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Does Economic Development and Democracy Translate to Happiness? A Global Perspective

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Abstract: This paper explores the relatively intriguing area of research on the "economics of happiness". The present study was designed to determine the effects of economic development and democratic freedom on happiness. A cross-sectional econometric analysis is employed to examine the impact of the economic variables of income and democracy on happiness across thirty eight countries in 2011. Democracy and economic development were found to contribute positively to happiness. The findings also indicate a bi-directional relationship between happiness and its dual determinants of income and democratic freedom. It was found that countries reporting higher levels of well-being tend to enjoy higher incomes and seem to choose democracy over other political overtures. Institutions of democracy were found to enhance economic development and this relationship is bi-directional. The study concludes with an examination of policy implications of the findings.

Key words: Happiness; income level; democracy, subjective well-being.

INTRODUCTION

There is a growing body of research in economics concerning happiness or life satisfaction and its relationship with a wide range of variables. The subject of happiness has always intrigued the human species, and has long been the focus of attention of the humanities. Aristotle, as cited by Tracy (2010), clearly emphasized the importance of happiness when he pointed out that "*Happiness is the meaning and purpose of life, the whole aim and end of human existence*".

The concepts of happiness, life satisfaction or subjective well-being (SWB) are mutually inter-related, and have always been interchangeably used in research dealing with quality of life (Diener, 1984; Argyle, 1987; Michalos, 1991; Frey and Stutzer, 2000; Feldman, 2008). The literature on happiness began its roots in the areas of psychology and sociology. It was only recently that happiness became an area of research interest among economists. The first modern economist to investigate the economics of happiness was Richard Easterlin, who in the early 1970s, discovered what is now famously known the Easterlin Paradox. It was only in the 1990s that a more generalized interest in happiness research begun (see among others, Easterlin, 1974, 1995; Clark and Oswald, 1994; Frey and Stutzer, 2002; Blanchflower and Oswald, 2006).

There has always been an attraction towards certain religions because these religions provide their followers with recipes for attaining higher levels of happiness or well-being. Taking care of the well-being of a nation is an area of great interest to all governments. Nations that do not attend to the well-being of their citizens could see a rise in the number of suicides, crimes and various other socio-economic problems. If left unchecked, long periods of unhappiness and dis-satisfaction could be the cause of a decline in a nation's productivity and progress.

The present study is in the right direction as it explores a relatively intriguing area of research on the "economics of happiness". The study is relevant to both developed and developing countries as "happiness' or 'well-being' is the right of every person and should be considered a "universal" objective of the human population. Exploring and understanding the determinants of happiness will assist policy makers to conciously set policies that will take the people's welfare and well-being into consideration.

For as long as one can remember, income (proxied by GDP per capita) has been used as the key measure of well-being or quality of life. Despite the key role income plays, this indicator of well-being is riddled with many limitations. While income accentuates changes in material welfare, it ignores changes in quality of life. Income does not look into urban decay, environmental degradation, increasing crime rates, decline in social trust and other such negative externalities associated with development and progress, rendering it to be a rather inadequate measure of well-being. This inadequacy has led scholars and policy makers to explore for alternative measures of quality of life, leading to the numerous studies on happiness or subjective well being.

Happiness can be used as a complementary indicator (aside from social and economic indicators) to assist in policy decision making. People's subjective reactions to events are also relevant to policy because these reactions affect people's future behaviour. Subjective assessments of well-being are much broader than social

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and economic indicators because they are not limited to an evaluation of those aspects of life that are observable to others. Subjective assessments of well-being also provide a common metric that can be used to compare outcomes across domains, e.g. policy makers may be faced with trade-offs when deciding whether to promote advances in health or reducing pollution. Therefore, it is imperative that emphasis be given to research on this area as it will assist governments and businesses in making the right decisions especially when it involves the intricate human being.

Looking at the global trend of happiness, one is able to witness the existence of certain trends and patterns. While the levels of happiness seem to be higher in developed countries, there is empirical evidence that some developing countries are also beginning to enjoy high levels of well-being. This seems to be the case for the ASEAN-5 economies. Looking at the data on life satisfaction of the ASEAN-5 economies in the 2006-2011 periods, it can be seen that Singapore, on average is the happiest nation compared to the other Asean countries. Thailand is seen moving up the happiness ladder from 2008 onwards as exhibited in Figure 1.10, while Malaysia which started on a happier level in 2006, has seen its happiness levels declining since 2008.

Source: R. Veenhoven, World Database of Happiness, collection Happiness in Nations, Overview of happiness surveys using Measure type: 31D / 11-step numeral Best-Worst possible Life, viewed on 2012-08-26 at http://worlddatabaseofhappiness.eur.nl

Fig. 1: Happiness in the Asean-5 economies (2006-2011).

This research attempts to investigate the impact of happiness with the hope that the findings would enable policy makers to plan and implement proper policies in the pursuit of happiness and a better quality of life. It is hoped that the study will be of interest to policy makers across the world, as they begin to understand and acknowledge the nature and determinants of well-being. The progress of society and the success of public policies are measured by the extent to which well being of the citizens are improved and sustained. Thus, the main motivations of this study focuses on enhancing the understanding of happiness or life satisfaction and in finding alternative ways of approaching happiness.

The study is organized as follows. Firstly, the literature review is briefly discussed. The next section describes the data and methodology and this is followed by a discussion of the findings. The final section concludes.

2.0 Literature Review:

Amartya Sen (1999) has described democracy as a ‘‘universal value.’’ Sen in his deliberation for universality, similar to other theorists of democracy, concentrates on democracy’s instrumental effectiveness at securing other good ends, and not on democracy as an end-in-itself. The substantial value of democracy as a tool for securing its effectiveness lies as a reliable instrument for gaining and defending specific valued ends, including liberty and social justice. Plato would argue that democracy had non-instrumental value, whereas Aristotle would have answered with a qualified affirmativeness (Ober, 1998). Therefore, democracy could be one of the fundamental values to be considered for human happiness. Hence, the relationship between political democracy and economic growth has been the center of debate in the past fifty years. Supporters of democracy argue that the motivations of citizens to work and invest, the effective allocation of resources in the marketplace, and profit maximizing private activity can all be maintained in a climate of liberty, free-flowing information and secured control of property (North 1990).

The literature further, avers the three revolutionary stages in the development of democracy (Dahl, 1994). The first is Athenian Democracy, characterized by the citizens' assembly (Bonner, 1967). The second was brought about by the French revolution. It's principle of representation allowed democracy to extend over a wide area. The third stage is semi-direct democracy, in which the citizens may decide on political issues via initiatives and referenda (Cronin, 1989; Budge, 1996). Bruno (1999) had argued that the more developed (direct) democracy is, the happier the citizens are. His study suggests that the higher levels of happiness associated with more extensive democracy, is partly due to the utility produced by the political process itself, and not only due to favorable political outcomes (Bruno, 1999).

Protracted periods of economic development seem to be conducive to rising levels of happiness, and severe economic decline can have the opposite effect. Similarly, the breakdown of the social and political order that accompanied the collapse of communism in many societies was linked with declining levels of happiness, despite the piercing, sudden increase in political rights and civil liberties that occurred at the same time. We suspect that democratic institutions do contribute to human happiness to an appreciable extent, but the causal linkage seems to work much more strongly in the opposite direction, with democratic institutions being much more likely to flourish in a social climate characterized by high levels of subjective eudaimonia which are linked with high levels of trust, tolerance and emphasis on self-expression, constituting a syndrome of "self-expression values" (Inglehart and Welzel, 2005).

Thus Inglehart and Welzel examine why economic development goes with democracy, hypothesizing that cultural changes provide the link between development and democratization.

Economists are increasingly interested in the impact of institutions on economic development. Rigobon and Rodrik (2005), Dollar and Kraay (2003) and Acemoglu and Robinson (2000) argue that high quality institutions in a country, represented by a number of dimensions such as the protection of property rights and a functioning democracy, foster economic development because they promote investment in human and physical capital. Countries that are governed by high quality institutions experience higher capital accumulation, productivity, and output per worker (Hall and Jones, 1999). Rodrik (1999) shows how the extent of democracy in a country has a positive impact on wages received by manufacturing workers.

Barro (1996) argues that a more democratic regime stimulates economic growth when the level of political freedom is low. Democracies can limit state intervention in the economy, are responsive to public's demands on areas such as education, justice and health, and encourage stable and long run growth (Rodrik, 1999; Lake and Baum, 2001; Baum and Lake, 2003). Democracies are also said to be prone to conflicts due to social, ethnic and class struggles. While some authors favor authoritarian regimes to suppress conflicts, resist sectional interests and take coercive measures necessary for rapid growth, others remain sceptical on the whole as to whether regimes, rather than markets and institutions, matter for growth (Bhagwati, 1995).

The literature on the economics of happiness acknowledges the dictum that utility should be considered in terms of happiness, which can and should be measured. In the revealed preference theory, people are assumed to be well informed when making decisions about their choices. This is often not the case, as individuals may not always be rational in making decisions about their best choice and forgoing their next best alternative.

Economic growth has always been considered a major aim of policy decisions as it is believed to increase well-being brought on by material welfare gains. The consequence of economic growth and development is that it provides a means to an end. The "end" refers not to the material gains that humans receive, but more so to the enhancement of human well-being or happiness. Oswald (1997) encapsulates this by saying that "*Economic things matter only in so far as they make people happier*".

Powdthavee (2007) mentions that, the standard economic theory of utility which emphasizes on the objectivist approach has been challenged, both theoretically and empirically, by several innovative economists such as Hermalin and Isen, 1999; Loewenstein, 1999 and Rabin, 1997 (as cited by Powdthavee, 2007). Economists are now able to employ the subjective utility approach to study happiness as this approach offers them a much needed and useful alternative in obtaining a better insight into the concept of human well-being. To economists conducting research on well-being, happiness itself is subjective -- what makes one person happy may or may not make someone else happy. Studies measuring happiness, including the World Database of Happiness project, rely on subjective data rather than objective data, and generally define happiness as how satisfied a person is with the quality of his or her life.

The study by Easterlin (1974), was the first to use happiness (or subjective well-being) as a proxy for economic utility. The validity of subjective well-being as a proxy for individual well-being has been the subject of query but numerous studies have conducted stringent validity test to examine this and found it to be a satisfactory empirical approximation (A summary of the methods to validate happiness data is provided by Frey and Stutzer (2002) in their book entitled Happiness and Economics). Oswald and Wu (2010) demonstrated the evidence of a strong match between subjective and objective well-being across the United States. Studies have found that happy people are rated as happy by friends, family members and spouses. People who reported high subjective well-being also smiled more often and were less likely to commit suicide (Steiner, Leinert and Frey, 2010).

While studies on happiness have received a fair amount of attention, further indepth analysis and exploration into this rather intriguing area of research needs to be carried out in order to provide a meaningful guide to policy makers and various other interested stakeholders. It is therefore the objective of this study to further explore this area from yet another angle, so as to add to the existing literature on happiness.

Some studies have found ways of measuring happiness, while others have used happiness data in comparative studies to determine how populations in various countries were doing in terms of happiness. Krueger and Schkade (2008) found that the reported well-being of populations were reasonably stable over time. Easterlin (1974) on the other hand, discovered that despite experiencing a rising growth in GDP in the United States, this did not translate into higher levels of happiness. It was concluded that people generally compared themselves to those of equal standing in other countries and were not satisfied with what they had and wanted more. As Blanchflower and Oswald (2011) succinctly put it: "We go from having one Ford to having three Lexuses, and nobody is happier".

Myers (2002) found that some wealthy countries had more satisfied people, while the very poor tend not to be happy. The existence of a positive relationship between income and happiness was also found in the studies done by Blanchflower and Oswald (2004); Stevenson and Wolfers (2008); Deaton (2008); Helliwell (2003) and Blanchflower (2008). Easterlin (2001) cited the works of Andrews (1986), p.xi,; Argyle, 1999, pp.356-7 and Diener, 1984, p. 533 and aptly wrote that "*As far as I am aware, in every representative national survey ever done, a significant bivariate relationship between happiness and income has been found*".

As far as the relationship between pollution and happiness was concerned, Van Praag and Baarsma (2001) and Welsh (2002) found the two variables to be negatively related. Welsch (2002, 2006) found pollution to have a detrimental impact on overall happiness while Ferrer-i-Carbonell and Gowdy (2007) established that life satisfaction reduces for the people who live in areas where there are environmental problems.

A rather interesting finding among the numerous studies conducted on happiness points to the existence of a convergence in the empirical findings across countries (Fahey and Smyth, 2004; Powdthavee, 2005; Appleton and Song, 2008 and Diener, Ng, Harter, and Arora, 2010). The literature on happiness is quite extensive in the West while the spark of interest on happiness research has only recently begun in the East. The literature on happiness in the Asian countries is somewhat limited in scope and as such, it is hoped that this cross-sectional study will further contribute to this limited literature.

In the study of economics, the concept of utility is often used to indicate satisfaction or well-being. There are several ways of measuring utility or satisfaction. The two main approaches of measuring utility are the ordinal and cardinal approach. "Economists often infer utility or preferences from the observable choices that people make (revealed preferences), but this objective well-being approach relies heavily on the assumption that people act rationally – an assumption which does not hold in many situations as has been shown by numerous behavioral economists" (Zimmermann, 2007, page 1). Since economists measure utility objectively, it may not capture the essence of utility or satisfaction in the best manner possible. To overcome this, there have been an increasing number of researchers (Oswald, 1997 and Frey & Stutzer, 2000) who have started using subjective measures of utility in their research.

The concept of utility or satisfaction is of great importance to policymakers as their policy decisions are based on the benefits or utility that people receive as a consequence of these policy decisions. In light of what has been discussed thus far, this study intends to ascertain the impact of income level, health care expenditure and pollution on happiness.

3.0 Data and Methodology:

The study employs cross-sectional econometric analysis of 38 countries in the year 2011 to investigate the possible existence of associations between happiness and various economic variables comprising of GDP per capita and democracy levels. The 38 countries were chosen based on the availability of data on happiness to feasibly carry out a cross-sectional analysis. The 38 countries involved, ranging from developing to developed countries across the world, is shown in Table 1 below.

The life satisfaction (subjective well-being) index will be used as a proxy for happiness. The data on the economic variables used was taken from World Bank Global Health and World Databank: World Development Indicators database. The happiness data was taken from the World Database of Happiness (Veenhoven, 2007). This data was collected based on the following question: "*Here is a ladder representing the 'ladder of life'. Let's suppose the top of the ladder represents the best possible life for you; and the bottom, the worst possible life for you. On which step of the ladder do you feel you personally stand at the present time*?". The answers are based on ratings with a scale of 1 to 10.

Table 1: Countries involved in the Study.

Albania	Belarus	Canada	Denmark	Malaysia
Algeria	Bolivia	Chile	Egypt	Mexico
Argentina	Bosnia Herzegovina	China	France	Nigeria
Azerbaijan	Brazil	Croatia	Germany	Pakistan
Japan	Bulgaria	Czech Republic	Greece	Poland
South Korea	Israel	Thailand	Hungary	Romania
Sweden	Italy	United Kingdom	India	Slovakia
		United States	Indonesia	Spain

As the availability of time series data on happiness is rather limited, we employed a cross sectional analysis and were unable to proceed with time-series or panel data analysis for the current study. The analysis used data from the year 2011 for 38 countries across the world, including Malaysia. The White Standard Error option was used to cater for heteroscedasticity, which is common in cross sectional analysis.
The following equations were estimated for their respective effects.

Model 1: $LHappiness = \beta_0 + \beta_1 LGDPC + \beta_2 LDemo + \varepsilon_1$ (1)
Model 2: $LGDPC = \delta_0 + \delta_1 LHappiness + \delta_2 LDemo + \varepsilon_2$ (2)
Model 3: $LDemo = \alpha_0 + \alpha_1 LGDPC + \alpha_2 LHappiness + \varepsilon_3$ (3)

Model 1 was estimated to investigate the impact of the chosen two economic variables on happiness, while Model 2 and 3 were estimated to examine whether a bi-directional flow existed between happiness and the variables concerned.

4.0 Results and Analysis:

Model 1 was estimated and the results are shown in Table 1. Based on the results for 2011, both economic development (proxied by GDP per capita) and democracy appear to have a significant impact on the level of happiness. There is evidence of a direct relationship between happiness and GDP per capita and between happiness and democracy. The results are consistent with theory and the literature on happiness. Myers (2002), Blanchflower and Oswald (2004); Stevenson and Wolfers (2008); Deaton (2008); Helliwell (2003) and Blanchflower (2008) also concurs with the findings of this study on the positive relationship between income and happiness.

Wealthy countries were found to have happier people compared to their poorer counterparts as established in a study by Myers (2002). Countries with higher levels of economic development will see a rise in consumption patterns that will result in a rise in utility, enhancing the subjective well-being or happiness of its people. Myers (2002), however, asserted that when people reached a certain threshold level of income which allowed them access to the necessities of life, money no longer seemed to make a substantial difference.

Easterlin (2001) cited the works of Andrews (1986), p.xi,; Argyle, 1999, pp.356-7 and Diener, 1984, p. 533 and aptly wrote that "*As far as I am aware, in every representative national survey ever done, a significant bivariate relationship between happiness and income has been found*".

Table 1: (Model 1: $LHappiness = \beta_0 + \beta_1 LGDPC + \beta_2 LDemo + \varepsilon$).

Variables	Level of Happiness
Constant	0.810543* (0.203420) [3.984584]
GDP per capita	0.060019*** (0.032683) [1.836429]
Demo	0.209686** (0.078496) [2.671283]

, **, * Significant at 1%, 5% and 10% levels respectively; ( ) denotes standard errors; [ ] denotes t-statistics; The figures have been corrected for heteroscedasticity by using the White test.*

The significantly positive impact that democracy has on happiness concurs with the empirical findings of Frey and Stutzer (2000); Inglehart (2006); Dorn et.al (2007) and Helliwell & Huang (2008). Countries with strong constitutional democratic institutions have been found to record higher happiness scores. The citizens of these countries live in societies where their interests are well taken care of as these democratic institutions allow citizens the basic right and freedom to vote on issues of interest and to participate, without fear, in elections, providing them the opportunity to make choices according to their own preferences.

In a cross-sectional study of 28 countries, Dorn *et al*. (2007) established empirical evidence that countries with a strong underlying tradition of democracy enjoyed higher levels of happiness. Similarly, Inglehart (2006), who examined the relationship between happiness and measures of democracy for 39 countries from 1981 to

2006, discovered the existence of a strong correlation between the two variables. The author concluded that people who lived in democratic environments were generally a happier lot.

The results derived from estimating Model 2 using data for the year 2011 indicate that the level of happiness and the strength of democratic institutions have a significantly positive impact on economic development (proxied by GDP per capita). The findings illustrate that higher levels of happiness drive economic development bringing about increases in GDP per capita. Studies conducted by King (2006), Maital (2006) and Achor (2010) concur with our findings. Empirical evidence have shown that employees with higher happiness levels are far more productive, have better managerial skills, take on leading roles and higher positions in the organisations and are receive higher salaries and bonuses. The positive impact of happiness on economic development signifies the pertinent role played by policy makers in implementing people-centered policies leading to better and more efficient human resource management, emphasizing first and foremost, on the people's well-being before taking care of their other needs.

Rawls (1999) focused on the distribution of political and civil rights in his elaboration on justice. These are according to Rawls' lexically prioritized over economic welfare considerations. Under the Rawlsian veil of ignorance, individuals would not be willing to compromise their political and civil rights for economic gains. Even if this assertion is questionable, most political theorists and philosophers argue that freedom and fundamental rights and liberties outside the economic realm are normatively valuable in themselves (Sen, 1999; Nozick, 1974; Beetham, 1999). As Rawls (1999) argue, political and civil liberties and rights are important for people to be autonomous; that is to be able to define how they want to live their lives and act accordingly. The abilities to make free choices and live autonomously are also argued to be important for subjective well-being (Inglehart *et al*, 2008).

Democracy is considered to be the regime type that best secures the protection of individual rights and political freedom. In this study the assumption would be that individuals' value democracy in their own right, and not only because of its instrumental value in bringing forth different economic or other outcomes. Further, democracy does not only produce increased "outcome utility", but also increased "procedural utility". Procedural utility means that people value the conditions and process that lead to certain outcomes, and not only value the outcomes per se Frey, (2008). Economists tend to focus on outcome utility, but a key result from Frey and Stutzer (2000), claim that citizens do not only gain utility from the outcome of political processes and its material consequences but also from the democratic process itself. Citizens value the possibility of engaging themselves directly with politically relevant issues, quite irrespective of the outcome". A quite compelling and similar argument can be made with respect to the comparison of indirect democracy and authoritarian regimes. As Frey notes, democracy could be expected to contribute to procedural utility "because it enhances individuals' perception of self-determination" (2008). Moreover, if most citizens' preferences are better represented in policy making in democracies than in dictatorships, it would be natural to expect higher outcome utility on average in democracies as well.

Table 2: (Model 2: LGDPC = $\delta_0 + \delta_1$LHappiness + δ_2LDemo + ε_2).

Variables	GDP per capita
Constant	2.160020 (1.434355) [1.505917]
Happiness	2.693650** (1.036806) [2.598026]
Demo	1.384790** (0.574201) [2.411682]

**, ** Significant at 1% and 5% level respectively; ( ) denotes standard errors; [ ] denotes t-statistics; The figures have been corrected for heteroscedasticity by using the White test.*

The results in Table 3 indicate that democracy is positively related to income and happiness. A democratic society is often regarded as a prerequisite for economic growth and development. Yet, most empirical studies are not capable of identifying a positive link between GDP growth and democracy indexes. Higher levels of economic development lead to better established democratic institutions. In addition, our model involves a particular threshold value in income such that the growth-reducing impact of dictatorial consumption (corruption) outweighs the higher (initial) infrastructure investment. Thereafter, it is shown that the growth rate under democracy strictly dominates the one in dictatorship. Hence, there exists an intermediate income level such that economic development in a democratic society starts to outperform the one in dictatorship Schiffbauer, Ling (2010).

Barro (1999) finds that the propensity for democracy rises with per capita GDP. Minier (2001), on the other hand, shows that an increase in per capita GDP is associated with an enhanced demand for democracy, approximated by pro-democracy public demonstrations. Papaioannou and Siourounis (2008) report that economic development is a key factor determining the intensity of democratic reforms in a country. On the other hand, Acemoglu *et al*. (2008) finds no evidence of a significant impact of GDP growth on democratization.

It is interesting to note that happier people prefer democracy compared to other forms of political institutions. This suggest that happier people have a more positive outlook of their world and would like to enjoy their basic rights and freedom to vote on issues of interest and to participate, without fear, in elections, providing them the opportunity to make choices according to their own preferences. The positive impact of democracy on economic development is expected, as democratic institutions allow high degrees of business freedom and freedom of choice that are the basic tenets of economic development. Studies have shown that all the aspects of economic democracy, governance and private sphere in the economy have high correlations with political democracy.

In other words, the mere existence of participatory democracy implies the broader institutions conducive to development. As Rodrik (2000) argues, democratic regimes can be the meta institution for building market-supporting institutions. Further, various studies find that political democracy has enormous indirect effects on development through human capital accumulation, income distribution, and political stability (Baum and Lake 2003, Alesina, 1996). In addition, Sturm and de Haan (2001) find that the presence of democracy in a country positively affects the level of economic freedom. Thus, on the question of political democracy and growth, one should remember the broader associations that encompass the channels, or the indirect effects, between democracy and growth rather than one-to-one causation from regime to develop.

Bhagwati *et al* (1995) and Rodrik *et al* (2000) point out, democracies provide higher quality development through various means. Rodrik puts it in the following way: participatory democracies enable a higher-quality development by allowing greater predictability and stability in the long-run, by being stronger against external shocks, and by delivering better distributional outcomes. Democratic institutions would help markets function "perfectly", as is assumed in neoclassical economic models. As an extension to such arguments, the "volatility" channel has also been shown to be an important indirect effect of democracy on growth. Sah (1991) had argued that authoritarian regimes exhibit more volatile performance than democracies. Nondemocratic regimes are not a homogeonous lot (de Haan and Siermann, 1995, Alesina *et al*. 1996, Alesina and Perotti 1994), whereas democracies are more homogenous and can provide stable economic progress. Such a notion also implies less volatile and long-lived economic development.

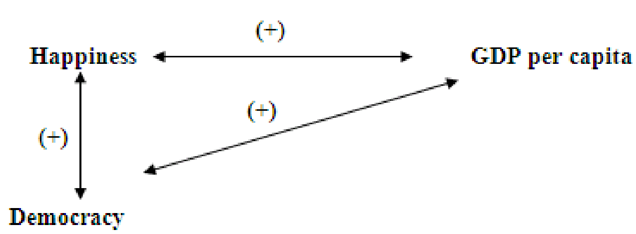
Table 3: (Model 3: LDemo = $\alpha_0 + \alpha_1$LGDPC + α_2LHappiness + ε_3).

Variables	Carbon Emission
Constant	-0.357300 (0.494734) [-0.722207]
GDP per capita	0.102902* (0.032555) [3.160838]
Level of Happiness	0.699291** (0.286078) [2.444404]

**, ** Significant at 1% and 5% level respectively; ( ) denotes standard errors; [ ] denotes t-statistics; The figures have been corrected for heteroscedasticity by using the White test.*

The figures in Tables 1, 2 and 3 have been corrected for heteroscedasticity by using the White test i.e. the estimates are White Heteroscedasticity-Consistent Standard Errors and Covariance.

In conclusion, based on the findings of the three models, we find that there is a bi-directional positive relationship between income and the level and happiness; between democracy and level of happiness and finally between income and democracy as shown below:



5.0 Conclusion:

The study investigates the economic determinants of happiness. The findings indicate the importance of economic development and democratic freedom on the level of happiness of nations. The existence of well-established democratic institutions was also found to enhance happiness. Gibson (1998) argues that tolerance is a crucial prerequisite of democracy. The very essence of democracy is that the government tolerates the opposition and allows it to advocate its views; and the crucial test of democracy is when one tolerates views one heartily dislikes. Inglehart *et al*. (2008) found that democratization contributes strongly to happiness, whereas the cross-section results from a large sample reported here show a non-significant effect from democracy on life satisfaction. Therefore, democratic institutions give rise to the self-expression values that are so closely linked with them. In other words, democracy makes people tolerant, trusting, and happy, and instils post-materialist values. This interpretation is appealing and suggests that we have a quick fix for most of the world's problems: adopt a democratic constitution and live happily ever after.

There is however, room for improvements in this study. One of the main limitations of the paper is the lack of the time-series data on happiness. The analysis of this study was only based on cross-sectional data available for the year 2011. This may have some impact on the accuracy of the estimations and its subsequent implications in policy-making decisions. The other drawback is that the data on happiness that was employed in this study, did not differentiate between the various sources of happiness but only referred to the average happiness of a nation based on the answers given to a single question on happiness. The use of multiple-item survey data would produce better results. Despite the limitations explained, this study is still useful as it provides some light in an area that is captivating the interest of researchers, corporations and policy makers the world over. As the happiness or subjective well-being of people is vital for the long term economic growth of a nation, it is imperative for the relevant authorities to better understand the drivers of happiness so as to formulate strategic public policies that would enhance the welfare and happiness of people across the world.

REFERENCES

Achor, S., 2010. The Happiness Advantage: The Seven Principles of Positive Psychology that Fuel Success and Performance at Work. *New York: Random House, Inc.*

Appleton, S., L. Song, 2008. Life satisfaction in urban China: Components and determinants. *World Development,* 36: 2325-2340.

Argyle, M., 1987. The Psychology of Happiness. London: Metbuen.

Blanchflower, D. and A. Oswald, 2006. Happiness and the Human Development Index: The Paradox of Australia. *Working Paper no. 11416*, National Bureau of Economic Research, Cambridge, M.A.

Blanchflower, D.G., 2008. "International evidence on well-being". IZA Discussion Paper No.3354.

Blanchflower, D. and A. Oswald, 2011. International Happiness: A New View on the Measure of Performance. *Exchange. Academy of Management Perspectives,* February 2011, 6-9.

Bruno S. Frey, A. Stutzer, 1999. Happiness Prospers in Democracy; Journal of Happiness Studies, 1: 79-102.

Budge, I., 1996. New Challenge of Direct Democracy (Polity Press, Cambridge).

Cronin, T.E., 1989. Direct Democracy. The Politics of Initiative, Referendum and Recall (Harvard University Press, Cambridge, MA).

Dahl, R.A., 1994. 'A Democratic Dilemma: System effectiveness vs. citizen participation', Political Science Quarterly, 109: 23-34.

Deaton, A., 2008. "Income, Health and Well-Being around the World: Evidence from the Gallup World Poll". *Journal of Economic Perspectives,* 22: 53-72.

Diener, E., 1984. Subjective Well-Being. *Psychological Bulletin,* 95(3): 542-575.

Diener, E., W. Ng, J. Harter, R. Arora, 2010. Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. *Journal of Personality and Social Psychology*, 99: 52-61.

Duha Altindag, Naci Mocan, 2010. Joblessness and Perceptions about the Effectiveness of Democracy, Journal of Labour Research.

Easterlin, R., 1974. Does Economic Growth Improve the Human Lot? in Paul A. David and Melvin W. Reder, eds., *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, New York: Academic Press, Inc.

Easterlin, R., 2001. Income and Happiness: Towards A Unified Theory. *The Economic Journal*, 111: 465-484.

Fahey, T., E. Smyth, 2004. Do subjective indicators measure welfare? Evidence from 33 European societies. *European Societies*, 6: 5-27.

Feldman, F., 2008. Whole Life Satisfaction Concepts of Happiness. University of Massachusetts at Amherst, Massachusetts USA.

Frey, B.S., A. Stutzer, 2000. Happiness, economy and institutions. *Economic Journal*, 110: 918-938.

Frey, B.S., A. Stutzer, 2002. Happiness and Economics: How the Economy and Institutions Affect Human Well-Being. Princeton University Press.

Frey, Bruno S., 2008. Happiness: A Revolution in Economics. Cambridge, MA: The MIT Press.

Frey, Bruno S. and Alois Stutzer, 2000. "Happiness Prospers in Democracy". Journal of Happiness Studies, 1(1): 79-102.

Gibson, James L., 1998. "A Sober Second Thought: An Experiment in Persuading Russians to Tolerate." American Journal of Political Science, 42: 819-850.

Helliwell, J.F., 2003. "How's Life? Combining Individual and National Variables to Explain Subjective Well-Being". *Economic Modelling,* 20: 331-360.

Inglehart, Ronald and Christian Welzel, 2005. Modernization, Cultural Change and Democracy – The Human Development Sequence. Cambridge: Cambridge University Press.

Inglehart, Ronald, Robert Foa, Christopher Peterson and Christian Welzel, 2008. "Development, Freedom, and Rising Happiness. Working Paper.

Kahneman, Daniel, 2000a. "Experienced Utility and Objective Happiness" in Daniel.

Krueger, A., D. Schkade, 2008. "The reliability of subjective well-being measures," Journal of Public Economics, Elsevier, 92(8-9): 1833-1845.

Lake, D.A. and M.A. Baum, 2001. The Invisible Hand of Democracy: Political Control and the Provision of Public Services. Comparative Political Studies, 34; 587-621.

Maital, S., 2006. Reclaiming Moral Sentiments". In Handbook of Contemporary Behavioral Economics: Foundations and Developments, ed. Morris Altman, 210-212. New York: M.E. Sharpe, Inc.

Michalos, A.C., 1991. Global Report on Student Well-Being. Vol. 1: *Life Satisfaction and Happiness.* New York: Springer.

Myers, D., 2002. The funds, friends, and faith of happy people. American Psychologist, 55: 56-67.

North, D., 1990. Institutions, Institutional Change and Economic Performance, Cambridge University Press.

Nozick, Robert, 1974. Anarchy, State and Utopia. New York: Basic Books.

Rawls, John, 1999. A Theory of Justice. Oxford: Oxford University Press.

Ober, J., 1998. Political dissent in democratic Athens. Princeton: Princeton University Press.

Oswald, A.J., 1997. Happiness and economic performance. *Economic Journal*, 107: 1815-1831.

Oswald, A.J. and S. Wu, 2010. Objective Confirmation of Subjective Measures of Human Well-Being: Evidence from the U.S.A. *Science,* 327: 576-579.

Powdthavee, N., 2005. Unhappiness and crime: Evidence from South Africa. *Economica*, 72: 531-547.

Rodrik, D., 2000. Institutions for High-Quality Growth: what they are and how to acquire them. Studies in International Comparative Development, 35: 3-31.

Schiffbauer Marc and Ling Shen, 2010. Democracy vs. dictatorship; Comparing the evolution of economic growth under two political regimes, Economics of Transition, 18(1): 59-90.

Sen, A.K., 1999. Democracy as a universal value. Journal of Democracy, 10: 3-17.

Steiner, L., L. Leinert and B. Frey, 2010. Economics, Religion and Happiness. *Zeitschrift fuer Wirtschafts- und Unternehmensethik (zfwu)* 11/1: 9-24.

Stevenson, B. and J. Wolfers, 2008. "Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox", *Brookings Papers on Economic Activity*, Spring.

Tracy, B., 2010. No Excuses! The Power of Self-Discipline. *Vanguard Press, The PerseusBooks Group, Philadelphia*.

Veenhoven, R., 2012. World Database of Happiness, collection Happiness in Nations, Overview of happiness surveys using Measure type: 31D / 11-step numeral Best-Worst possible Life, viewed on 2012-08-26 at http://worlddatabaseofhappiness.eur.nl

Veenhoven, R., 1991. Is happiness relative? *Social Indicators Research,* 24: 1-34.

Zimmermann, A.C., 2007. Adaptation, Assets, and Aspirations. Three Essays on the Economics of Subjective Well-Being. *A Dissertation Presented to the Faculty of the Graduate School University of Southern California in Partial Fulfillment Of the Requirements for the Degree Doctor of Philosophy (Economics).* http://digitallibrary.usc.edu/assetserver/controller/item/etd-Zimmermann-20070413.pdf. [Accessed on 11th July 2011].