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A Study of the Economic Factors Affecting Happiness with an Emphasis on the Sustainable Development

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ABSTRACT

At this we investigated study the economic factors affecting on happiness for two different groups of countries. In order to achieve this goal, we selected a sampling consist of 25 OECD countries and 9 opted developing countries during a ten year old period (2000-2009). Hypothesizes of this study consisted: social security and recreation that had positive effect on happiness and government debts had negative effect on happiness. The accuracy of hypothesis examined using panel method in the form of Econometric. The mentioned index which called happiness and was the dependent variable of model, based on three indexes: life expectancy, life satisfaction and ecologic that the new economic foundation of in England (NEF) calculated in 2006 and emphasized on countries happiness and environmental efficiency. The results of estimating the model described that in developing countries the total consumption costs of family had a negative relationship with happiness, showed that in these countries most of family costs spent on quotidian affairs. Human development index had positive relationship with happiness in developing countries.

In second group countries, happiness had positive relationship with final family expenditures. So that in these countries most of the contribution of family expenditures dedicated to recreation and also governments' debts had negative relationship with happiness. In both groups, social security and recreation costs had positive relationship with happiness.

KEYWORDS: Happiness, sustainable happiness, objective and subjective indexes, happy planet index

1 INTRODUCTION

The development of a country finds meaning only in the promotion rate of its people's happiness. The fulfillment of this important ideal is subject to paying attention to the "objective and subjective indexes" of human's development. On the other hand, if up to a century ago, the environment and natural resources were seen as fixed and unchangeable parameters (which due to their affluence, there was no need to be concerned about), today following industrialization of the societies and high rate of energy consumption to produce goods and subsequent pollution, so many problems have been created. The merciless destruction of the nature has caused the human's soul to move towards a kind of secret depression without knowing it. Therefore, paying attention to two issues of humans' environment and subjective happiness as a supplementary to objective indexes of the progress of nations are among the topics of the happiness economics as a multi dimensional research standpoint. So far, the economists used to consider the per capita income as a standard to measure the well-being. However, despite the increase of national per capita income and well-being in the industrialized communities, no comparable rate of happiness has been added to the citizens' happiness. In the new branch that has been recently imported to development literature, In addition to the economic growth, attention is paid to other parameters such as peoples' subjective well-being and environment. In other words, happiness is compatible with the concept of sustainable development. It is such that the happiness of countries is concentrated on three pivots of socio-economic and environmental sustainability.

2 MATERIALS AND METHODS

In developed countries, due to efficient economic management, the peoples' life level has improved in average and important parts of the populations in those countries enjoy a material wellbeing. However,

researches in particular by modern economists show that the feeling of happiness has not been improved at the same rate. Taking into consideration the pure economic factors and targeting economic development for the advancement of the society can bring about clashes with other societies to capture new natural resources and expand the realm of environment pollution. Development cannot lonely mean the promotion of social condition. The economic development should have a broad and interconnected impact to be able to lead to the improvement of life condition. The first index for the social development and quality of life, which was introduced in 1940, is GDP after which, it has been changed into the most prevailing index to compare the wealth of countries based on the physical assets. Using certain pre-suppositions and premises, the economists use GDP to measure social development and implicitly the quality of life. These premises are:

Human is a creature living with an economic logic. The economic logic commands human to be competitive and maximized. Based on this idea, if an ideal economic condition is established, then the human's quality of life would improve automatically, since it is in a thriving and developed economy, which the human's basic needs will be met.

Richard Easterlin was an economist who for the first time came to this conclusion that the absolute income higher than a minimum point will have no effect on individuals' happiness. In other words, as long as a person is relatively poor, the relationship between income and happiness is positive. But when the level of income reaches a point higher than the income of poverty line, the effects of this relationship decline. This issue is known as "Easterlin Paradox". With the increase of people's revenues, the material desires also increase. If desires are not changed and incomes go up, individuals will reach a good level of material life. Nevertheless, when desires escalate, they weaken the effects of the increase of income, such that they do not experience more happiness as compared with the past (Richard Easterlin, 2005).

2-1 Definition and Concept of Happiness:

The most comprehensive model of happiness belongs to researches of mental health. They consider happiness as one of the components of subjective well-being. In their views, various manifestations of subjective well-being are indications of a mental health. Subjective well-being means the perception, which an individual has of its quality of life.

Psychologists consider the subjective well-being or SWB with a variable with at least two components: Happiness and Satisfaction with life

According to this conceptual division, happiness refers to the emotional dimension and satisfaction to the recognition dimension of subjective happiness. The results of the researches show that these two components are intensively interconnected.

2-2 Happiness, Consumption, and Sustainability

From the sustainable point of view, happiness is not only momentary pleasure but also in a wide spread area can be considered. It is very important to reflect on whether the positive emotion derived from anything good or services has come at the expense of other people or the natural environment. The conditions under which goods are manufactured, how far environment transported. If the intention is made to pursue happiness or satisfaction of life then considerable shifts in behavior and policy would be required. This is where happiness studies could have substantial influence.

In fact, the happiness economics as a global dialogue is a natural reaction against the unfavorable outcomes of the management of societies in the macro management of socio-economic and political development. The variables of happiness are classified into two "objective and subjective" dimensions. The objective variables are those, which are measurable and related to the environment and life condition, which can in turn be classified into individual and social dimensions.

The most important objective variables are as follow:

- **A- Individual Dimension:** This dimension includes variables which shows the relationship of an individual with the specific conditions of individual's life including necessary facilities to enjoy a healthy and comfortable life encompassing material welfare, access to high quality educational, transportation and recreational services
- **B- Social Dimension:** A healthy family life, a healthy organizational life, quality of relationship in local society, social capital, political security, and socio-economic security

The subjective variables and components of happiness are of high importance, because human lives with his images of realities. It is likely that an important part of the feeling of dissatisfaction in the side of well-to-do peoples in the developed societies is resulting from subjective factors. Because, in these

societies the ideal objective conditions have been materialized to some extent for important parts of the population.

C- The most important subjective standards of life quality are as follow:

An individual's view towards life and its meaning, an individual's assessment of family and society efforts to improve his own life

D- Human's spiritual needs:

Curiosity, visualization and imagination whose manifestations are arts, sciences and technologies, a tendency to growth and a constant learning, a need to self-flourishing state and enhancement and continuous development which according to Ibraham Maslow are the highest level of human's needs.

2-3 Measuring the subjective happiness

2-3-1 self-report instruments

This method has been based on integration the self-report instruments which people have been announced.

One problem with retrospective self-report instruments used to assess positive emotions is that individuals may use the way they feel at the moment they are answering to determine how they have felt over a longer period of time. Individuals may also be subject to memory biases, such as the tendency to recall the most resplendent and last, best or worst experience (Kahneman, 1999).

2-3-2 The Day Reconstruction Method

In 2004 Kahneman at el devised a new method that accumulated data every 20 minutes during a period of 24 hours from respondents. Despite the DRM method remains retrospective, it allows to obtain useful data from sum-total of positive and negative emotions of individuals.

2-3-3 The Experience Sampling Method

In ESM, respondents are signaled via electronic devices (e.g., pager, mobile phone) at random during the day and they are asked present their feelings (Fleeson, 2007; Reis & Gable, 2000).

2-4 Objective measures of wellbeing

The important issue is that, which kind of indexes should be considered for calculating objective happiness indexes?

Different investigations have been done that we outline them briefly:

Amartya Sen (1999) proposed "capability approach". He established a framework which distinguished between "functioning" and "capability".

Functioning means the activities that have the value to be done by individual and capability implies to freedom which shows the feasible opportunities.

Ravels (1979/1999) points on a collection of factors which are essential for a logical life, such as freedom,

income, opportunities, wealth, self-esteem and salary.

Doyal and Gough's (1991)believe that health and independence are the most basic human needs in all cultures and for the next step they emphasize on following needs in order to obtain health and independence:

Food ,clean water, adequate housing ,a safe work environment, health care, security in childhood, close relationships, physical security, economic security, education and safe birth control and child bearing.

In the general the composition of the lists are different and consist the economical issues and political and social freedom which are essential for obtaining happiness, but these needs do not produce the happiness lonely.

On the other hand, it should be noted that values in society affect on different needs which are affecting on happiness.

2-5 A new metric for an old problem

There is a high difference in the per capita of using the resources of the earth. As the planetary resources are limit, so the rate of consumption should be less than the rate of renewing these resources. The present model of development is a model of unsustainable development. The New Economics Foundation

(NEF) is the innovator of an independent idea, which shows the economic real happiness. The purpose of NEW is to create a new way to move towards happiness and achieve a sustainable environment.

Happy Planet Index (HPI) is calculated by multiplying the average life satisfaction by the average Life expectancy divided by its environmental impact. In HPI, happiness is a combination of objective and subjective factors. The environmental impacts are criteria to measure how individuals, organizations or countries use the natural resources in connection with the biosphere capacities. The ecological effects in the report of NEF have been defined as follows: "The rate of lands required (in hectares) to sustain a given population at present levels of consumption, technological development and resource efficiency".

The main elements of this variable include: the rate of utilized land for the plantation of nutritional materials, trees and biological fuels, which are used for fishing. The main assumption of HPI studies is based on the capabilities of countries to sustain a long and a happy life, such that they could use the share of natural resources justly. The studies by NEF showed that in fact there are countries such as Costa Rica in which they hold the score of life satisfaction and hope in the life similar to that of Canada, but they have a noticeable smaller environmental effect in order to reach this score.

Consequently, a sustainable development means a basic change in the quality of life, thought, production and consumption. Thus, moving towards sustainable development in these countries demands change in the thinking models of the people in the society on issues such as life quality and moving towards concepts of happiness such that with a change in models and policy making by governments, the increase of consumption are not necessarily considered as a movement towards happiness in these societies. Many researches on sustainability consider the imbalance point in human's happiness due to utilization and destruction of the nature. Sustainable development is to make a change in the paradigm of the development theory in policy and practice. Recognizing this issue will cause economic development, social development and environment to become interdependent. The studies of positive psychology and happiness have extraordinary potentials to help with sustainability.

A sustainable happiness shows another model of change in human's behavior and in particular policymaking by governments as a standard of development of their societies.

2-6 A review on previous researches on happiness:

In this part, some of the studies performed on happiness in some countries of the world are reviewed:

Argyle (1989, 2001) learned that individuals' life satisfaction has an impact on their productivity and there are evidences that life satisfaction has a positive relation with the productivity of labor force. Amabile (2005) presented a document that showed happiness causes an increase in creativity. The results confirmed that emotion has a great impact on economy. The study showed that the increase of individual's happiness would cause productivity in performing duties.

Ali Ahmadi and Ali Hajinejad (2010) in an article on "Destruction of Environment as an Obstacle against Sustainable Development" reviewed the condition of environment and effects of profit-oriented views of economic liberal and stated that one of the basic factors for the destruction of environment returns to the value basis of capitalism. In profit-oriented system of economy, each individual seeks his own interests. The paradox between liberalism and the school of utilitarianism revealed that a further freedom did not lead to happiness. Excessive destruction of the environment in the world in particular in industrialized countries has lead to a situation in which human's life and the earth is exposed to a serious threat. This situation has finally led to the creation of the word "sustainable development" in the economics.

Guru et al in an article entitled, "Is the effect of mass media on American happiness positive or negative?" reviews the role of different T.V. programs on the happiness feeling of American people. The findings showed that advertising in particular on consuming goods are the main factors of lack of happiness, because, T.V. advertising usually portrays an ideal life and gives this feeling to the people that they have shortages in any condition which they are: watching these advertisings, individual experiences inferiority and a dissatisfaction feeling. Some studies in America were made on the effects of the parts of consumption on peoples' happiness. In these researches, the consuming spending was divided into 9 consuming groups: Leisure time costs, Durable goods, Gifts and donations, Personal cares and clothes, Health services, Home foods and drinking, Food services outside the house, Water, electricity, fuel and telephone facilities and Means of transportation. According to the studies carried out, it was concluded that the consumption of all classes of consuming goods would not create happiness. More specifically, only the costs of leisure time and costs of transportation have a significant relationship with happiness, since with social impacts such reduction of stress and loneliness will increase happiness.

Diego Libyan (Department of Economics (University of Verona), Italy in an article entitled "Happiness and Tax Morale: an Empirical Analysis" showed that tax discipline and sincerity of individuals to pay tax is effective in determining the level of individual's happiness.

Yangang Xing, R. Malcolm W. Horner, Mohamed A. El-Harem in an article entitled "A framework model for assessing sustainability impacts of urban development", stated that the pollutions resulting from the development are not only limited to the pollutions of the construction but are indirect effects such as the production of greenhouse gases as a result of fossil fuels for the urban development. Therefore, a sustainable development can mean the presentation of proper conditions to crate a sustainable increase in humans' happiness.

2-7 Research Assumptions:

Insurance has a positive impact on happiness.

Recreation has a positive impact on happiness.

Government's debt has a negative impact on happiness.

2-8 Research Variables:

2-8-1 Social Security:

The insurance industry is a key component of the economy by virtue of the amount of premiums it collects, the scale of its investment and, more fundamentally, the essential social and economic role it plays in covering personal and business risks.

Social security refer to the action programs of government intended to promote the welfare of the population through assistance measures guaranteeing access to sufficient resources for food and shelter and to promote health and wellbeing for the population at large and potentially vulnerable segments such as children, the elderly, the sick and the unemployed.

A need to security and safety to secure the future is among the human's innate instincts, which cause dynamism and elevation of human in the course of life growth and evolution, while maintaining his freedom and originality. Insurance is an instrument, which not only compensate economic damages resulting from incidents, secure his future, promote the level of life and create a safe bed for economic development and growth but also will bring about comfort to the people in the society.

Economic interests of a dynamic social security

A) Accumulation of the savings

Social security is an important method by which individual with a relatively low income can invest and save for a long time more effectively.

B) Investment and development of capital markets

As a result of the investment of paid insurance fees by the insured parties (and investment of the funds by stakeholders) and the transfer of saving (within the format of insurance fee) will lead to economic development. The mechanism, which performs this transfer, is the capital market.

C) Helping with the amendment of pension systems

In all parts of the world, the countries tend to play a reduced role in pensioners' pension. In recent decades, a main tendency is seen towards the transfer of the responsibility of pensioners' stipends to the private sector. In developed economies, due to the age structure of the population and increase of public expectations and due to the increase of life standards, there appear more tendencies to transfer this role to the private sector.

D) Interaction between social security insurances and other economic sectors

Economic interests are injected into the economy through collecting insurance fees within the framework of savings and investment in the capital market. Savings can be used for investment in different sections of economy including industry, agriculture, energy and commerce. Therefore, that insurance can serve as a supplement for the operations of banking system.

2-8-2 Spending for recreation and culture:

Household expenditure on recreation and culture includes purchases of audio-visual, photographic and computer equipment; CDs and DVDs; musical instruments; camper vans; caravans; sports equipment; toys; domestic pets and related products; gardening tools and plants; newspapers; tickets to sporting matches,

cinemas and theatres; and spending on gambling (including lottery tickets) less any winnings. It excludes expenditures on restaurants, hotels, and travel and holiday homes but includes package holidays.

One of the factors effecting happiness and promotion of individual's life quality is recreation. Recreation is a logical and rational activity in individual's life and its existence is very necessary in the industrial life of present societies. It is such that one of the indexes of progress in the societies is the duration of leisure time, which is granted to individuals. According to researchers and psychologists, recreation is one of the environmental factors affecting the health by which it is possible to measure the score of an individual's physical, mental, social and spiritual health.

2-8-3 Index of human development:

The HDI is a comparative measure of life expectancy, literacy, education, and standards of living of a country. It is a standard means of measuring well-being, especially child welfare. It is also used to distinguish whether the country is a developed, a developing or an under-developed country, and also to measure the impact of economic policies on quality of life.

Since a past decade, the concept of human development has developed based on this idea that the global progress in the area of human problems cannot be measured by per capita income, so it pursues to measure a combination of three basic capacities of gaining knowledge, access to necessary material facilities and enjoying a long life accompanied with health. The approach of human development considers the consumption of goods and services as only one of the life elements and in order to meet the spiritual needs, it emphasizes on the role of education.

2-8-4 Government's debts:

Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans.

It seems that government's debt is one of the main reasons for taxes, unemployment and economic recession. The increase of budget shortages and public debts in the short term will cause the growth of inflation rate. The most obvious effect of government's debt will be a burden, which will be imposed on the shoulder of the taxpayers of the following generations. When this debt and interest are accumulated, the future taxpayers will face a difficult choice. In total, budget deficiency will make present tax payers enjoy a higher consumption and employment whereas its load will be imposed on the shoulders of the future taxpayers.

2-8-5 Household final consumption expenditure per capita (private consumption per capita):

Household final consumption expenditure per capita is calculated using private consumption in constant 2000 prices and World Bank population estimates. Household final consumption expenditure is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses.

2-9 Statistical population and sampling:

The statistical population includes two groups of countries:

The first group includes 25 countries of The Organization for European Economic Co-operation: Austria, Iceland, Ireland, Belgium, UK, Portugal, Greece, America, Mexico, Germany, Norway, Sweden, Swiss, Luxemburg, Italy, Spain, Denmark, France, Finland, Netherlands, Australia, Korea, Canada, Japan and New Zealand.

The second group with nine selected developing countries includes: Iran, Brazil, Argentine, Turkey, Jordan, Ukraine, India, Indonesia and Egypt.

The necessary data on variables of the per capita of the final spending of household and costs of recreation have been extracted from the data of the World Bank and data released by OECD countries. The statistics related to social security for developing countries have been collected from the reports released by ILO for 2000-2009.

Now, the variables being used in the model are explained briefly:

Happiness Index (H): the Happiness Index for each two groups of the mentioned countries has been used based on data released by NEF or HPI.

Final Expenditure of Goods and Services Per Capita in Fixed Price of 2000 (EXP): is the total final expenditure of countries by population of those countries.

Recreation costs (REC): The cost of recreation as a percentage of GDP

Cost of social security (INS) which for OECD countries, it is the cost of life insurance and for developing countries; it is the rate of costs of social security of the government's share.

2-10 Research methodology: The above data was estimated by econometric software of Eviews (Econometric Views) within the framework of Data Panel Method.

3 RESULTS

3-1 Model Elaboration:

3-1-1 Static Analysis:

In this research, in order to review the static of variables, the Unit Root Tests (Levin, Lin et al, 2002) (LLC) was used. All variables affecting the function were confirmed at the possible level of 95 percent. That means the assumption of the (existence of a unit root) is rejected and its opposite assumption (the lack of a unit root) is accepted. So that the variables are at the static level. The results of the Unit Root Test for the per capita of the final expenditures of goods and services (EXP), the costs of recreation (REC), the cost of social security (INS), the human development index (HDI) and happiness index (H), government's debt (DEB) and health costs (HEL) are reported in Tables nos. 1 and 2.

Table 1- The results of estimation of Unit Root Test for Developing Countries

HDI	Н	EXP	REC	INS	variable
-4.28	-2.79	-11.59	-2.75	-10.56	LLC

Source: Researcher findings

Table 2- The results from the estimation of Unit Root Test for OECD member countries

	DER	H	EXP	HEL	REC	INS	variable
-	3.18	-5.32	-9.11	-2.69	0.127	-5.69	LLC

Source: Researcher findings

3-2 Presenting the Estimated Model:

In order to estimate a model based on assumed variables and to calculate the effect of mentioned parameters on happiness indexes, the following model was used:

A) Developing countries:

Happiness= α_1 hdi+ α_2 Ins+ α_3 rec+ α_4 fexp+ α_5 hpi(-1)+ ϵ_t

Variable	coefficient	t-statistic	probability
hdi	14.43018	3.948815	0.0003
insurance	0.286044	5.743027	0.0000
rec	2.301835	8.463693	0.0000
family expenditure	-0.001480	-4.641653	0.0000
H(-1)	0.465107	32.68583	0.0000
R^2		0.91	
Durbin-Watson stat		1.809731	

Source: Researcher findings

B) OECD member countries

Happiness= $\alpha_0 + \alpha_1 \text{Deb} + \alpha_2 \text{Ins} + \alpha_3 \text{Hel} + \alpha_4 \text{fexp} + \alpha_5 \text{hpi}(-1) + \varepsilon_t$

Variable	coefficient	t-statistic	probability
С	9.374658	1.733636	0.0846
Deb	-0.062133	-2.852497	0.0048
Exp	0.001135	3.065813	0.0025
Ins*Hel	4.05268	1.576875	0.1164
H(-1)	0.453261	3.445778	0.0007
R ²		0.90	<u> </u>
Durbin-Watson stat		2.182281	

Source: Researcher findings

Taking into consideration the results of model estimation in which the coefficients of the model are significant at the level of 95 percent certainty, and one of coefficient is significant at the level of 90 percent certainty. In the group of developing countries, the per capita of final expenditure of the household has a negative impact on happiness and the effect of human development index, happiness of the previous period, expenditure of social security and recreation have positive and significant impacts on happiness. In the model of OECD countries, the government's debt has a negative impact on happiness. The final expenditure of the household consumption, the mutual effect of the cost of social security, health and happiness of the previous period has a positive impact on happiness.

4 DISCUSSION

The topic of the happiness economic pays attention to the economic objective indexes, which lead to wellbeing and economic productivity, associated with human's subjective indexes. A mere attention directed at economic growth is associated with the destruction of the environment, and this indicates the indifference of countries towards the quality of environment and consequently the daily increase of industries with a high pollution in countries. Researchers believe that the imbalance point in human's happiness is due to the utilization and destruction of the environment. Therefore, the concepts of happiness and sustainable development have a noticeable compatibility with changing the peoples' consumption models and change in governments' policymaking.

It is suggested due to the positive effect of social security, insurance, recreation on happiness, because of economic and social security, the governments especially in developing countries should pay attention to above cases.

Due to the effect of subjective well-being index on happiness, these factors such as economical conditions should be paid attention in governments planning.

Over-consumption is the core of the problem and people need to change the consumption method because the over consumption causes government debts and environmental pollution. Inequality not only in income but also in other social opportunities has destructive impacts on happiness and destruct the integrity of necessary social capital to develop common solutions to overcome environmental problems. Governments should seek to stop and reverse the trend of increase of inequalities and pursue to change the indexes of development based on the indigenous indexes of their own countries. While paying attention to the subjective dimensions of societies' life and environmental factors, governments should make serious efforts to achieve a sustainable happiness.

5 Conclusion

In this study, some of the factors affecting the happiness in developing and OECD member countries were measured. In addition, the effect of government's debt is negative. It shows that governments' debts and borrowing money for economic development will lead to the increase of inflation and unemployment and will have a negative impact on individuals' happiness. The negative relation of negative expenditure of household with happiness is positive for OECD countries and the per capita relation of final expenditure of household with happiness is negative for the selected developing countries. The analysis of the results indicates that in developed countries, most of the household's costs are spent on recreational expenditures and in developing countries, a main part of the individual's income are related to living costs and those of basic needs.

Recreation and culture have positive and significant impacts on happiness. It is such that reaction has effects on human's subjective dimension, so that they are among the activities, which are selected by

human and by his own will. This will promote the personality and mental health of individuals. Insurance has also a positive and significant relation with happiness. Insurance helps not only to secure the future of individuals, but also with the saving in the society and investment noticeably. The human development index has a positive and significant effect for the developing countries, which shows it has necessary potential to increase the individuals' opportunities in health, educational areas and income distribution in order to prevent any gender inequality.

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