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Interdependence of Quality of Life and Happiness of the Population in Southeast European Countries

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ABSTRACT

The aim of this paper is to examine the interdependence between the quality of life measured by gross domestic product per capita (GDP/p.c.) and the happiness of population measured by the happiness index. The analysis is based on recent data from the International Monetary Fund (IMF) on GDP/p.c. as well as the report from the United Nations Sustainable Development Solutions Network on the World Happiness Index. The subjects of analysis are the happiness of the population of Southeast European countries in European and global contexts and the level of GDP/p.c. at which the amount of happiness becomes independent of income. The research results are based on descriptive and inferential statistics methods. The main finding of this paper points to the need for a significant increase in quality of life in order to increase the happiness of the population of Southeast European countries.

INTRODUCTION

What could be more important for an economy than to produce and consume large quantity of housing, shelter, food, education and recreation?, is the question which Samuelson and Nordhaus (2004) ask in their famous book Economics. These authors also point that ultimate goal of good economy is to improve the living conditions of people in their everyday lives. According to Frey and Shultzer (2002), economic activities are valuable because they contribute to our happiness. They say that happiness depends on three sets of factors: a) demographic and personality factors, b) economic factors - unemployment, income, and inflation and c) political and institutional factors (Vasilyeva et al., 2018; Grabara, et al., 2016; Pietrzak et al., 2017; Draskovic et al., 2019). Most commonly used indicator to measure the quality of life is GDP. Gross domestic product per capita (GDP/p.c.) is one of the economic factors of great importance to the subject of this research. The results of happiness research (Bok, 2010) are very interesting. Its results challenge conventional wisdom about what people want, respectively when finding that societies experiencing higher incomes are not necessarily happier. People from developed countries are usually more satisfied with their own lives than those from less developed countries. Does that mean that rich people are also happier ones? How could we interpret high degree of happiness of people from not so wealthy countries? To find answer on those questions, UN's Sustainable Development

Solutions Network from year 2012 started to use The World Happiness Index (WHI), which, in addition to the GDP/p.c. should be a critical measure of the progress. The list was based on a global survey across 157 countries. Respondents rated the happiness from 0 to 10, with zero being the worst and ten the best possible life. The World Happiness Index represents the sum of the sub-indexes from the following components: GDP/p.c., social support, healthy life expectancy at birth, freedom to make life choices, generosity, trust, perceptions of corruption. They also added a level of poor community ratings, people's confidence levels and (residual) self-assessment factors different from the expected level expressed in earlier measurements.

1. LITERATURE REVIEW

The concept of the economy of happiness is known from utilitarian philosophers, who believed that the benefit or promotion of prosperity should be the basic principle and criterion of human action. It is assumed that economic subjects make a rational choice of scarce resources for the realization of their interests, starting primarily from their own benefit or profit. For utilitarian's (Robinson and Garratt, 2006, p. 78), happiness often takes the form of a "public good," in the form of libraries, hospitals, schools, good sewerage system, etc. Therefore, the main duty of government is to make the largest part of the population happy. The founder of the welfare economy A.C. Pigou (1920) held that prosperity is measured by the total sum of the pleasures an individual experiences using the available quantity of goods. The happiness (satisfaction) of an individual in the economy is observed through the choice of consumers among baskets of goods that will maximize their utility with a given level of disposable income (Ralasic and Bogdan, 2018, p. 351, Draskovic and Draskovic, 2015). The income increase will also allow him to achieve a higher degree of satisfaction because it will allow him combinations of goods that were not previously available to him. Accordingly, it can be concluded that the main indicator of a country's success is GDP / p.c. The traditional approach links the higher happiness of the population to higher GDP / p.c., Which has imposed high growth rates as the main goal of the economy. According to Clark et al. (2012) happiness inequality has fallen in the majority of countries that have experienced a positive income growth over the last forty years.

Alternative concept of Gross National Happiness (GNH) was first expressed by King of Bhutan in the 1980s as a response to Western economists visiting Bhutan and regarded it as a 'poor" country by standards of GDP (Tideman, 2011). This concept requires reshape cultural values to prioritize "the good life"over"the goods life" (Kasser, 2012). Stiglitz commission also recommended a shift of focus from growth to people's well-being (Stiglitz et al., 2009). This commission urged development of welfare indicators "beyond GDP". Exploring the happiness of the population can benefit not only individuals but also creators of politics. A. Sen (1999) sees increase of the income as a fundamental prerequisite for individual and social prosperity. Achieving macroeconomic goals such as production growth, stable price levels and employment growth are extremely valuable, but they are not the only important goals. Humans are intrinsically adaptable living beings who are able to find happiness and contentment even in very difficult living conditions. A. Smith (1817, p. 235) noticed that the mind of every man, in a longer or shorter time, returns to its natural and usual state of peace. In times of prosperity, after a certain period, he descends into that state, and in times of trouble after a certain period, he rises to it. On average, residents of developed countries are more satisfied with doubtless life because they are healthier, have more free time for hobbies and have a richer social life, and ultimately have much more interesting jobs (Bernanke, 2010). Easterlin (1974) noticed that economic growth does not necessarily lead to happiness.

Citizens in poor countries became happier once they could afford to meet basic existential needs, but after that there was no noticeable increase in happiness. Second, he noted that once they exceed the basic subsistence level, on average, citizens of underdeveloped countries are no less happy than those in developed countries, although in each country richer citizens are happier than those in the poor (Easterlin's paradox). Easterlin explained this by interpreting that the height of relative income is more important for happiness than the level of absolute income. B. Stevenson and J. Wolfers (2008) refuted this paradox, at least the part that said people in wealthy nations weren't happier than those in poor nations. The same authors defined one new paradox, The Paradox of Declining Female Happiness. Namely, despite the fact that the lives of women in the United States have improved over the past 35 years, yet they show that measures of subjective well-being indicate that women's happiness has declined both absolutely and relative to men. Also, some other research is not supporting the Esterlin paradox (Hagerty and Veenhoven, 2003; Inglehart et al., 2008; Veenhoven and Hagerty, 2006).

The economics of happiness explores which economic phenomena (apart from increasing income) contribute to an individual's happiness. The economy of happiness does not strive to satisfy the interest of capital but to simplify life in the community and make each of its members happy (Frajman-Ivkovic, 2012). The economy of happiness is twofold: on the one hand, it develops various indicators of progress and happiness on which the management of the state and policy decisions should be based, which focuses on increasing the quality of life of citizens. Thus, for example, the increase in GDP in China from a relatively low level by four times over the last two decades has not resulted in an increase in life satisfaction (Easterlin, 2013). On the other hand, the emphasis is on the localization of economic activities that activates and simplifies the lives of community members. One such activity (Yunus, 2009) also relates to microcredit (up to $ 100) which can significantly raise the level of happiness at the individual and societal levels. Accordingly, it is not surprising to point out (Zsolnai, 2016) that production using local resources for local needs is the most rational way of organizing economic life.

2. DATA AND METHODS

To achieve the main goal of this research the secondary data have been collected from: a) International Monetary Fund's data on GDP/p.c. based on purchasing power parity (PPP) in 2018 (http://statisticstimes.com/economy/countries-by-gdp-capita-ppp.php) and b) UN's Solutions Network data on World Happiness Index – WHI (https://worldhappiness.report/ed/2019/). The World Happiness Report is a landmark survey of the state of global happiness that ranks 156 countries by how happy their citizens perceive themselves to be. Collected data has been processed using the Statistica software and MS Office Excel. The analysis covered 153 countries of the world that were able to determine the World Happiness Index and GDP/p.c. Collected secondary data have been processed by using descriptive statistics as well as correlation and regression analysis. Descriptive statistics will be used to analyze and grade GDP/p.c. and WHI of the South-East European countries on European and Global market. A correlation analysis will explore the correlation between GDP/p.c. and WHI as well as the connection between WHI and its sub-indexes. Accordingly, we will also try to determine the level of GDO/p.c. from which income doesn't have any influence on the happiness. The model of simple linear regression will be explored to obtain accurate evaluation on WHI changes according to GDP/p.c. movement

$$Y = a + bX + \varepsilon \qquad (1)$$

where a and b parameters need to be evaluated, the Y-happiness index is measured by WHI size, X -size of GDP/p.c. and ε vector of theoretical values of stochastic members.

3. RESEARCH RESULTS AND DISCUSION

GDP as a measure of national success was officially released in the United States in 1942. According to the expenditure method, GDP is the sum of final spending, i.e. measure of total personal value, investment and government consumption plus the value of exports minus the value of imports. This approach is often presented by an open economy model

$$GDP = C + I + G + (X - M) \quad (2)$$

The largest share of disposable income, from 50% to 90% and above, is distributed to personal consumption. Characteristic of the business cycle is that consumption begins to decline during the recession. Likewise, increased consumption follows the movement of the economy on a good cycle. Thus the myth has developed that the economy should be driven solely by consumption growth. Approximately two-thirds of GDP in the United States (Skousen, 2001) accounts as personal consumption (model closed economy).

$$GDP = 66C + 14I + 20G \quad (3)$$

C – personal consumption, I – investment, G – government spending.

One of the most commonly used ratios is GDP per capita that you get when you divide GDP with the number of people. That is the way to estimate purchasing power and wealth of individuals. Accordingly, in 2018, Qatar was the richest country of the world with 128 487 $ per capita. When talking about European country, people from Luxembourg are richest with 105 147 $ per capita. Regarding South-East Europe, Slovenia is the richest with 34 480 $ per capita. Collected data from 153 countries out of 192 countries in the world, EU – 28 countries and 10 countries of Southeast Europe (Greece, Slovenia, Croatia, Romania, Bulgaria, Serbia, Bosnia & Herzegovina, Northern Macedonia, Albania and Montenegro) has been used for short descriptive analysis of GDP per capita (cf. Table 1).

Table 1. Descriptive statistics of GDP (153 worldwide countries, EU-28 countries and 10 countries of SEE)

	GDP/p.c. countries of the world		*GDP/p.c. EU-28*		*GDP/p.c. SEE countries*
MEAN case 1-153	22713,14	MEAN case 1-28	43214,14	MEAN case 1-10	21885,38
MEDIAN case 1-153	15021,30	MEDIAN case 1-28	39387,40	MEDIAN case 1-10	21034,45
SD case 1-153	22873,11	SD case 1-28	17439,23	SD case 1-10	7752,04
VALID_N case 1-153	153,00	VALID_N case 1-28	28,00	VALID_N case 1-10	10,00
SUM case 1-153	3475110,60	SUM case 1-28	1209996,10	SUM case 1-10	218853,80
MIN case 1-153	712,40	MIN case 1-28	23207,30	MIN case 1-10	13330,20
MAX case 1-153	128487,10	MAX case 1-28	109198,70	MAX case 1-10	36825,70
_25th% case 1-153	4598,40	_25th% case 1-28	31835,35	_25th% case 1-10	15522,60
_75th% case 1-153	34421,10	_75th% case 1-28	50009,70	_75th% case 1-10	26215,90

Source: authors' calculations

According to the obtained data in table 1, it is clear that countries of European Union have almost twice as much value of GDP per capita when compared with world's average. Out of 153 countries of the world the poorest are people from Central African Republic with only 712 $ per capita. In the lower quarter we can find countries with GDP/p.c. lower than 4,598.40$. 50% of countries have GDP per capita between 4,598.40$ and 34,421.10$. The lower quarter of EU countries is 31,835.35$. The lower quarter of Southeast European countries is twice smaller when compared with Southeast European countries and 3,37 times higher than global average. High values of standard deviations (SD) point on high deviations from arithmetic middle (MEAN) in all countries.

GDP only measures how much and how the residents of certain country spend their money, not how do they feel while doing it. Instead of measuring how much people create and spend, we should measure if they are happy and satisfied with their life and being. Instead of the growth of GDP and purchasing power, progress should be defined as increase of the happiness and reduction in poverty (Pupavac, 2006). Some countries, such as Bhutan, have already rejected GDP as a measure for success, while the

United Arab Emirates has established a Ministry of Happiness. According to a survey (https://aboutislam.net/family-life/culture/these-countries-have-a-ministry-of-happiness/) conducted in Bhutan in 2015, 35% of the population said they were extremely happy, 47.9% were moderately happy and only 8.7% were unhappy. In 2012 United Nations put out "Happiness Report" in which they try to affirm a new view on how to measure happiness. In that report, happiness (WHI) has been defined in several categories: a) GDP/p.c., b) Social support (SS), c) Healthy life expectancy (HL), d) Freedom to make life choices (F), e) Generosity (G), f) Perceptions of corruption (C) and g) dystopia and residual component. The correlation analysis has asserted strong and positive correlation (r = 0.77) between the World Happiness Index with GDP/p.c., social support and healthy life expectancy (cf. Table 2).

Table 2. Correlation analysis of WHI and its sub-indexes

	WHI	*Dystopia+residual*	*GDP/p.c.*	*SS*	*HL*	*F*	*G*	*C*
WHI	1							
Dystopia (1,88+residual)	0,4740	1						
GDP/p.c.	**0,7939**	-0,03352	1					
SS	**0,7770**	0,027017	0,75489	1				
HL	**0,7798**	-0,00571	0,83556	0,71896	1			
F	0,5666	0,077456	0,37914	0,44709	0,39036	1		
G	0,0758	-0,05101	-0,07978	-0,04814	-0,02985	0,26968	1	
C	0,3855	-0,00784	0,29848	0,18180	0,29519	0,43899	0,32650	1

Source: authors' calculations

According to the obtained data in table 3, it is clear that people in Finland are the happiest with the index 7.769. Taking in consideration GDP/p.c., Luxembourg is in the 3rd place in the world but according to happiness index it is in the 14th place while Costa Rica is highly ranked in the 12th place and regarding the wealth they are in low 82nd place. When talking about Southeast European countries, Slovenia has the highest happiness index (6.118) and it is also the richest country. The poorest country whose people are least happy (4.719) is Albania. List of top 15 countries of the world is in Table 3.

Table 3. Top 15 country by happiness, 2019

Country	*Happiness Index*
Finland	7,769
Denmark	7,6
Norway	7,554
Iceland	7,494
Netherlands	7,488
Switzerland	7,48
Sweden	7,343
New Zealand	7,307
Canada	7,278
Austria	7,246
Australia	7,228
Costa Rica	7,167
Israel	7,139
Luxembourg	7,09
United Kingdom	7,054

Source: authors prepared according to: https://countryeconomy.com/demography/world-happiness-index

Collected data from 153 countries out of 192 countries in the world, EU – 28 countries and 10 countries of Southeast Europe (Greece, Slovenia, Croatia, Romania, Bulgaria, Serbia, Bosnia & Herzegovina, Northern Macedonia, Albania and Montenegro) has been used for short descriptive analysis of World Happiness Index (cf. table 4).

Table 4. Descriptive statistics of World Happiness Index (153 worldwide countries, EU-28 countries and 100 countries of SEE)

	WHI of 153 of the world		*WHI of EU-28countries*		*WHI of SEE countries*
MEAN case 1-153	5,42	MEAN case 1-28	6,46	MEAN case 1-10	5,44
MEDIAN case 1-153	5,425	MEDIAN case 1-28	6,28	MEDIAN case 1-10	5,409
SD case 1-153	1,129	SD case 1-28	0,72	SD case 1-10	0,428
VALID_N case 1-153	153,00	VALID_N case 1-28	28,00	VALID_N case 1-10	10,00
SUM case 1-153	829,35	SUM case 1-28	181,04	SUM case 1-10	54,424
MIN case 1-153	2,853	MIN case 1-28	5,01	MIN case 1-10	4,719
MAX case 1-153	7,769	MAX case 1-28	7,76	MAX case 1-10	6,118
_25th% case 1-153	4,534	_25th% case 1-28	5,99	_25th% case 1-10	5,274
_75th% case 1-153	6,198	_75th% case 1-28	7,03	_75th% case 1-10	5,603

Source: authors' calculations

According to the obtained data in table 4, it is clear that EU countries have higher happiness index average by one index point than the average of 153 countries of the world and Southeast European countries. Difference between 153 countries of the world and Southeast European countries can be notice only on second decimal. 56 countries in the world have a happiness index of less than 5, which means that the population of these countries is not satisfied with their lives. For these three groups of countries of the world, a correlational analysis was conducted between happiness index and GDP/p.c. (cf. Table 5).

Table 5. Correlation between World Happiness Index and GDP/p.c.

		GDP value
Happiness Index of 153 countries of the world	Pearson's correlation coefficient P value	0,71 0,000
Happiness Index of EU-28 countries	Pearson's correlation coefficient P value	0,65 0,000159
Happiness Index of 10 SEE countries	Pearson's correlation coefficient P value	0,59 0,07258

Note: Correlation is significant on 0,05 level

The correlation analysis has asserted medium strength, positive correlation ($r = 0.74$; $p < 0.05$) between the GDP/p.c. and happiness index in all three groups of observed countries ($0.5< r < 0.8$). A regression analysis was carried out and a macroeconomic model was made to estimate the happiness index depending on the movement of GDP:

WHI = 4,621912 + 0,000035BDP/p.c. (4)

The resulting model will examine the trends of happiness of SEE countries in case they reach an average EU-28 GDP/p.c. level of 43 214.14$ (cf. Table 6).

Table 6. Estimate of the increase of the average SEE happiness index as the average level of GDP/p.c. in EU-28 countries

Country	*Current WHI*	*Current GDP/p.c.*	*WHI at average level of GDP/p.c. EU-28 countries*	*Difference*
Greece	5,288	29111,50	6,1344	+0,847
Slovenia	6,118	36825,70	6,1344	+0,016
Croatia	5,432	26215,90	6,1344	+0,702
Romania	6,070	26176,20	6,1344	+0,064
Bulgaria	5,011	23207,30	6,1344	+1,123
Serbia	5,603	16089,80	6,1344	+0,531
Bosnia and Herzegovina	5,386	13513,00	6,1344	+0,748
North Macedonia	5,274	15522,60	6,1344	+0,860
Albania	4,719	13330,20	6,1344	+1,415
Montenegro	5,523	18861,60	6,1344	+0,611

According to the obtained data in table 6, it is clear that with the increase of GDP/p.c. to the level of average GDP/p.c. in EU – 28 countries, happiness index in all Southeast European countries increase as well. The highest increase of the happiness index with the achievement of the average GDP/p.c. would have Albania of 1,415 and Bulgaria of 1,123 index points, while the lowest increase of the happiness index would have Slovenia of 0.016 and Romania by 0.064 index points. As far as the EU-28 countries are concerned, $40,000 represents the level above which the happiness index becomes independent of the movement of the GDP/p.c. The correlation analysis has asserted positive and medium strength (r=0.66) correlation between the happiness index and GDP/p.c. below 40,000$ while above absence of correlation is noticeable between the happiness index and the level of GDP/p.c. (r=-0.05). The same claim applies to the 153 countries in the world observed. The correlation analysis has asserted positive and medium strength (r=0.66) correlation between the happiness index and GDP/p.c. below 40,000$ while above absence of correlation is noticeable between the happiness index and the level of GDP/p.c. (r=-0.09).

CONCLUSION

The main role of the government should be to create environment in which individuals can accomplish and achieve its full potential and be happy. The happiness of the population can be increased with growth of the GDP as well as using appropriate policies towards more effective social program and lowering poverty level. The average happiness index measures the happiness of a country's residents. The human happiness index is manifested through seven sub-indexes. The three sub-indexes stand out for their importance: GDP/p.c. social support and healthy life expectancy at birth. The average World Happiness Index in Southeast European countries is on the level of the world's average. When compared with average index of EU countries it is lower for entire index point. This is another argument in favor of the thesis that residents of developed countries are satisfied with life than those in less developed countries. In case that GDP/p.c. of Southeast European countries increases to the level the EU countries have, all Southeast European countries would record an increase in the average happiness index. The largest increase in the average happiness index would be recorded by the residents of Albania and Bulgaria, and the smallest growth of the average happiness index would be recorded by the residents of Slovenia and Romania. When level of the GDP/p.c. is exceeding 40,000$ there is no correlation between the average happiness index and the level of the GDP/p.c.

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