

ECONOMY AND HAPPINESS IN THE VISEGRAD FOUR AND SCANDINAVIAN FOUR COUNTRIES

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Abstract

This study examines whether there is a connection between certain economic indicators (gross domestic product, the aggregate amount of investment, inflation, average consumer prices, unemployment rate, general government revenue and expenditures, general government net borrowing costs and general government net debt, current account balance, and general well-being) and the indicators published in World Happiness Report, Life Expectancy, Ladder of Life, Ecological Footprint, Happy Planet Index, and the Human Development Index. The scope of the research extends to the Scandinavian Four (Denmark, Finland, Norway, and Sweden) and the Visegrad Four countries (Czech Republic, Poland, Hungary, and Slovakia). The research findings indicate the existence of such a connection determined by general government revenue.

Keywords: happiness, Scandinavian Four, Visegrad Four, economic indicators

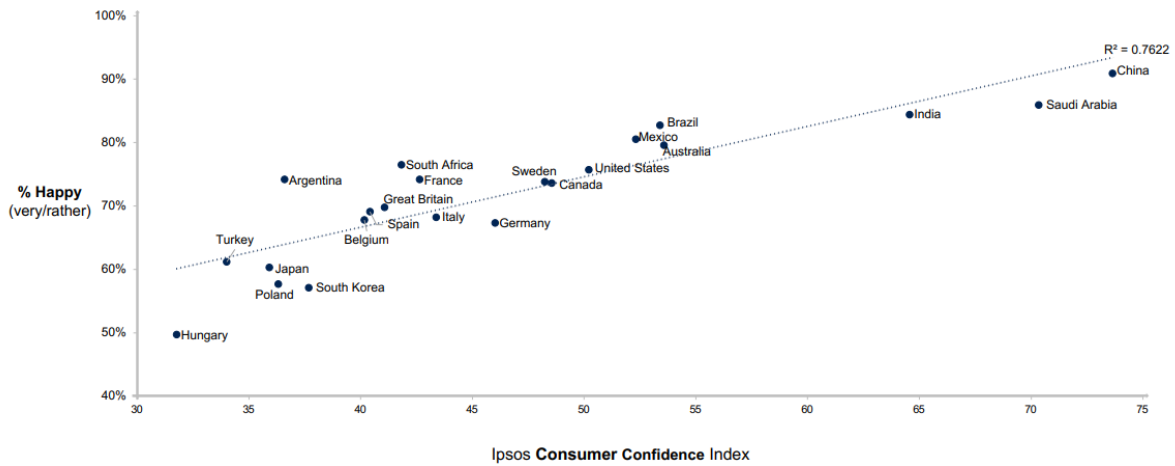
1. Introduction

According to the World Happiness Report (2022, 2021) in 2022 Hungary placed 51st and in 2021 53^d., (Helliwell et al., 2020) among the happiest countries in the world, while it was ranked 62^d in 2019 (Helliwell et al., 2019). The satisfaction survey of the Eurostat (2022) shows that Hungarians are ranked sixth from the last place in the category of personal relations while they are in the 8th position from the end concerning overall satisfaction with life on the list of European Union countries. Research results of the European Social Survey (2015a, 2015b) pertaining to hedonic and eudemonic well-being present an even worse scenario, placing Hungarians third from the last position in both categories. According to the IPSOS' March 2023 survey, Hungary ranked last out of 22 countries measuring the correlation between happiness and the consumer confidence index (these indicators show high correlation) (Figure 1.). Hungary came last with 50%. China placed first with 91%, while the average value was 73% in this category. (The high score achieved by China can be explained by the concept of *guanxi*. The term, which executives of international firms should definitely be familiar with, refers to a type of brotherhood, a typically collectivist notion, along with fairness being indispensable both for motivation and experiencing happiness" (Juhász, 2014, p. 74).

Although, the other Visegrad Four (henceforth V4) countries did not achieve much better results either, the Scandinavian Four countries (henceforth S4 based on Bódi and associates, 2016) are regularly placed in the top ranks. At this point I must reiterate that while "Finland is not considered a Scandinavian country in a geographical sense, it tends to appear as such in the political and economic press and the discourse of the general public" (Bódi et al., 2016, p. 160).

Figure 2 indicates the V4 countries of Central Europe, especially Hungary are significantly lagging behind the S4 countries in such aspects as happiness, satisfaction, and well-being. What could be the reason behind such a deficiency for Hungary? One of the best indicators of the significance and at the

same time dearth of domestic happiness or well-being-related research efforts is the re-issuing of Kopp and Skrabski's book (2020) originally published in 2011, despite the fact that the authors died in 2012. Bagdi and Oláh's national happiness map for Hungary, however, published in 2021 for the sixth time is among the latest research results.



Base: 22,508 online adults under the age of 75 across 32 markets, interviewed Dec. 22, 2022 – Jan.6, 2023

Figure 1. Correlation between happiness and the consumer confidence index

Source: IPSOS, 2023, p. 19.

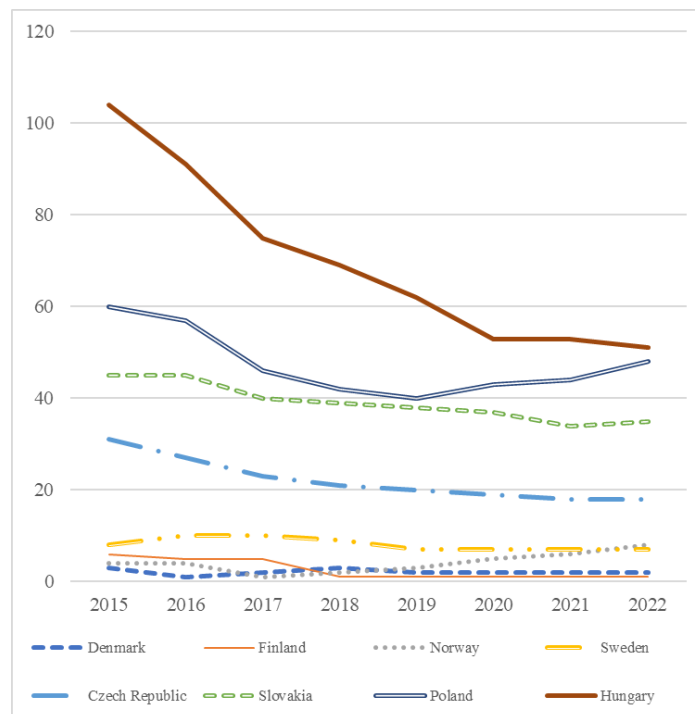


Figure 2. Rankings of the S4 and V4 countries on the World Happiness Report in the past eight years (2015-2022) (author's own compilation)

Source: World Happiness Report 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022

Another crucial indicator of well-being related to the present research is the Human Development Index (HDI). It can be defined as “A composite index measuring average achievement in three basic dimensions of human development - a long and healthy life, knowledge and a decent standard of living.” (United Nations Development Programme, 2022, p. 276). As Figure 3 shows in 2021 the S4 countries achieved the highest scores on this index, while among the V4 countries only the Czech Republic came close with a 0,889 value. It is also important to highlight the HDI value in relation to sustainability finance, as the inclusion of the social (S) pillar is a key factor in the ESG aspects of sustainability reporting. (Baranyi et al., 2022).



Figure 3. Scores of the S4 and V4 countries on the Human Development Index in 2021

Source: Based on United Nations Development Programme, 2022, p. 277 data (author's own editing with QGIS Software)

While a comparative analysis pertaining to happiness, satisfaction, and well-being in light of economic data in the V4 and S4 countries has not been performed, the somewhat differently themed works of Gál (2018), Zsarnóczai and Bence (2018), and Bódi and associates (2016) should be mentioned.

It is noteworthy that research focusing on the personality traits of the representatives of different nations in correlation with the respective level of happiness and economic status has not yet been conducted. Scandinavian countries tend to surpass the V4 countries not only in the category of happiness, but economic performance as well. The comparative analysis according GDP per capita in the respective countries (Figure 4) suggests that the inhabitants of the S4 countries are not only happier and more content, but enjoy a stronger economy than those of the V4 countries. (This somewhat contradicts the Easterlin paradox, which states that: “there is no correlation between the level of economic development in a society and the overall happiness of its citizens” (Kiss, 2018, p. 274).) Research must focus on the reason for such difference, and aim at identifying a correlation between national economic status and the individual happiness.

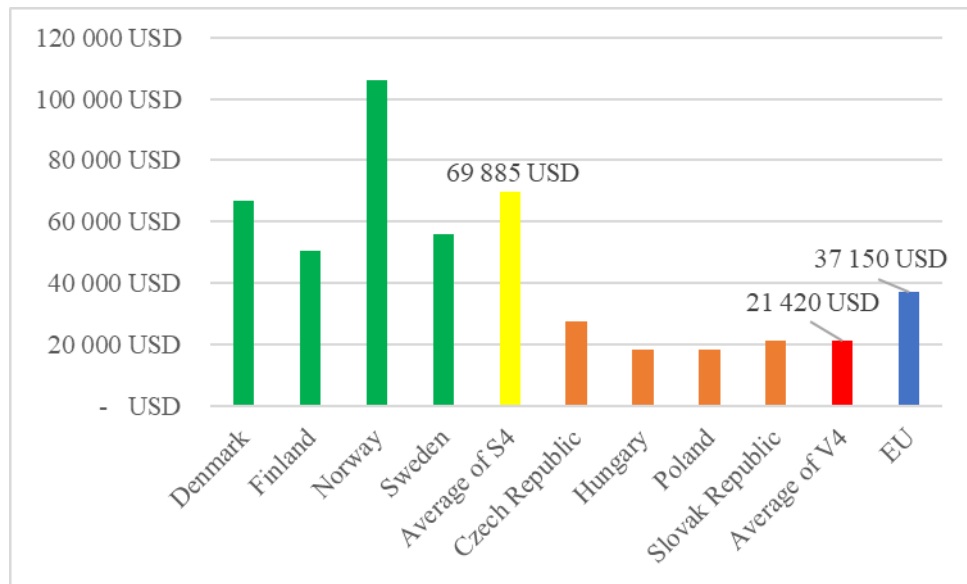


Figure 4. Gross Domestic Product per capita, current prices (US dollars) (2022)
 Source: Based on World Bank, 2023 data (author’s own editing)

2. Research methodology: the subjects of the inquiry, data collection, analysis

2.1. The subjects of the inquiry

The inquiry focuses on the Scandinavian Four (Denmark, Finland, Sweden, Norway) and Visegrad Four (Hungary, Czech Republic, Poland, Slovakia) countries.

Data collection

The research utilized secondary data obtained from larger databases accessible online as listed below:

- Footprint Database (Global Footprint Network),
- Happy Planet Index Database,
- Human Development Index Database (United Nations Development Programme),
- International Monetary Fund Database,
- Organisation for Economic Co-operation and Development (OECD) Database,
- Our World in Data Database,
- Tradingeconomics Database,
- World Bank Database,
- World Happiness Report Database.

2.2. Analysis

The collected data was analyzed and evaluated by the Excel, the QGIS and the SPSS programs. As far as statistical tests are concerned, I relied on calculation and correlation. In the correlation calculation, we examine the relationship between two variables. The linear correlation (or Pearson's) coefficient (r) can have a value between -1 and $+1$. The absolute value of the correlation coefficient is closer to one the stronger the relationship between the two variables. The relationship is strong positive if the coefficient value is between $0.7 \leq r < 1$, and strong negative if the coefficient value is between $-1 \leq r < -0.7$ (Sajtos et al., 2007, pp. 204-205). Based on the available data and the hypotheses formulated, the use of this statistical method was justified.

3. Hypotheses and comparative analysis

The specific objective of this research is to perform a comparative analysis of the S4 Scandinavian countries (Denmark, Finland, Norway, Sweden) and the V4 or Visegrad countries (Czech Republic, Hungary, Poland, Slovakia) in order to identify a correlation between national economic status and state of happiness of the given country. The key issues of the research program are expressed in the following hypotheses:

- H1: In light of such economic indicators as GDP, General government revenue, General government net debt, Inflation, and Unemployment rate the S4 countries (Denmark, Finland, Norway, Sweden) surpass the V4 countries (Czech Republic, Hungary, Poland, Slovakia).
- H2: A correlation can be discerned between the higher economic position, aggregate happiness and social well-being, and general satisfaction of the S4 countries (Denmark, Finland, Norway, Sweden) and the lower level of economic achievement, national happiness, social well-being and contentment in the V4 countries (Czech Republic, Hungary, Poland, Slovakia).

Figure 5 and Figure 6 describe the general government revenue and general government net debt in the S4 and V4 countries. It is suggested that significant conclusions cannot be made based on the GDP alone. While the S4 GDP is regularly higher than that of the V4 countries (cf. Figure 4), in case of the general government revenue category the respective differences tend to disappear. Furthermore, according to 2020 data Hungary places first in general government debt followed by Slovakia and a Scandinavian country, Norway.

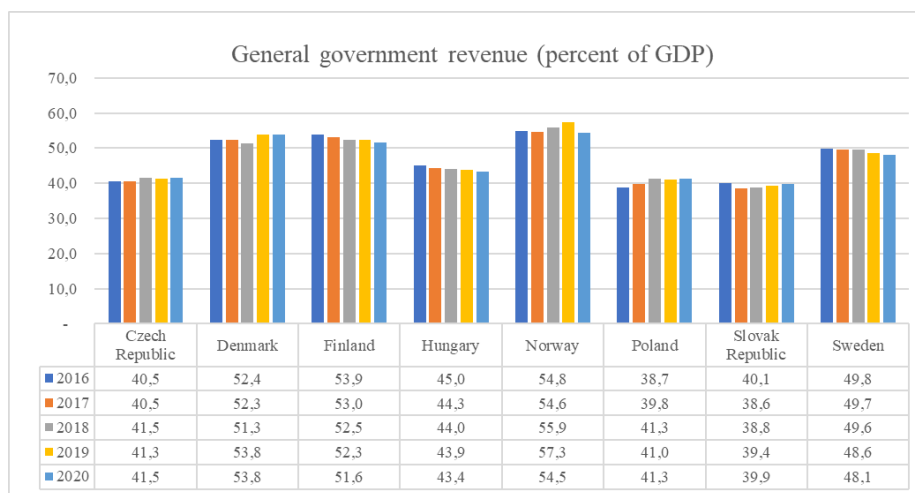


Figure 5. General government revenue (percent of GDP) (2016-2020)

Source: Based on International Monetary Fund, 2023 data (author’s own editing)

The weakness or even the lack of correlation between the respective data is not out of the ordinary. Lelkes’ (2022, p. 59) recognition of a weak correlation between the increase of the GDP and the average feeling of happiness provides ample justification: “the weak correlation between the increase of the GDP and the general feeling of happiness is not surprising. The GDP was not established to become the main indicator of development. As several economists (Joseph E. Stiglitz, Amartya Sen, Alan B Kruger, Thomas Piketty, Tim Jackson, Richard Layard or László Zsolnai) have proven it is not suitable to become the principal indicator of general social well-being.”

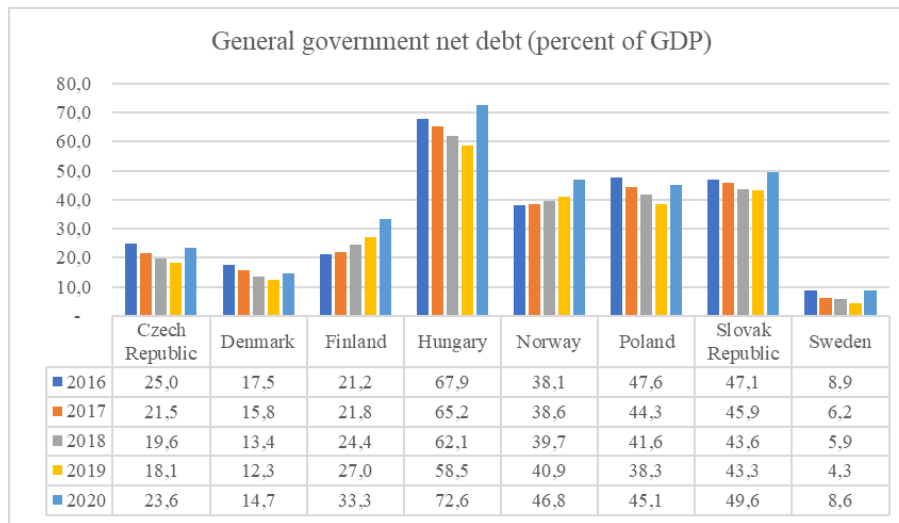


Figure 6. General government net debt (percent of GDP) (2016-2020)

Source: Based on International Monetary Fund, 2023 data (author’s own editing)

Having analysed the inflation and unemployment rate along with the GDP and related data, one can arrive at even more surprising conclusions. (cf. Figure 7. and Figure 8.).

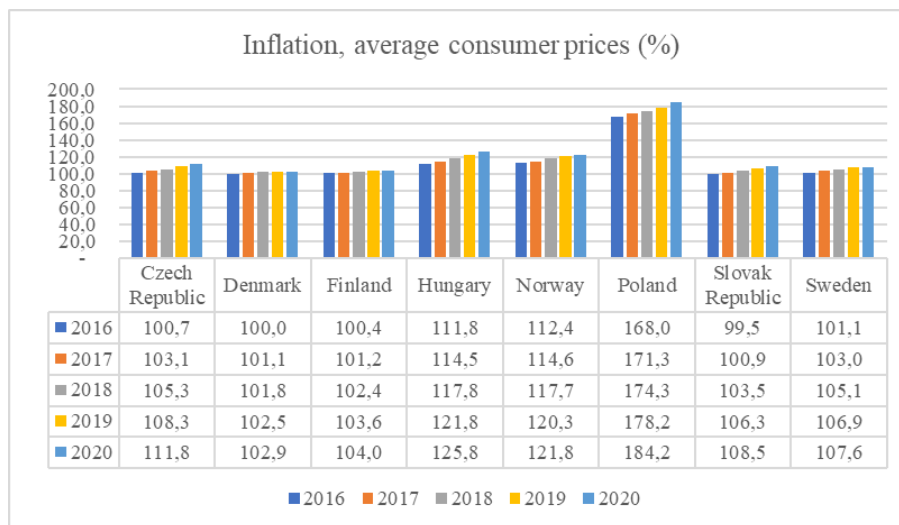


Figure 7. Inflation, average consumer prices (index, %) (2016-2020)

Source: Based on International Monetary Fund, 2023 data (author’s own editing)

It is clearly shown that with the exception of Poland where such figures are very high there is no significant digression between the values of the Inflation and the average consumer price index.

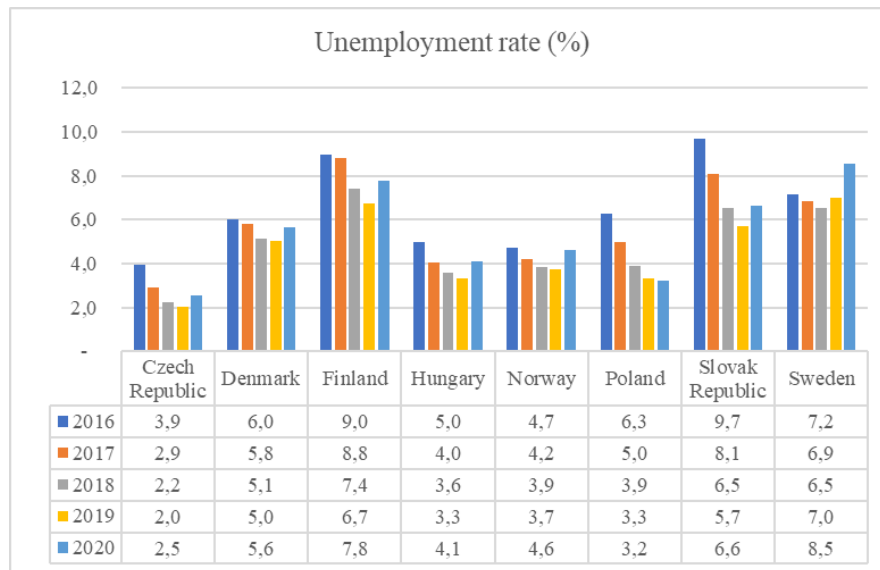


Figure 8. Unemployment rate, Percent of total labour force (2016-2020)

Source: Based on International Monetary Fund, 2023 data (author’s own editing)

Focusing solely on the unemployment rate produces an even more surprising result as the highest unemployment rate was exhibited by two Scandinavian countries, Finland and Sweden, in the past years.

Consequently, based upon the abovementioned data Hypothesis One [H1: In light of such economic indicators as GDP, General government revenue, General government net debt, Inflation, Unemployment rate the S4 countries (Denmark, Finland, Norway, Sweden) surpass the V4 countries (Czech Republic, Hungary, Poland, Slovakia] has to be discarded.

In order to substantiate Hypothesis 2 [(H2): A correlation can be discerned between the higher economic position, aggregate happiness and social well-being, and general satisfaction of the S4 countries (Denmark, Finland, Norway, Sweden) and the lower level of economic achievement, national happiness, social well-being and contentment in the V4 countries (Czech Republic, Hungary, Poland, Slovakia] I relied on the Pearson correlation test focusing on such relevant data as well-being and economic indicators:

1. well-being indicators: Ranks and scores of the World Happiness Report, Life Expectancy, Ladder of Life, Ecological Footprint, Happy Planet Index, Human Development Index;
2. economic indicators: Gross domestic product, current prices, Gross domestic product per capita, Total investment, Inflation, average consumer prices, Unemployment rate, General government revenue, General government total expenditure, General government net lending/borrowing, General government net debt, Current account balance.

Table 1 summarizes the results of the 2020 inquiry. Accordingly, correlation can be established in case of several indicators either at a significance level of 1 or 5 indicated by a red and blue background respectively. Since the present research focuses on the correlation between the well-being indicators and the economic indicators, the correlation between “purely” well-being and “purely” economic indicators is not examined in detail despite the existence of such connection.

Apart from the obvious correlation between the Rank of World Happiness Report and the Score of World Happiness Report (0,988), a correlation between such “pure” well-being indicators can be discovered between the Life Expectancy and HDI index (0,985) along with the Score of World Happiness Report and Ladder of Life (0,984) and the Ladder of Life and Rank of World Happiness Report (0,973) and the Score of World Happiness Report and Life Expectancy (0,944) at one percent

significance level. In case of “purely” economic indicators at one percent significance level the value of the correlation coefficient between the General government revenue and the General government total expenditure is 0,914.

In case of “mixed,” that is both well-being and economic indicators, a strong positive correlation is displayed at one percent significance level with the following Pearson coefficients: HDI index and General government revenue (0,905), Life Expectancy and General government revenue (0,884), Score of World Happiness Report and General government revenue(0,862), and Ecological Footprint and General government net lending/borrowing (0,860), to be completed with Ecological Footprint and General government revenue (0,852). At the same time at level 5 significance strong negative connection can be discerned between specific indicators with the following Pearson coefficient values: Rank of World Happiness Report and General government revenue (-0,810) and a strong positive connection is recognized between Ladder of Life and General government revenue (0,797) (further connections with lower coefficient values are shown in Table 1).

In light of the given results it can be concluded that there is a correlation between the well-being and economic indicators (“mixed” indicators) pertaining to the S4 and V4 countries especially regarding the General government revenue category appearing 4 times among five indicators with the highest positive correlation coefficient. Since the General government revenue values show a close correlation with the well-being indicators, Hypothesis 2 was substantiated.

Table 1. Distribution of the results of the Pearson correlation coefficient tests related to the economic and well-being indicators of the S4 and V4 countries (2020) (author’s own editing with SPSS)

		Correlations																
		RankofWHR	ScoreofWHR	LifeExpectancy	LadderofLife	Ecological Footprint	HPI	HDI	GDPCurrentPrices	TotalInvestment	Inflation	UnemploymentRate	Revenue	Expenditure	LendingBorrowing	Debt	CurrentAccountBalance	
RankofWHR	Pearson Correlation	1	-.988**	-.939**	-.973**	-.885**	-.726*	-.946**	-.235	-.375	.572	-.474	-.810*	-.637	-.784*	.651	-.398	
	Sig. (2-tailed)		.000	.001	.000	.003	.041	.000	.576	.380	.138	.235	.016	.000	.021	.081	.329	
ScoreofWHR	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
LifeExpectancy	Pearson Correlation	0	0	1	.501**	.864**	.705	.985**	.388	.476	-.413	.503	.884**	.778*	.703	.749**	.401	
	Sig. (2-tailed)				.001	.000	.006	.051	.000	.342	.233	.310	.204	.004	.023	.052	.032	.325
LadderofLife	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
EcologicalFootprint	Pearson Correlation	0	0	0	0	1	.816**	.817*	.886**	.103	.346	-.643*	.572	.797*	.675	.893*	-.520	.260
	Sig. (2-tailed)						.000	.000	.002	.014	.013	.003	.007	.006	.066	.062	.186	.502
HPI	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
HDI	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
GDPCurrentPrices	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
TotalInvestment	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
Inflation	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
UnemploymentRate	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
Revenue	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
Expenditure	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
LendingBorrowing	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
Debt	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	
CurrentAccountBalance	Pearson Correlation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Sig. (2-tailed)																	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Sources of data: Global Footprint Network (2023), Happy Planet Index (2023), United Nations Development Programme (2023), International Monetary Fund (2023), Organisation for Economic Co-operation and Development (2023), Our World in Data (2023), Tradingeconomics (2023), World Bank (2023), World Happiness Report (2023)

4. Conclusion

My research concludes that the Scandinavian Four countries do not surpass the Visegrad Four countries regarding all economic indicators under inquiry. Furthermore, a clear connection or correlation can be established among the well-being and economic indicators of the eight countries especially in case of

the General government revenue category whose relatively high value can reliably forecast the extent of social well-being.

One obvious limitation of the research is the fact that it focused only on 8 countries. Naturally, the expansion of its scope to all countries displaying the previously discussed indicators promises extensive results with wider applicability.

5. Acknowledgement

The author would like to express his gratitude to Dr. Adam Gyurkó (Assistant Professor, Eszterházy Károly Catholic University) for his help in constructing the map presented in this essay.

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