, the empirical evidence for less developed countries is more in line with the theoretical expectations. A survey of 22 countries indicates that the higher the gross national product, the lower the correlation between happiness and income (Veenhoven, 1991). More recent data from a world survey of country data shows that additional income provides more happiness at low levels of economic development (Frey & Stutzer, 2002b).

With these empirical results in mind, some authors such as Easterlin (1995), Lane (2000**),** and Veenhoven (1991) have suggested that the relationship between income and happiness might be curvilinear. As Frey and Stutzer (2002b) state:

> *"Income provides happiness at low levels of development, but once a certain threshold has been passed, income has little or no effect on happiness"* (p. 75).

This is also supported by the fact that for US data there is a positive correlation between income and happiness up to the average income level of US $10000 (see Frey & Stutzer, 2002b). Relative to this, the US population who felt "very happy" peaked in 1957 and has decreased since then, although real income has been increasing continuously (Schor, 1991). Furthermore, many cross-sectional empirical studies indicate that more developed countries do not report higher happiness levels once GDP per capita exceeds half that in the US in mid-1990s (see for instance, Helliwell, 2003; Kenny, 1999). In a similar vein, there is evidence that when a country's income per head is below the threshold level of $15000, countries with higher per capita income seem to be happier than those with lower per capita income (Layard, 2005b). In general, the curvilinear nature of the income - happiness relationship is currently recognized by many specialists, and it is also supported by many empirical studies (for a review see Inglehart, Foa, Peterson, & Welzel, 2008). However, there is no universal agreement for a theoretical explanation of the curvilinear relationship, but, as we shall see, the hierarchical and the income comparisons approaches might serve as a basis.

## 3. Explanations of the Paradox

Given the controversial nature of the relationship between income and happiness over time and also of the cross-country studies, it is not surprising that there have been a number of explanations regarding the paradoxical relationship between income and happiness. As one would expect, one reaction was to challenge the empirical findings. Stevenson and Wolfers

(2008), for instance, dismiss the long-term evidence for Japan as a result of changes in survey questions. However, many specialists seem to agree that many of the above empirical findings concerning the paradox have stood many reliability tests using various econometric methods (Blanchflower & Oswald, 2004; Ferrer-i-Carbonell & Frijters, 2004; Myers & Diener, 1995). A similar criticism focuses on the semantic aspect: the meaning of the word “happiness” might differ among languages. However, research using bilingual and multilingual participants as well as different stated preferences ranking measures, suggests that language is not a significant factor (Cummins, 2003; Layard, 2005a; Veenhoven, 2000).

Apart from the above reactions, researchers have attempted to tackle the paradox by focusing on the components of happiness. More specifically, they argue that a number of non-economic and economic variables affect the level of happiness (Frey & Stutzer, 2002a, 2002b). Such variables can be social capital, relational goods, lacking of goals, economic inequality and unemployment, among others. In particular, it has been pointed out that the deterioration of social capital (trusting people, friendship) in many advanced countries might be a crucial factor for the paradox of happiness (Bjornskov, 2003; Putnam, 2000). Similar to this line of explanation is the idea of relational goods (for a discussion of this concept, see Sugden, 2002). The main argument here is that the lack of relational goods such as close personal relationships might be common in advanced countries and this may reduce overall well-being (Pugno, 2009). This approach also draws from current work in psychology (see for instance Ash, 2000; Gui, 2000; Pugno, 2005). Lacking of goals, active interests, and meaning (or boredom) have also been

proposed as explanations for the observed high levels of unhappiness although incomes were high (Scitovsky, 1976; Loewestein, 1999). The concept of freedom has also been connected with the level of well-being. In particular, the three main dimensions of freedom -political, economic and personal- have been found to exhibit a positive relationship with happiness in many countries (Veenhoven, 2000). For Phelps (2001), the paradox of happiness in the US is attributed to a decline in the percentage of altruists in the population. This is because altruists are more likely to report themselves happy than people with other personality attributes.

Finally, a number of economic variables have been used in order to explain the paradox. The level of income inequality and unemployment are among the main ones that have been suggested. The basis of the negative effects of inequality is the concept of diminishing marginal utility of money: an extra dollar provides much more utility to a poor than to a rich person. This implies that if there is a transfer of money from the rich to the poor, average happiness increases. Thus, the more equally income is distributed, the higher the level of happiness level in a country (Alesina et al., 2004**;** see also Layard, 2005a). The level of unemployment has also been found to negatively affect happiness levels given that apart from the obvious individual costs, unemployment leads to social problems that affect society as a whole (Di Tella, MacCulloch, & Oswald 2003).

All of the above explanations to the paradox of happiness no doubt, contribute to our understanding of the complex relationship between income and happiness. They all have empirical support and some backing from research in psychology and sociology (for further discussion see Layard,

2005a). In spite of this, however, many leading researchers in the field still claim that these approaches are not adequate in explaining the paradox. As Frey and Stutzer (2002b) state: “The causal factors that relate wealth to happiness, however, are not yet fully understood” (p. 76). This is mainly due to some recent empirical findings and some conceptual problems which undermine the above explanations. For instance, social relations have been found to account for only a fraction of the initial variance of life satisfaction (Ehrhardt, Saris, & Veenhoven, 2000). As far as inequality is concerned, there is recent evidence that some groups treat it as a feature of their environment and have a positive attitude towards it. In particular, when individuals focus on other people’s circumstances, extra income might have a strong positive effect on life satisfaction even for high levels of income. This can reduce the effect of the diminishing marginal utility of money mentioned above. This holds true especially for groups who exhibit a large variation of their income mainly due to higher job mobility (Clark, 2003). In addition, inequality may also affect social relationships and this complicates further its impact on happiness level (Helliwell, 2003).

It seems that a combination of economic and non-economic factors might shed more light to the paradox. For this reason, in the next two sections we concentrate on the idea of needs hierarchy and the role of income comparisons.

## 4. **The needs hierarchy approach**

Many authors consider the psychologist A. Maslow as the basic proponent of the needs hierarchy (Maslow, 1954, and also Alderfer, 1969**,** with less emphasis on hierarchy though). Today, the idea of needs hierarchy can be found in social sciences such as psychology, politics and sociology (see for instance, Ardrey, 1970; Deci & Ryan, 2000; Doyal & Gough, 1984; Levi, 1986; Tversky, 1969). Furthermore, although this approach has not made a substantial impact to the established contemporary economic theory of choice, a number of influential economists like Little (1957), Encarnacion (1964), Georgescu-Roegen (1966), and Day (1971) have long emphasized the importance of needs hierarchy for choice theory. Furthermore, Earl (1986), Falkinger (1990), Pfouts (2002), Lavoie (2004) and others have recently discussed hierarchical-type preferences (for a review see Drakopoulos, 1994; Drakopoulos & Karayiannis, 2004).

The standard approach to economic rationality assumes that economic agents engage in full substitutability which means that all preferences can be substituted fully. To take an example, food can in theory be substituted completely for perfume. This approach is in contrast to needs hierarchy. The conceptual basis of hierarchical choice is that human needs are of varying importance and that they are hierarchical. Primary needs must reach a given level of satisfaction first before the secondary ones are considered. In other words, preferences are hierarchical in the sense that higher priority choice variables must reach certain levels before lower priority choice variables are

considered (for a discussion of the definition of primary and secondary needs, see Gasper, 2005; Max-Neef, 1995).

It must be noted that hierarchical needs – related behavior manifests itself quite strongly in many empirical studies of consumption patterns. In particular, the hierarchical approach predicts that when income is low, a very high percentage of it would be spent on food since food satisfies a basic need. (A detailed analysis of the role of income and substitution effects in the hierarchical model can be found in Lavoie, 2004). There are numerous empirical studies which indicate a significant and positive impact of household income on food variety. This is in line with the hypothesis that consumption evolves along a hierarchical order as income increases (for relevant empirical work in a number of countries, see for instance, Canterbery, 1979; Jackson & Marks, 1999; Lluch, Powel**,** & Ross, 1977; Thiele & Weiss, 2003). The same pattern of behavior is observed with respect to the saving patterns which is the mirror image of consumption (Canova, Rattazzi, & Webley, 2005; Xiao & Noring, 1994).

The incorporation of needs hierarchy in the framework of happiness research can provide some interesting insights. The standard approach to an individual's happiness level or life satisfaction is given as:

$$U = U(y, z) \qquad (2)$$

where U is happiness level or life satisfaction, y is the level of income and z is a vector of characteristics comprising variables that affect life satisfaction. There is no accepted list of these variables but as we saw it can include

social capital, social aspiration, freedom, emotions, goal completion and meaning (Clark et al., 2008). These variables may or may not affect income.

There is also no agreement concerning the conceptual basis of happiness or life satisfaction. More specifically, there are two main approaches: the hedonic and the eudaimonic conceptions. The hedonic viewpoint defines well-being in terms of pleasure seeking and pain avoidance and thus the basic criterion for happiness is hedonic well-being. The eudaimonic approach focuses on meaning, self-development and functioning, and the basic criterion for happiness is eudaimonic well-being (Ryan & Deci, 2001; Waterman, 1993). Both approaches have convergent and divergent aspects but are distinguishable in the sense that according to the eudaimonic approach pleasure attainment alone should not be identified with happiness. The philosophical roots of these approaches can be found in Ancient Greek philosophers and also in the Utilitarianism of J. Bentham and J.S. Mill (for a discussion, see Drakopoulos, 1991). Modern psychological theories like self-determination theory attempt to reconcile the two approaches by identifying three fundamental psychological needs which, if satisfied, result in both hedonic and eudaimonic well-being (Ryan & Deci, 2000).

The incorporation of needs hierarchy into a happiness or life satisfaction framework implies that the individual has a priority approach to life satisfaction. This means that the most important variables must be satisfied first before the second priority variable comes into the picture. In terms of hedonic and eudaimonic well-being, the hierarchical approach fits better with the latter. The multi-dimensional character of the eudaimonic approach might be accommodated better with an ordered structure of needs

that hierarchical choice implies (see also Drakopoulos, 1994). This idea is also supported by empirical findings by a number of job satisfaction (a major determinant of life satisfaction) specialists (see for instance, Clark & Oswald, 1996; Drakopoulos & Theodossiou, 1997; Locke, 1976).

The application of the hierarchical system in a life satisfaction framework can be the following: we take a simple life satisfaction vector:

$$U = (y, y^*, z) \qquad (3)$$

where y is the most important variable which can be income, y* is the aspiration or target level of income which can be determined by a number of factors, and z is the secondary variable which can represent a vector of other variables affecting life satisfaction. The target level of income y* satisfies the basic needs and its inclusion in equation (2) reflects the essence of hierarchy; (for a discussion concerning the determination of y*, see Ferrer-i-Carbonell, 2005). The other variables (z) satisfy secondary needs and are taken into consideration only when y reaches a satisfactory level or target y*. We can incorporate all the above by taking a two-part life satisfaction function:

$$U(y,z) = \{U_1 (y,z), U_2 (y,z)\} \qquad (4)$$

where $U(y,z) = U_1$ for $y \leq y^*$

and $U(y,z) = U_2$ for $y > y^*$

with the following conditions:

$\partial U_1/\partial y > 0$, $\partial U_2/\partial y > 0$ and

$\partial U_1/\partial y > \partial U_2/\partial y$

The conditions provide the essence of the hierarchical approach to life satisfaction. The first two conditions imply that income has a positive effect on life satisfaction. The last condition indicates that income does not provide the same rate of satisfaction once a given level (y*) has been reached (although it continues to have a positive effect).

One potential difficulty with the empirical dimension of the hierarchical system might be the definition of basic needs. However, it has been maintained that needs lower in the hierarchy are likely to be common among individuals of different cultures, and that needs higher in the hierarchy are likely to be common among individuals of the same culture (see Georgescu-Roegen, 1966**;** Little, 1957; Max-Neef, 1995).

The above formulation of happiness can be used as an additional explanation of the observed curvilinear relation between income and happiness: income has strong impact on happiness but after a certain income level, the effect becomes much weaker.

## 5. Income comparisons

As was mentioned above, a strand of literature towards explaining the happiness paradox focuses on “missing” economic variables. One idea which has been suggested is that of income comparisons. The idea that individuals compare their income to the income of similar individuals belongs to the general theoretical framework of reward comparisons. The general notion of comparing rewards with others has a long and persistent presence in the social

sciences and in particular in many psychological, social and managerial theories. Examples of theories where the idea of comparing rewards is central are: social comparison theory, reference group theory, relative deprivation theory, adaptation level theory, dissonance theory, and equity theory (see for instance, Adams, 1963; Deci & Ryan, 2000; Festinger, 1954; Greenberg, 1990; Martin, 1981; for surveys see Earl, 1990, and Kapteyn & Wansbeek, 1982).

The main thrust of the income comparisons argument in the context of happiness research is that individuals do not extract much happiness from their absolute income but from their position relative to other people's incomes. In terms of the life satisfaction framework that was used above, this implies:

$$U = (y, y^c, z) \qquad (5)$$

with $\partial U/\partial y > 0$ and

$\partial U/\partial y^c < 0$

where $y^c$ is the "comparison income" or the "reference group income". The negative sign of the last relation, shows that life satisfaction falls as the income of the relevant reference group increases. Thus, raising everybody's income does not necessarily increase general happiness. This is because in comparison to others, income has not improved (Andrews, 1991; Easterlin, 1974, 2001; Ferrer-i-Carbonell, 2005; Frank, 1985, 1999; Kenny, 1999; Veenhoven, 1991). A similar line of thought has to do with the changing income aspirations. More specifically, it has been argued that aspirations change over the life-cycle roughly in proportion to income and this means that they have

offsetting effects on happiness levels. According to this outlook, happiness level has a positive relationship with current income but a negative one with aspirations about future income. Moreover, aspirations are based on past income. Given that material aspirations change over life cycle in proportion to income, it is likely that happiness level remains constant while income rises. The main example of this approach is the work of Easterlin but it also draws from work in psychology (Easterlin, 2001; Inglehart, 1990; Kahneman, Wakker, & Sarin, 1997).

The idea of comparison or relative income is quite important in economics and has been used in many theoretical contexts (Drakopoulos, 2011; Lommerud, 1989)[1]. It was first suggested as a possible way of explaining the paradox by Easterlin (1974). The same author uses it in a later paper (Easterlin, 2001)**,** in which he elaborates on the idea of income aspirations in relation to actual income. A number of empirical papers have focused on the empirical testing of the idea in relation to happiness at both the individual and the aggregate level. On individual happiness, McBride (2001) presents an empirical analysis to test for the effect of an individual's own income, past financial situation, and cohort (reference) income on subjective well-being. McBride (2001) finds that the higher the income of the peers, the less satisfied is the individual. Similar findings are presented in a relatively early paper by Tomes (1986) which utilizes social - psychological measures of happiness and satisfaction.

There are numerous empirical studies on the aggregate level. A recent study by Blanchflower and Oswald (2004) investigates happiness in the

[1] In some formal specifications y is income, $y^c$ is called reference group or comparison income, while the ratio $y/y^c$ is called relative income (see also Clark, Frijters & Shields, 2008).

United States and Great Britain. Apart from confirming the existence of the happiness paradox for US and UK, the authors find that people care about comparison income. They also find indications that income is still important for lower income groups. Similar results are found by other empirical papers concentrating on the US (Luttmer, 2005), Latin America (Graham & Felton, 2006), Canada (Helliwell & Huang, 2005) but also for emerging economies like China (Knight, Song, & Gunatilaka, 2009). The gist of these works is that life satisfaction or happiness is largely relative in income. Finally, a survey of empirical research on happiness and income shows a clear connection between income comparisons and happiness levels. As Frey and Stutzer (2002b) write: “It is not the absolute level of income that matters most but rather one’s position relative to other individuals” (p. 411**;** see also Ferrer-i-Carbonell, 2005).

The concept of income comparisons has also attracted criticism given that there is no universal agreement about the income group that people compare themselves within the relative income hypothesis (Sousa-Poza & Sousa-Poza, 2000; but see also the discussion in Rablen, 2008). However, the relative income approaches to the paradox might be enhanced (and respond more adequately to criticism) if a hierarchical system is also taken into account. The hierarchical approach implies that happiness depends only partly in comparisons. Basic needs cannot be substituted and this limits the human capacity for adaptability. As Root Veenhoven (1991) states: “To a great extent happiness depends on the gratification of innate bio-psychological needs which do not adjust to circumstances” (p. 32). Comparisons and adaptation are important once the basic needs are met.

Therefore, further increases of income do not result in equivalent increases on happiness because people start comparing their income with the income of similar individuals, and this implies that their absolute income is not as important as before. Thus, a combination of the two approaches might contribute towards a more complete understanding of the paradox of happiness.

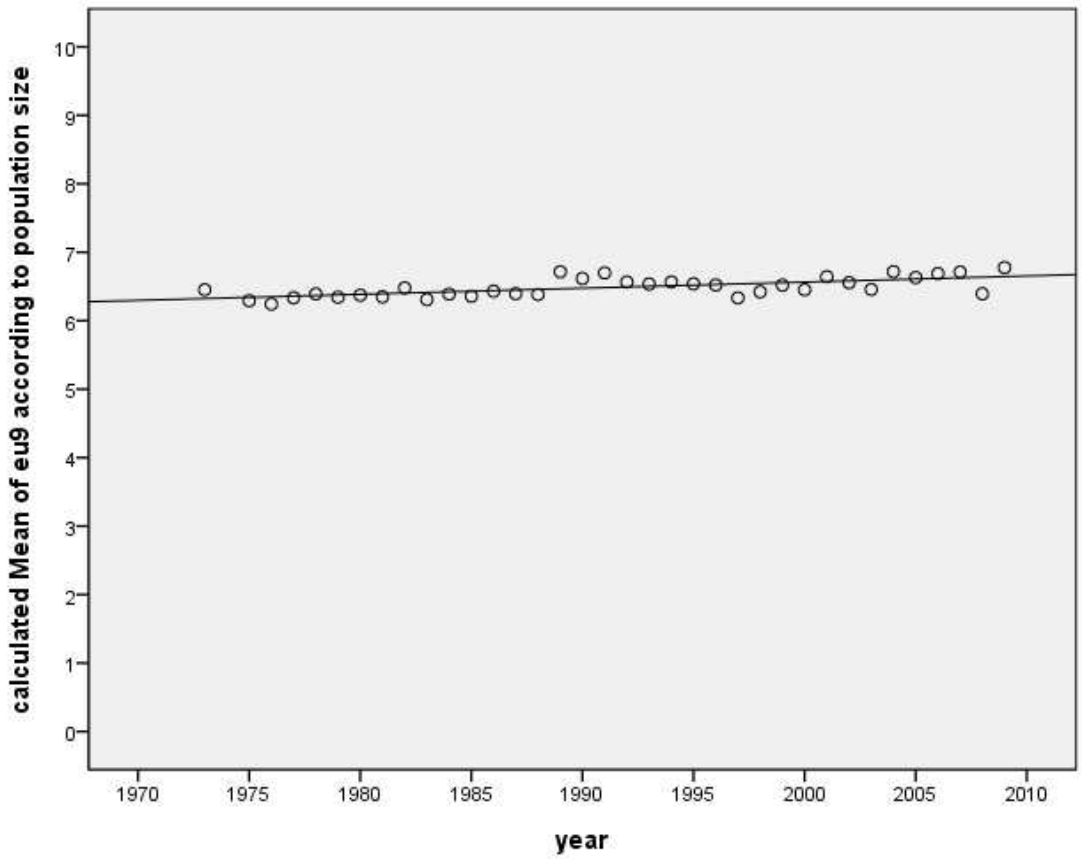
## 6. Concluding comments

According to most economists, income is among the most important determinants of happiness. This is also supported by many empirical studies which focus at a particular point in time and country. However, the relationship is problematic given that there is ample evidence that increases of income over time do not correspond to equivalent increases in reported happiness and this is the central idea of the paradox of happiness. There have been a number of explanations of the paradox which include economic and non-economic considerations.

The basic aim of this chapter was to highlight two concepts which might enhance further our understanding of the income - happiness relationship. More specifically, it suggested that the combination of the notion of needs hierarchy and of comparison income can shed more light to the issue. Hierarchical choice has been studied by many social scientists and has been applied in a wide variety of social and economic issues. The notion of comparison income belongs to general theoretical framework of reward comparisons. Both needs hierarchy and income comparisons have strong empirical support in many studies across a number of fields. After a

discussion of the characteristics of the two concepts in the context of happiness research, the present chapter argued that their combination might explain many empirical results that point to the happiness paradox. In particular, empirical studies indicate that income might be very important variable in providing happiness up to a certain level. After that level has been reached, it ceases to do so and other variables become important. In other words, there exists a curvilinear relationship between the two variables: income has a positive relationship with happiness up to a certain level of income but the relationship weakens after that level. The theoretical implications of needs hierarchy and comparison income mean that income is very important for happiness up to the satisfaction of basic needs. People start comparing their income after the basic needs have been met. Thus, further increases of income do not result in equivalent increases on happiness because people start focusing on comparing their income with the income of other people rather than on their absolute income. The same argument holds when there is a fall in average income: happiness levels will also fall but not to the same extent, unless the reduction in income is so substantial as to affect basic needs satisfaction. One can also get an insight of these points from the recent economic recession in the US and Europe in 2008. Some preliminary studies indicate that due to average income drop, overall reported happiness has also dropped but not to the same extent as income (see Stellar, 2011). This finding also implies that income is not very important for happiness when basic needs are satisfied and when people compare their incomes.

Thus, although many studies have concentrated on suggesting a number of variables which might account for the happiness paradox, a combination of the above two notions might be a way forward towards a more complete understanding of the complex relationship between income and happiness.




# Figure 1: Trend Average Happiness in EU9 Nations

Weighted average of first 9 member states of the European Union 1973-2009
The population weights are about as follows (1995):
Belgium 0.037
France 0.215
(West)Germany 0.234
Ireland 0.015
Italy 0.207
Luxembourg 0.002
Netherlands 0.058
Denmark 0.019
United Kingdom 0.212

Source: Veenhoven (2011)

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