HAPPINESS AND INCOME
HOW DOES THE INCOME AFFECTS HAPPINESS?

technology innovation
management & entrepreneurship

Student: Despo Karatsioli.

Supervisor: Costas Hadjiyiannis.

Semester: Fall Semester 2022

ACKNOWLEDGMENT:

First, I would desire to express my gratitude to my Supervisor for his valuable help and the University of Cyprus which once again gave me the opportunity to be enriched with knowledge.

University of Cyprus, 2022

Despo Karatsioli.

ABSTRACT:

The principal occasion for this case study is the correlation between happiness and income. In the theory of happiness, a positive relationship is observed between them. The research that will follow includes data from the European Social Survey (ESS) for all the countries participating in the questionnaires and for all the years in which they are conducted. A total of 10 questionnaires were administered. The investigations started in 2002 and every two years they were repeated with other people. The last questionnaire that was done and has results is in 2020. The model of the research below has happiness as a dependent variable. As we will observe after using the demographic characteristics where in econometrics, they are considered controlling variables, we will see a positive relationship between income and happiness.

Keywords: Happiness, Well-being, Life satisfaction, Subjective well-being, Income, Survey.

CONTENT:

1.INTRODUCTION

Happiness, a purely subjective term for each one. Many have tried to define it or even study it. Based on Ryan and Deci (2001) who are phycologist, define happiness in scientific literature, as "hedonia" the existence of positive emotions and non-appearance of negative emotions. Many sciences have studied happiness, especially social sciences such as sociology and psychology. Until the end of the 20th century, specifically in 1974 where, Richard Easterlin, then professor of economics at the University of Pennsylvania, studied happiness data and invented the "Easterlin paradox" which we will discuss later on the case study. The approach to happiness has developed quite a lot enough from those years, in the field of economic science called "The Economics of Happiness" or "Happynomics" and in a more academically deferential title, "The Economics of Subjective Well-Being".

Happiness is quite important both for the person himself and for the economy itself. If a person works all day from morning until night and thinks about the second job he has taken to survive or thinks about the bills he has to pay or when he will find time to rest or if he will ever be able to make his dreams come true, without working 24/7 to cover his basic expenses. It is important for a person to feel happy and satisfied with his life in order to be more productive, to have ideas to offer in the society, to move in the market and thus to develop the economy of his own country. As Aristotle (350 B.C) said "Happiness is the meaning and the purpose of life, the whole aim and end of human existence".

In the difficult days we are going through, happiness became even more important as all these years we took it for granted. In the last twenty years we have experienced a lot such as murders, crises, quarantines, various corona mutations, deaths and wars. All this has affected the income of each individual. In this research we will examine the following main question:

"How does income affect happiness?",

for the countries that participated in the European Social Survey.

As is known, the main objective of this research is to analyze the relationship between happiness and income in European and Non - European countries that participated in the ESS for the last 20 years.

For the analysis below, we use data from the European Social Survey. The data contains 419 268 observations for the years 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020. The regression is going to have as dependent variable the Happiness variable. More analysis will be done below. The results we expect to spot are the positive relationship between happiness and income. If our expectations come true, we can say that the phase "Money can buy happiness" is a fact.

The research begins in the next chapter where the theory around happiness will be presented and analyzed. Then the presentation, analysis and explanation of the data and methodology we found to carry out the research will be done. Additionally, we will analyze the results which they will follow us at the appropriate discussions. The last chapter of the paper will include the results.

The major keywords that will be used in the case study are the following: *happiness, well-being, subjective well-being, and life satisfaction*. These words are synonyms and as will be seen below, they will be used frequently to describe the individual's well-being.

2. THEORY

Until the end of the 1990s, happiness was exclusively part of the social sciences, especially psychology. Nevertheless, in recent years the research and analysis of happiness has also extended to economic sciences. Economists showed enough interest in the analysis of happiness resulting in the emergence of Utility Theory. This theory has to do with the analysis of individual behavior. (Frey & Stutzer, 2002b). The utility function takes an objective form to give a more general approach to individual well-being (Lange, 1934).

$$U=u (x, y, z ,…)$$

In simpler words and with the equality we see above, the utility function for each individual is the maximization of his utility given a limited budget of choices. The above equation depends only on the decisions made by each person individually, such as the amount of material goods he chooses to consume or the amount of free time he chooses to waste or the number of services he chooses to spend, but always with the aim maximizing their Well - Being. In order for a person to be able to make decisions regarding the maximization of his Utility, he must satisfy the following criteria:

    i. To be fully informed
    ii. To think logically
    iii. To always want to conquer the maximum of his usefulness.

After all, the theory of utility that we developed above has been questioned by many researchers as they believe that the preferences of each individual do not give a clear picture of the link that the consequences of their choices have with their well-being. (Dolan et al., 2008)

Additionally, economists Frey and Stutzer, in 2002, argued that a more subjective approach should be taken around the subject of individual well-being, as the objective approach used in economic theory puts barriers in the understanding of human Well - Being, so with this approach to have a more complete study around this issue. The formula of subjective well-being as presented in 2008 in the article of Journal of Economic Psychology (Donal et al., 2008) is as follow:

$$SWB_{report}= r(h)$$

Where,

SWB$_{report}$= the self-reported subjective well-being, can be formed from the answers to the question of how satisfied the person himself is with his life.

r = true subjective well-being, h, can be formed by a length of sociodemographic factors such as age, gender, marital status, level of education and employment status.

In 2003, the economist Diener and his partners, illustrated subjective well-being as an assessment of the life of each individual. This approach includes the person's feelings, moods, and assessments of life experiences. Opposed with the neutral estimation of Utility SWB which represents the general assessment of an individual's life (Dolan et al., 2008).

Another two economists who referred to subjective well-being are Frey and Stutzer (2002b) who they mentioned that people during the evaluation of their subjective well-being, they pay attention to the circumstances of their life, they compare their life with others, they take into consideration their previews experiences and their expectations of their future. Most of the time, subjective well-being can be measure as an answer on a figure scale to a related questions for happiness and life satisfaction. In this case study, the following questions are presented: «*Taken all things together, how happy would you say that you are*?».

As is always observed in the economic sciences, in every theory there are always two sides: the one that supports it and the one that will be questioned. Thus, in the case of subjective well-being, there are some concerns about whether subjective well-being is a good unit of measurement of well-being for three main reasons.

The first consideration concerns asking the question of measuring one's happiness, whether it is good range for the well-being of the participants. As reported by Boarinin (2012) in their case study named "What Makes for a Better Life? The Determinants of Subjective Well-Being in OECD Countries – Evidence from the Gallup World Poll", the "quantity" of subjective well-being and the descry level of happiness, are exhibit to be "correlated with non-self-reported measures such as expression of positive emotions, level of the stress hormone cortisol, and left/right brain activity"

The second concern is whether we can tell whether one person is happier than another. Each person has different perceptions regarding the alternatives of the response

scale. For example, the number "6" on the scale is different for each person. Nevertheless, we can say that it is achievable to compare happiness scores. It has been accepted that individuals "have a common human language of happiness" as each person can translate their feelings with the same numbers on a numerical scale. This results in the possible comparison of subjective well-being. (Boarini et al., 2012).

Last but no less important for the measurement of subjective well-being is that the individual at the given moment - the measurement of his happiness - is affected by various factors such as the weather. Although, they declare that the questions are not affected by such factors due to the fact that interviews often take place over an extended period of time.

A question to think about well-being is this: What affects well-being and does it differ from person to person? From the literature we found that the factors that are basic tools for subjective well-being are the following: *age, gender, health, marital status, education, income, employment status and social interactions.* (Fleche et al., 2011). Although we can see their importance for well-being, we will focus on our main questions, although they will be controlled.

2.1 INCOME AND WELL-BEING

The most general conclusion observed in the literature on the interrelation between income and well-being is that people who usually have elevated levels of well-being are the richest. (Frey and Stutzer, 2002b). To give an example, Economists Yang and Morgan (2008) found that in America, when a person belongs to the highest income quartile then their chances of happiness increase by 13%, while if they belong to the lowest income quartile then their chances of happiness decrease by 26%. Still and all, this relationship appears to be non-linear, specifically a diminishing marginal utility is observed as income increases.

The ideal income empowers the person to set goals, to dream and to be able to have better goods and services. This results in affecting one's well-being, in a good way. Moreover, research has shown that the above are not the only ways that income affects well-being. First one's income compared to others such as family, friends, and colleagues affects one's well-being. This theory comes from the so-called " Easterlin

Paradox" which it states that people tend to compare their incomes with others - social comparison - and also individuals are used to higher incomes, this may indicate a high average level of happiness in a developed country but its economic development is not a consequence of the development of happiness. The paradox concludes that the relationship between income and happiness has a "static nature" i.e., there is a positive correlation only for a given moment, therefore increasing everyone's income does not increase everyone's happiness. He also found that people with higher incomes are more generous than those with lower incomes, but this is temporary, having a higher income also increases the ambitions of the individual but the effect does not last forever as individuals as life goes on will want more and more. (Easterlin, 2001)

2.2 OTHER DETERMINADS AND WELL-BEING

- AGE

It is worth noting that there are studies that show the connection between age and subjective well-being but the outcomes are complicated. Studies show that there is not even a linear relationship between the two, but a U-shaped relationship. First, from young age to middle age, happiness declines and in old age it rebounds. (Gerdtham & Johannesson, 2001). As we understand from the U shape, we mean that people are happier at younger and older ages. A survey in Sweden (Gerdtham & Johannesson, 2001) showed that happiness for the 45-64 age group is lower, while the research for the OECD countries found the 40-45 age group with lower well-being (Fleche et al., 2011).

- GENDER

Women from all over the world have higher levels of well-being than men. Data from research by Graham and Chattopadhyay (2013), which is the first to assess the link between well-being and gender based on a comprehensive global data set, finds that levels of well-being are higher in developed countries and the gap between men and women is higher in rich countries and non-existent in poorer countries and in countries with less equal rights between the sexes. These results cannot be explained by differences in the norms and expectations that in turn affect the dimensions of well-being. Subsequently, it was found that women from all over the world are happier and

that the divide is even greater between well-educated people, people who live in urban areas and people who are over 25 years old. Also, it was proven that married women are happier than married men.

- HEALTH

Health also positively affects well-being as it is one of its predictive factors. (Fleche et al., 2011). It turns out that people in excellent health are twice as likely to be happy compared to people in good health. Also, people in poor health have a 30% chance of being more unhappy. (Yang & Morgan, 2008)

- MARITAL STATUS

Additionally, Steven Stack and J. Ross Eshleman (1998) found that being married has higher levels of happiness compared to people who say they are single. This research was done independently of the protections offered by marriage such as financial and health protections. It was also independent of other control variables such as ethnicity and socio-demographic variables. This research concluded that the relationship between happiness and marital status is determined by two intermediate processes. A marriage can increase a person's financial satisfaction, which results in an increase in the person's happiness. Also, marriage has been linked to a high level of perceived health which also results in an increase in the individual's happiness. The above findings support the hypothesis of social causation or in other words the protection of marriage. Yang and Morgan also showed that in America widows were 70% and divorced 60% less happy than married couples.

- EDUCATION

Further, there are also studies that show the positive relationship between education and well-being. In OECD countries, progressing beyond the high school level increases one's level of well-being. (Helliwell, 2008). But there are also studies that prove the non-existent relationship between them when the control of other factors is included. These studies show that a high level of education can lead to greater incomes and better health, thus providing a possibility that well-being is meandering affected by education through income and health. (Dolan et al., 2008)

- UNEMPLOYMENT

However, the studies observed in the literature show a consistent negative correlation of unemployment and well-being (Dolan et al., 2008). Econometric models using life satisfaction scales as a continuous variable observe that people who declare themselves unemployed have 5-15% lower scores in life satisfaction scales compared to workers. (Stutzer,2004). There were also studies that showed that unemployed men were less happy than unemployed women, especially mid-career men (Frey & Stutzer, 2002b).

- SOCIAL INTERACTIONS

The last factor we will analyze is social interactions. As it turns out, it positively affects the well-being of the individual. (Fleche et al., 2011). Contact with the world makes a person feel supported and that there is someone next to him to pay attention to him. Also, people who have relatively satisfying relationships with the people around them tend to be both happier and less sad. (Siedlecki et al., 2014)

2.9 THEORITICAL MODEL SPECIFICATION

The theoretical model that will be presented and analyzed later in the paper has the same formula as the general formula of Subjective Well - Being presented in the preview pages.

$$SWB_{report} = r\ (A, G, H, M, E, I, U, A)$$

Where subjective well-being or happiness is affected by factors presented earlier in this chapter:

- A = Age,
- G = Gender,
- H = Health,
- M = Marital status,
- E = Education,
- I = Income,
- U = Unemployment and
- S = Social interactions.

3. DATA AND METHODOLOGY.

The data for this survey comes from surveys carried out by ESS. They consist of 419 268 observations from people selected at random who are part of the European Union and non-European Union from the year 2002 to the year 2020. The ESS is a transnational survey where, since its establishment in 2001, it has been conducted throughout the European Union. Every two years, surveys are conducted in 38 countries at the personal level for more modern samples. During the survey, some basic principles must be observed:

- 70% response rate,
- 1500 minimum people in the sample,
- Strictly random selection of people and
- Representative sample for people over 15 years of age regardless of language, religion, nationality and citizenship.

The following chapter will explain and analyze the variables we will use to answer our research question.

3.1 VARIABLES:

- Happiness.

Use this variable as a dependent variable in this research.

The survey member answers the question "*Taking all things together, how happy would you say that you are?*" on a 10-point scale where 0 = extremely unhappy and 10 = extremely happy.

The following variables are independent variables that affect the variable of happiness.

- Gender

The variable takes value 1 if the respondent is Male and value 2 if the respondent is Female.

- Age

In the questionnaire, the participant is asked to state his date of birth. In the present research we need the age of the person so we created the variable age. To calculate the age, we subtract the person's year of birth from the date of the survey.

- Health

These variable answers the question "*How is your health in general*?", having the following options: (1) Very Good (2) Good (3) Fair (4) Bad (5) Very Bad

- Marital Status

The respondent had to describe his/her marital status by having the following options: (1) Married (2) Separated -still legally married- (3) Divorced (4) Widowed (5) Never married.

- Education

The variable that we chose is a Generated variable that captures the highest level of education, ES – ISCED* and is divided into the following options:

Value	Category
1	Less than lower secondary education (ISCED I)
2	Lower secondary education completed (ISCED II)
3	Lower tier upper secondary education completed (ISCED IIIb)
4	Upper tier upper secondary education completed (ISCED IIIa)
5	Advanced vocational, sub-degree (ES-ISCED IV)
6	Lower tertiary education, BA level (ES-ISCED V1)
7	Higher tertiary education, MA level (ES-ISCED V2)

(* ISCED is the authority of international classification for organizing education programs and homogenous qualifications by levels and fields.)

- Income

The Variable is based on the feeling about household's income nowadays. Answer the question "*Which of the descriptions on this card comes closest to how you feel about your household's income nowadays*" The responders had the following choices:

1. Living comfortably on present income.

2. Coping on present income.

3. Difficult on present income.

4. Very difficult on present income.

- Unemployment

The unemployment variable captures if the responders have experienced unemployment lasting 3 months or longer. If the respondent has experienced unemployment lasting 3 months or longer choose the value (1) and the value (2) when the responders have not experienced unemployment lasting 3 months or longer.

- Social Interactions.

The Social Interactions variable takes values from 1 to 7.

Value	Category
1	Never
2	Less than once a month
3	Once a month
4	Several times a month
5	Once a week
6	Several times a week
7	Every day

3.2 DESCRIPTIVE STATICS

The table below presents the descriptive statistics of the variables that will be used in the analysis of this case study.

Table 1: Descriptive statics

VARIABLES	OBSERVATIONS	MEAN	STANDARD DEVIATIONS	MIN	MAX
HAPPY	446,004	7.20587	2.030017	0	10
AGE	447,043	47.92606	18.63012	12	123
AGE^2	447,043	2643.988	1853.493	144	15129
GENDER	482,241	1.537155	0.4986181	1	2
HEALTH	482,236	2.232679	0.9332242	1	5
MARITAL STATUS	432,843	2.622896	1.783083	1	5
EDUCATIONS LEVEL	373,366	3.834656	1.810494	1	7
INCOME	439,915	2.073264	0.8859153	1	4
UNEMPLOYMENT	478,699	1.729444	0.4442476	1	2
SOCIAL INTERACTIONS	446,321	4.852624	1.604452	1	7

As can be seen from the table, the Happiness variable has 446 004 observations with an average level of happiness 7,20 and it takes values from 0 to 10. The number 0 is the extremely unhappy level of happiness and 10 is the extremely happy level of happiness.

The variable Age ranges from 12 to 123 years old with an average age of 50 years old.

Following variable age, the Square of the variable is also calculated with values from 144 to 15129 and median of 2644.

The variable Gender has 482 241 observations with values 1 and 2. The value 1 is male and the value 2 is female.

The Health variable takes values from 1 to 5, where the value 1 is very good level of health and 5 is very poor level of health. This variable has an average level of health of 2.23, between the level of good and fair health.

The Marital Status variable has 432 843 and as can be seen from the table the minimum value is 1 where it is the married category and the maximum value is 5 where it is the "never married" category.

This is followed by the variable Education where the minimum value is 1 where it is the category of people who had an education level less than lower secondary and the maximum value is 7 which it is the category of people who completed higher tertiary education such as masters and doctoral level.

Additionally, the most important independent variable in the case study, Income variable has 439 915 observations. The highest value it gets is 4 where it belongs to the group of people who are having a very hard time with their current level of income. The minimum value is 1 which belongs to the people who are living comfortably with their current level of income.

In addition, the variable Unemployment takes values 1 and 2. The value 1 is for the respondents who have experienced unemployment lasting 3 months or more and the value number 2 is for the respondents who have not experienced unemployment.

Finally, the Social Interactions variable has 446 321 observations. Minimum value is 1 for people who never meet socially with friends, relatives or work colleagues and the maximum value is 2 which is for people who meet socially with friends, relatives or work colleagues every day.

Table 2: Happiness_Gender_Livingcomfortably
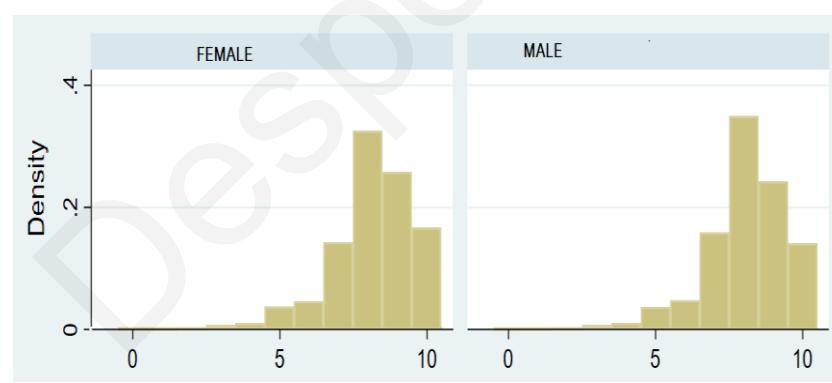
Analyzing the data, it is detected that the percentage of women who live comfortably with their income and are very happy does not differ much from the percentage of men who live comfortably with their income and are very happy. It is also worth noting that the percentage of men who live comfortably with their income and choose a happiness level of 7 is the same percentage as women who live comfortably with their income and are very happy.

Table 3: Happiness_Marital status_Living comfortably
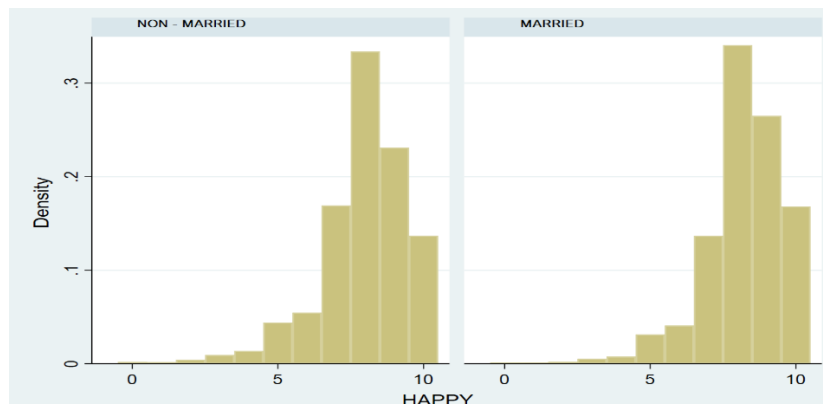
Furthermore, married people who live comfortably on their income are happier than people who, while living comfortably on their income, have never married. Nevertheless, as you can see in table 3, we observe that it is the same percentage of people who are married, live comfortably with their income and choose the level of happiness equal to 7 as people who have never married live comfortably with their income and they choose the happiness level equal to 7.

4. RESULTS

Table 4: Regression

DEPENDENT VARIABLE - HAPPY		
INDEPENTENT VARIABLES	**COEFFICIENT**	**P - VALUE**
ALBANIA	-0.0724709	0.172
AUSTRIA	0.2839124	0
BELGIUM	0.569065	0
BULGARIA	-0.8650715	0
SWITZEELAND	0.6795758	0
CYPRUS	0.4233877	0
CZECHIA	0.0432023	0.022
GERMANY	0.3991195	0
DENMARK	0.860007	0
ESTONIA	0.2865216	0
SPAIN	0.5402357	0
FINLAND	0.9147415	0
FRANCE	0.0851215	0
UNITED KINGDOM	0.3110083	0
GREECE	-0.1970392	0
CROATIA	-0.0137608	0.604
IRELAND	0.2768413	0
ISRAEL	0.54011	0
ICELAND	0.7144804	0
ITALY	-0.0885852	0.001
LITHUANIA	-0.1141986	0
LUXEMBOURG	0.6318369	0
LATVIA	0.3506702	0
MONTENEGRO	0.3926041	0
NETHERLANDS	0.5227233	0
NORWAY	0.56157	0
POLAND	0.3596803	0
PORTUGAL	-0.1316102	0
ROMANIA	-0.1166528	0.007
SERBIA	-0.0948567	0.025
RUSSIA	-0.0973418	0
SWEDEN	0.4299925	0
SLOVENIA	0.2467468	0
SLOVAKIA	-0.0725012	0.002
TURKEY	-0.6439054	0
UKRAINE	-0.3627378	0
KOSOVO	-0.3596815	0
ROUND 2 - 2004	0.0501714	0
ROUND 3 - 2006	-0.0107726	0.392
ROUND 4 - 2008	-0.0108661	0.368

ROUND 5 - 2010	0.0618992	0
ROUND 6 - 2012	0.1605713	0
ROUND 7 - 2014	0.1312811	0
ROUND 8 - 2016	0.2477275	0
ROUND 9 - 2018	0.3013116	0
ROUND 10 - 2020	0.4132885	0
AGE	-0.000564	0.449
AGE^2	0.00000752	0.315
MALE	-0.1573707	0
VERY GOOD	0.7558602	0
GOOD	0.32066	0
FAIR	-0.1372888	0
BAD	-0.8636771	0
MARRIED	0.3473001	0
SEPARATED	-0.234091	0
DIVORCED	-0.0824516	0
WIDOWED	-0.0929867	0
LOWER SECONDARY	-0.0922317	0
LOWER TIER UPPER SECONDARY	-0.1145095	0
UPPER TIER UPPER SECONDARY	-0.1126021	0
ADVANCED VACATIONALY SUB DEGREE	-0.0823283	0
LOWER TERTIARY EDUCATION	-0.0961497	0
UPPER TERTIARY EDUCATION	-0.0930916	0
LIVING COMFORTABLY	1.694005	0
COPING	1.343381	0
DIFFUCULT	0.769698	0
UNEMPLOYMENT	-0.203962	0
LESS THAN ONCE A MONTH	0.4335475	0
ONCE A MONTH	0.7528699	0
SEVERAL TIMES A MONTH	0.9500355	0
ONCE A WEEK	0.9971922	0
SEVERAL TIMES A WEEK	1.160005	0
EVERYDAY	1.349876	0
_cons	4.627022	0

Starting from the countries, it is observed that there some Countries that are not statistically significant. It is also observed that, holding all other variables, there are countries that have a negative relationship with happiness such as Portugal and Romania.

The following are the years when the questionnaires were made. From the regression, the years 2006 and 2008 are not statistically significant. Holding the other variables constant and analyzing these two years separately they have a negative effect on happiness.

Table 5: Age and Age^2

Nonlinear relationship between Happiness and Age
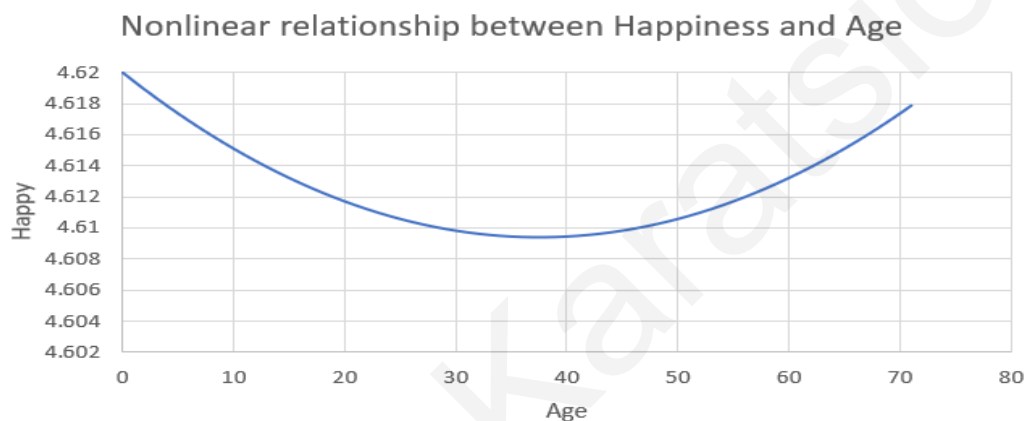
As for age, initially a non-linear relationship was observed with the variable Age, therefore it was considered necessary to create this variable in its square. Analyzing the age squared variable, the regression holding all other variables constant shows its positive relationship with happiness. Nevertheless, both of the age variables are not statistically significant for all the levels of significant.

Moreover, it is observed that men, holding everything else constant, are 0.157 less happy than women. The variable is statistically significant at all significance levels.

At the same time, health is statistically significant in this regression. People who are in very good health are 0.755 happier than people who are not at all in good health, holding all other variables constant. Even when people are in fair health and holding other variables constant, they are 0.137 less happy.

In addition, it is observed that the marital status variables are statistically significant for all the levels of significant. It is also observed that only married people

have a positive impact on Happiness. Holding all other variables constant, married people are 0.34 happier than people who have never been married.

Also, it is worth noting that although the education variables are statistically significant for all the levels of significant. Analyzing them separately and holding all other variables constant the education levels lower the happiness rates. The largest decrease is noted by lower tier upper secondary with a decrease of around 0.114.

Additionally, we see from the table above that the variables that measure income are statistically significant. Holding all other variables constant, people living comfortably on their current income are 1.69 times happier than people struggling on their current income.

Moreover, holding all variables constant, the unemployed are 0.20 less happy than the employed. This variable is statistically significant for all significance levels.

Social interactions effects are equally statistically significant for all significance levels. Analyzing each of these variables separately and holding all other variables constant, individuals appear to be happier whenever they socialize. People who meet on a daily basis with friends, relatives and colleagues tend to be 1.34 happier than people who do not meet at all with people from their surroundings.

5. DISCUSSION:

The case study aimed to identify how income can affect the happiness of each individual. The theory surrounding happiness suggests some characteristics that influence happiness such as health, education and marital status of the individual. Those mentioned as well as other characteristics have been added to the analysis and showed that the more comfortably a person lives with the income they have, the happier they are. This result is identical to the studies of economists Frey & Stutzer regarding happiness and income.

In the theory of the relationship between happiness and income, there were studies that proved that the relationship was transitory. When a person's income increases, their expectations also increase. In the present study it is illustrated how they feel about their household's income nowadays, as a result it is not possible to have results showing how long this relationship can last.

Looking at the theory of the relationship between happiness and age, a u-shaped relationship is observed. This means that people are happier when they are young and old. The results of this research do not correspond to the theory we identified. As identified by the research model the relationship between age and happiness is positive.

Following the relationship between gender and happiness, it is observed, as in this case study, that women are happier than men than women are happier than men but in this case study.

Moving on to the analysis of the theory of happiness, it noticed that people who are married are happier than those who were never married. This shows that the literature is identical with the results of this case study.

A positive relationship was also observed between health and happiness. The healthier a person is, the happier they feel.

Furthermore, it is observed that the negative relationship that exists in this case study between education and happiness is not proven by the literature surrounding this relationship.

Nevertheless, the negative relationship between unemployment and happiness is proven. When a person is unemployed, he is less happy than people who are employed.

Finally, but equally important for happiness are the social interactions of the individual. Previous studies show a positive relationship between happiness and social interactions as evidenced by this research. The more a person interacts with people from his environment, the happier he is.

5.1 LIMITATIONS AND FURTHER RESEARCH

As mentioned above, there have been studies that have demonstrated the transitory relationship between income and happiness. The research includes how income affects happiness over a given period of time. The absence of a variable that shows how long this relationship lasts is a limitation of this study. For further research it should be shown how long this positive relationship lasts.

As for the other variables, the study was able to provide clear evidence of their impact on happiness. However, it does not manage to show the direction of causality and this limits the research. For example, unhappy people may not have the ability to work harder for a better income or lack the initiative to look for work or socialize or invest in their health. In order to answer the above, further research must be done to better understand the causality.

7. CONCLUSION

The case study came to an important conclusion and partially managed to answer the question of this whole case study. Seeing the previous research done by well-known economists, we were also inspired by making a model that measures the happiness of the individual. Running the model in the STATA program we ended up with Aristotle's conclusion "Happiness is the meaning and the purpose of life, the whole aim and end of human existence". Money makes people happier. The more comfortably a person lives with his current income, the happier he is. In conclusion, the saying "Money can buy happiness" may be a fact.

8.APPENDIX

- ## Variable_Happiness

happy - How happy are you

Question: Taking all things together, how happy would you say you are?

Value	Category
0	Extremely unhappy
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	Extremely happy

- ## Variable_Gender

gndr - Gender

Question: CODE SEX, respondent

Value	Category
1	Male
2	Female

- ## Variable_Health

health - Subjective general health

Question: How is your health in general? Would you say it is ...

Value	Category
1	Very good
2	Good
3	Fair
4	Bad
5	Very bad

- ## Variable_Marital status

marital - Legal marital status

Question: Could I ask about your current legal marital status? Which of the descriptions on this card applies to you?

Value	Category
1	Married
2	Separated
3	Divorced
4	Widowed
5	Never married

- ## Variable_Education

edulvla - Highest level of education

Question: What is the highest level of education you have achieved?

Value	Category
1	Less than lower secondary education (ISCED 0-1)
2	Lower secondary education completed (ISCED 2)
3	Upper secondary education completed (ISCED 3)
4	Post-secondary non-tertiary education completed (ISCED 4)
5	Tertiary education completed (ISCED 5-6)

- ## Variable_Income

hincfel - Feeling about household's income nowadays

Question: Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?

Value	Category
1	Living comfortably on present income
2	Coping on present income
3	Difficult on present income
4	Very difficult on present income

- ## Variable_Unemployment

uemp3m - Ever unemployed and seeking work for a period more than three months

Question: Have you ever been unemployed and seeking work for a period of more than three months?

Value	Category
1	Yes
2	No

- ## Variable_SocialInteractions

sclmeet - How often socially meet with friends, relatives or colleagues

Question: Using this card, how often do you meet socially with friends, relatives or work colleagues?

Value	Category
1	Never
2	Less than once a month
3	Once a month
4	Several times a month
5	Once a week
6	Several times a week
7	Every day

- ## Summary of the Variables

Variable	Obs	Mean	Std. dev.	Min	Max
happy	446,004	7.20587	2.030017	0	10
age	447,043	47.92606	18.63012	12	123
age2	447,043	2643.988	1853.493	144	15129
gndr	482,241	1.537155	.4986181	1	2
health	482,236	2.232679	.9332242	1	5
maritalb	432,843	2.622896	1.783083	1	5
eisced	373,366	3.834656	1.810494	1	7
hincfel	439,915	2.073264	.8859153	1	4
uemp3m	478,699	1.729444	.4442476	1	2
sclmeet	446,321	4.852624	1.604452	1	7

Regression

Source	SS	df	MS
Model	472787.516	73	6476.54131
Residual	1251634.19	419,194	2.98581133
Total	1724421.71	419,267	4.11294404

Number of obs	= 419,268
$F_{(73, 419194)}$	= 2169.11
Prob > F	= 0.0000
R-squared	= 0.2742
Adj R-squared	= 0.2740
Root MSE	= 1.728

happy	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]	
al	-.0724709	.0530073	-1.37	0.172	-.1763636	.0314218
at	.2839124	.0214967	13.21	0.000	.2417795	.3260453
be	.569065	.0199498	28.52	0.000	.5299641	.608166
bg	-.8650715	.0212181	-40.77	0.000	-.9066584	-.8234847
ch	.6795758	.0203006	33.48	0.000	.6397871	.7193645
cy	.4233877	.0287151	14.74	0.000	.367107	.4796684
cz	.0432023	.0188955	2.29	0.022	.0061677	.0802368
de	.3991195	.0180658	22.09	0.000	.363711	.4345279
dk	.860007	.0219558	39.17	0.000	.8169742	.9030397
ee	.2865216	.01977	14.49	0.000	.2477729	.3252703
es	.5402357	.019837	27.23	0.000	.5013559	.5791156
fi	.9147415	.0198102	46.18	0.000	.8759141	.9535689
fr	.0851215	.0201469	4.23	0.000	.0456341	.1246088
gb	.3110083	.0195414	15.92	0.000	.2727077	.3493088
gr	-.1970392	.0235511	-8.37	0.000	-.2431986	-.1508798
hr	-.0137608	.0265652	-0.52	0.604	-.0658278	.0383062
ie	.2768413	.0193014	14.34	0.000	.2390112	.3146714
il	.54011	.0206939	26.10	0.000	.4995507	.5806694
is	.7144804	.0358074	19.95	0.000	.6442991	.7846618
it	-.0885852	.0255201	-3.47	0.001	-.1386039	-.0385665
lt	-.1141986	.0216924	-5.26	0.000	-.1567152	-.0716821
lu	.6318369	.0350315	18.04	0.000	.5631762	.7004977
lv	.3506702	.039302	8.92	0.000	.2736396	.4277009
me	.3926041	.0534216	7.35	0.000	.2878994	.4973087
nl	.5227233	.0200118	26.12	0.000	.4835007	.5619458
no	.56157	.0206261	27.23	0.000	.5211434	.6019966
pl	.3596803	.0198437	18.13	0.000	.3207872	.3985734
pt	-.1316102	.0208417	-6.31	0.000	-.1724592	-.0907611
ro	-.1166528	.0432624	-2.70	0.007	-.2014457	-.0318598
rs	-.0948567	.0422449	-2.25	0.025	-.1776554	-.012058
ru	-.0973418	.021728	-4.48	0.000	-.1399281	-.0547555
se	.4299925	.0206889	20.78	0.000	.3894428	.4705422
si	.2467468	.0210468	11.72	0.000	.2054957	.2879979
sk	-.0725012	.0229305	-3.16	0.002	-.1174443	-.027558
tr	-.6439054	.0315633	-20.40	0.000	-.7057685	-.5820423
ua	-.3627378	.0239121	-15.17	0.000	-.4096048	-.3158708
xk	-.3596815	.0516224	-6.97	0.000	-.4608598	-.2585033
ess2	.0501714	.0121734	4.12	0.000	.0263119	.0740308
ess3	-.0107726	.0125872	-0.86	0.392	-.0354432	.013898
ess4	-.0108661	.0120705	-0.90	0.368	-.0345239	.0127916
ess5	.0618992	.0123651	5.01	0.000	.037664	.0861345
ess6	.1605713	.0122877	13.07	0.000	.1364877	.1846549
ess7	.1312811	.0130171	10.09	0.000	.1057679	.1567942
ess8	.2477275	.0127264	19.47	0.000	.2227841	.272671
ess9	.3013116	.0127248	23.68	0.000	.2763714	.3262518
ess10	.4132885	.0171262	24.13	0.000	.3797216	.4468554
age	-.000564	.0007445	-0.76	0.449	-.0020232	.0008953
age2	7.52e-06	7.48e-06	1.01	0.315	-7.14e-06	.0000222
Male	-.1573707	.0054245	-29.01	0.000	-.1680026	-.1467388
verygood	.7558602	.0063192	119.61	0.000	.7434748	.7682456
good	.32066	.0053969	59.42	0.000	.3100822	.3312378
fair	-.1372888	.0057749	-23.77	0.000	-.1486075	-.1259702
bad	-.8636771	.0085515	-101.00	0.000	-.8804379	-.8469164
married	.3473001	.0064456	53.88	0.000	.3346669	.3599333
separated	-.234091	.0247002	-9.48	0.000	-.2825026	-.1856795
divorced	-.0824516	.0105622	-7.81	0.000	-.1031531	-.06175
widowed	-.0929867	.0103503	-8.98	0.000	-.113273	-.0727004
lowersecondary	-.0922317	.0104796	-8.80	0.000	-.1127714	-.071692
lowertieruppersecondary	-.1145095	.010884	-10.52	0.000	-.1358418	-.0931773
uppertieruppersecondary	-.1126021	.0102021	-11.04	0.000	-.1325978	-.0926064
advancedvacationalysubdegree	-.0823283	.0118024	-6.98	0.000	-.1054607	-.059196
lowertertiaryeducation	-.0961497	.0123524	-7.78	0.000	-.1203601	-.0719392
uppertertiaryeducation	-.0930916	.0119875	-7.77	0.000	-.1165867	-.0695964
livingcomfortably	1.694005	.012325	137.44	0.000	1.669848	1.718162
coping	1.343381	.0111282	120.72	0.000	1.32157	1.365192
diffucult	.769698	.0115161	66.84	0.000	.7471267	.7922693
unemployment	-.203962	.0062254	-32.76	0.000	-.2161637	-.1917604
lessthanonceamonth	.4335475	.0191267	22.67	0.000	.3960598	.4710352
onceamonth	.7528699	.0190672	39.49	0.000	.7154988	.790241
severaltimesamonth	.9500355	.0181409	52.37	0.000	.9144798	.9855912
onceaweek	.9971922	.0182638	54.60	0.000	.9613957	1.032989
severaltimesaweek	1.160005	.0179803	64.52	0.000	1.124764	1.195246
everyday	1.349876	.0185687	72.70	0.000	1.313482	1.38627
_cons	4.627022	.0314689	147.03	0.000	4.565344	4.6887

9. LITERATURE:

- Boarini, R., Comola, M., Smith, C., Manchin, R., & De Keulenaer, F. (2012). *What Makes for a Better Life? THE DETERMINANTS OF SUBJECTIVE WELL-BEING IN OECD COUNTRIES-EVIDENCE FROM THE GALLUP WORLD POLL*

- Dolan, P., Peasgood, T., & White, M. (2008). *Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being*. Journal of Economic Psychology, 29(1), 94–122.

- Diener, E., Oishi, S., & Lucas, R. E. (2003). *Personality, Culture, and Subjective Well-being: Emotional and Cognitive Evaluations of Life*. Annual Review of Psychology, 54 (December 2015), 403–425.

- Easterlin, R. A. (2001). *Income and Happiness: Towards a unified theory*. The Economic Journal, 111, 465–484.

- Fleche, S., Smith, C., & Sorsa, P. (2011). *Exploring determinants of subjective wellbeing in OECD countries: Evidence from the World Values Survey* (No. 921; OECD Economics Department Working Paper).

- Frey, B. S., & Stutzer, A. (2002b). *What Can Economists Learn from Happiness Research?* Journal of Economic Literature, 40(2), 402–435.

- Gerdtham, U. G., & Johannesson, M. (2001). *The relationship between happiness, health, and socio-economic factors: Results based on Swedish microdata*. Journal of SocioEconomics, 30(6), 553–557.

- Graham, C., & Chattopadhyay, S. (2013). *Gender and well-being around the world*. International Journal of Happiness and Development, 1(2), 212.

- Helliwell, J. F. (2008). *Life Satisfaction and Quality of Development*. In NBER Working Papers (No. 14507).

+ O. Lange Source: *The Review of Economic Studies*, Jun., 1934, Vol. 1, No. 3 (Jun., 1934), pp. 218- 225 Published by: Oxford University Press.

+ Ryan, R. M., & Deci, E. L. (2001). *On happiness and human potentials: A review of research on hedonic and eudaimonic well-being*. Annual Review of Psychology, 52, 141–166.

+ Siedlecki, K. L., Salthouse, T. A., Oishi, S., & Jeswani, S. (2014). *The Relationship Between Social Support and Subjective Well-Being Across Age*. Social Indicators Research, 117(2), 561–576.

+ Steven Stack and J. Ross Eshleman Source*: Journal of Marriage and Family*, May, 1998, Vol. 60, No. 2 (May, 1998), pp. 527- 536.

+ Stutzer, A. (2004). *The role of income aspirations in individual happiness*. Journal of Economic Behavior and Organization, 54(1), 89–109.

+ Yang, Y., & Morgan, P. (2008). *Social Inequalities in Happiness in the United States, 1972 to 2004: An Age-period-Cohort Analysis*. American Sociological Review, 73, 204–226.