





*Review article*

## ECONOMICS OF HAPPINESS: THE RELATIONSHIP BETWEEN GDP AND SUBJECTIVE WELL-BEING

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**Apstrakt:** U ovom radu bavimo se ekonomijom sreće, sa posebnim fokusom na odnos između sreće i materijalnog bogatstva, sa ciljem da ispitamo postojanje Eastelinovog paradoksa. Analiza se zasniva na podacima iz Svetskih izveštaja o sreći, pri čemu se posmatra korelacija između sreće i bruto domaćeg proizvoda (GDP) po glavi stanovnika na međudržavnom nivou. Dodatno, posmatramo kretanje GDP per capita i skora sreće longitudinalno u okviru jedne zemlje. Dobijeni rezultati samo u određenoj meri idu u prilog Easterlinovom paradoksu. Naime, na međudržavnom nivou, sa rastom bogatstva do određenog nivoa dolazi do porasta sreće, nakon čega se javlja zasićenje. U slučaju Srbije, sa porastom GDP per capita, najpre dolazi do rasta sreće, nakon čega se uočava stagnacija. Ovi rezultati mogu poslužiti kao osnova za kreiranje mera ekonomske i javnih politika usmerenih ka unapređenju individualnog i društvenog blagostanja.

**Ključne reči:** ekonomija sreće, sreća, blagostanje, Easterlinov paradoks, GDP per capita.

**Abstract:** This paper explores the field of economics of happiness, with a particular focus on the relationship between happiness and material wealth, aiming to examine the validity of the Easterlin Paradox. The analysis is based on data from the World Happiness Reports, estimating the correlation between happiness and gross domestic product (GDP) per capita at the cross-country level. Additionally, we are examining the movement of GDP per capita and happiness scores longitudinally within a single country. To some extent, the findings support the Easterlin Paradox: namely, at the international level, as wealth increases, happiness initially rises to a certain threshold, after which saturation occurs. In the case of Serbia, with the rise in GDP per capita, firstly there is an increase in happiness, after which stagnation is observed. These results may serve as a foundation for designing economic and public policy measures aimed at improving individual and societal well-being.

**Keywords:** Economics of Happiness, Happiness, Well-being, Easterlin Paradox, GDP per capita.

### 1. INTRODUCTION

Welfare economics is a branch of economic theory that studies how the allocation of resources affects individual and societal well-being and identifies changes in allocation that may lead to improvements in overall welfare. Neoclassical welfare economics assumes that individuals are rational agents who make choices according to their preferences. Well-being is measured indirectly, through the choices people make, under the assumption that *Choice = Preferences = Welfare*. In other words, individuals make choices based on their preferences, and those choices generate a certain level of well-being. Public policies are formulated with minimal intervention, following the *laissez-faire* principle.

In the aftermath of the Global Financial Crisis of 2007, behavioral welfare economics began to develop rapidly, incorporating insights from psychological research into actual human behavior. Behavioral welfare economics accounts for emotions, psychological factors, and cognitive limitations of economic agents. Instead of the traditional notion of preferences, the concept of *informed preferences* began to be used (Chetty, 2006). This implies that welfare is not measured solely based on the choices individuals make, but also on what they would choose if they were informed, attentive, and consistent. The concept of informed preferences acknowledges that people make systematic errors in decision-making.

Bernheim and Rangel (2007) developed a theoretical foundation for welfare analysis grounded in the choice theory, adapted to cases in which decision-makers are not consistent and make errors in judgment. They

introduced the concept of a *normative standard* of behavior, a criterion that allows us to evaluate what is genuinely in an individual's best interest and, accordingly, design public policies—even when individual choices deviate from the rational model.

Within the framework of *libertarian paternalism*, Thaler and Sunstein (2003), and later Sunstein and Thaler (2008) argue that for any given choice situation, there exists a better choice for the individual—one that leads to a higher level of actual well-being. If the individual is unable or unmotivated to make that choice, a *choice architect* can assist through subtle interventions known as *nudges*, encouraging better decisions without restricting freedom of choice. Thus, public policies are based on *soft paternalism*.

Economics of happiness is a relatively new scientific field that emerged within behavioral welfare economics. It proposes that economic policy measures should be designed to maximize the happiness of individuals and society as a whole. Defining and measuring happiness remains a significant challenge, given the abstract nature of the phenomenon. In this paper, we focus on the happiness score, a measurable and annually published indicator. We aim to assess whether greater wealth necessarily translates into greater happiness.

This paper is structured in the following way. In the second section, we present neoclassical and behavioral indicators of well-being. The third section offers a literature review. In the fourth section, the research results and discussion are provided. At the end, we conclude the paper, providing an overview of the key implications and insights.

## 2. INDICATORS OF WELL-BEING

Indicators of well-being are metrics used to measure the level of well-being. Well-being is not measured solely by economic wealth, but also includes various life dimensions — education, health, environmental quality, safety, freedom, and the subjective experience of happiness.

The main indicators of well-being within neoclassical welfare economics are Gross Domestic Product (GDP) and the Human Development Index (HDI). The Gini coefficient is used as an indicator of inequality and may be considered a partial indicator of well-being.

Gross Domestic Product (GDP) represents the total market value of all goods and services produced within a national economy over a specific period, typically one year. As an indicator of well-being, GDP has several advantages. It is a simple and widely accepted measure that is easy to calculate. Using GDP, we can easily make comparisons between countries and track economic growth. Economic policies are often formulated and revised based on GDP trends.

However, GDP has its limitations. It provides only a rough estimate of living standards and does not account for income distribution within a country. Thus, it fails to reflect inequality and poverty. It also excludes the informal and shadow economy (e.g., undeclared labor and household work). GDP measures national wealth only quantitatively, without capturing quality of life or happiness. Furthermore, it neither accounts for the sustainability of economic growth nor incorporates negative externalities.

The Human Development Index (HDI) was developed to address the shortcomings of GDP. Unlike GDP, HDI measures how healthy, educated, and long-living people are. It was introduced by the United Nations Development Programme (UNDP) in 1990 and is calculated as the geometric mean of three indices: the health index, the education index, and the income index:

$$HDI = \sqrt[3]{Health\ Index * Education\ Index * Income\ Index} \quad (1)$$

The health index is based on life expectancy at birth and reflects the general health, longevity, and access to healthcare within a society. The education index considers the average number of years of formal education among adults and the expected years of schooling for children entering the education system. The income index is based on gross national income per capita (GNI per capita), expressed in purchasing power parity (PPP) dollars, which enables cross-country comparisons regardless of price differences.

The main indicators of well-being within behavioral welfare economics are the Happiness Score published in the World Happiness Report (WHR), and Gross National Happiness measure (GNH). Subjective well-being is measured directly through surveys in which respondents answer questions about life satisfaction. These surveys serve as data sources for the Happiness Score. Gross National Happiness (GNH) is a concept first introduced in Bhutan, encompassing not only economic development but also cultural values, environmental sustainability, and spiritual well-being.

This paper focuses on the Happiness Score and the field of Economics of happiness. Richard Easterlin is considered the founder of economics of happiness, with his seminal paper from 1974 laying the foundation for this field (Easterlin, 1974). Other influential scholars include Kahneman, Deaton, Frey, Stutzer, and Oswald (Kahneman & Deaton, 2010; Frey & Stutzer, 2002; Oswald, 1998).

The World Happiness Report is an annual survey published by the United Nations Sustainable Development Solutions Network (UN SDSN) in collaboration with experts in economics, psychology, and statistics. First published in 2012, it has since served as a key resource for comparing levels of happiness and quality of life across countries worldwide.

A major advantage of the happiness score and the World Happiness Report is that they do not consider only economic growth and material wealth as sources of happiness, but also incorporate a wide range of other factors, such as healthy life expectancy, social support, and freedom. As such, they enable the formulation of economic and public policies oriented toward human well-being rather than solely GDP. The main limitation of the happiness score is that categories such as social support, freedom, and perceived corruption are subjective and difficult to measure. Surveys serve as the primary method for collecting such data and come with inherent limitations, including socially desirable responses, reliance on respondents' honesty, limited information depth, sample bias, and low response rates, as well as high variability in emotional states.

In addition to surveys, experimental method is also used—especially to test whether a proposed economic policy would have the desired effect in practice. The experimental method is particularly useful for establishing causal relationships. It is crucial to ensure high internal and external validity of experiments to confirm that true causal relationships have been identified and that the findings can be generalized from the sample to the population, and from specific conditions to broader contexts. In randomized controlled trials, a randomly selected group (treatment group) is exposed to the behavioral intervention, while a control group is not. The difference in happiness between the two groups is then assessed.

### 3. LITERATURE REVIEW

Empirical research has shown that within a country, increases in income from poverty to a decent standard of living do raise people's happiness. However, once income exceeds the threshold of basic comfort and enters the realm of luxury and abundance, additional money no longer leads to increased happiness, and in some cases, it may even reduce life satisfaction. This pattern is known as the Easterlin Paradox (Easterlin, 1974). Specifically, within a country, higher income is associated with greater happiness up to a certain income level, but over time, increases in average income do not lead to increases in average happiness. When comparing countries, wealthier nations are not necessarily significantly happier than poorer ones. Over time, as countries grow economically, happiness levels stagnate due to adaptation, social comparison (relative income), and changing values and expectations. It can thus be concluded that economic growth does not guarantee long-term increases in subjective well-being—contrary to the traditional economic assumption that higher GDP automatically implies greater welfare.

Clark et al. (2008) find that relative income, i.e. income compared to others, significantly affects happiness. People care more about their income rank than the absolute amount. Oswald (1997) and Clark (2001) show that unemployment has a profound and lasting negative impact on happiness, greater than the effect of income level. Alesina et al. (2004) finds that higher income inequality reduces happiness, especially among the poorer population. These findings have important policy implications: economic and public policies should consider not just the level of GDP, but also other key factors affecting well-being and happiness—such as freedom, inequality, corruption, and social support.

Easterlin et al. (2010) re-examine the Easterlin Paradox and concluded that it holds in both developed and developing countries. Stevenson et al. (2008) find a positive relationship between GDP per capita and happiness both across countries and over time within a single country. In contrast, Deaton et al. (2008) observe that the income-happiness link exists globally but weakens within wealthier countries. Kahneman & Deaton (2010) distinguish between evaluative and emotional happiness: evaluative happiness refers to life satisfaction, while emotional happiness includes day-to-day experiences. They found that in the United States, income above \$75,000 no longer increases emotional happiness, although it continues to improve evaluative well-being.

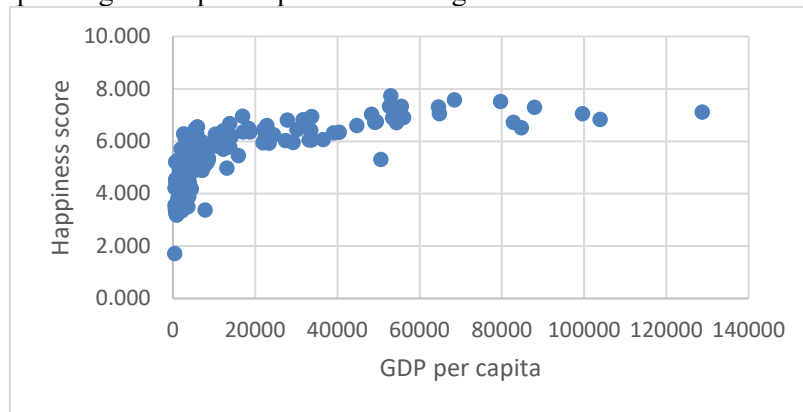
### 4. RESULTS AND DISCUSSION

For the purposes of this analysis, we used data from the World Happiness Report spanning the years 2016 to 2023 (<https://data.worldhappiness.report/map>, accessed on May 26, 2025). The data, collected via the Gallup World Poll, cover approximately 150 countries, representing around 98% of the global adult population. The survey includes several categories of questions: overall life satisfaction and happiness (a subjective assessment of life quality), social support, GDP per capita, healthy life expectancy, inequality, freedom of choice, generosity, perceptions of corruption, positive and negative emotions, and altruism—including

donations, volunteering, and helping strangers. Some of the questions include: "Did you experience enjoyment/worry/sadness yesterday?" and "Have you donated money in the past month?"

Based on these factors, a composite score is calculated, and countries are ranked accordingly. The Happiness Score ranges from 0 to 10. For the year 2023, data were available for 139 countries. The countries with the highest Happiness Score include Finland, Denmark, Iceland, Sweden, and the Netherlands—nations characterized by high living standards, strong social support, low corruption, and a favorable work-life balance. Conversely, the lowest-ranked countries include Afghanistan, Sierra Leone, Lebanon, Malawi, and Zimbabwe. It is noteworthy that Finland has held the top position for eight consecutive years.

To examine the presence of the Easterlin Paradox at the cross-country level, we calculated the Spearman correlation coefficient between GDP per capita and the Happiness Score for all countries in 2023. This coefficient amounts to 0.86, indicating a strong positive correlation between national wealth and subjective well-being. The corresponding scatterplot is presented in Figure 1.



**Figure 1:** Scatterplot of Happiness Score vs. GDP per Capita

As GDP per capita increases, the happiness score initially rises. However, beyond a certain threshold—where comfortable living transitions into luxury—further increases in wealth is no longer followed by the increase in happiness. This plateau suggests the presence of a saturation effect. While this may indicate the existence of the Easterlin Paradox, further analysis is required.

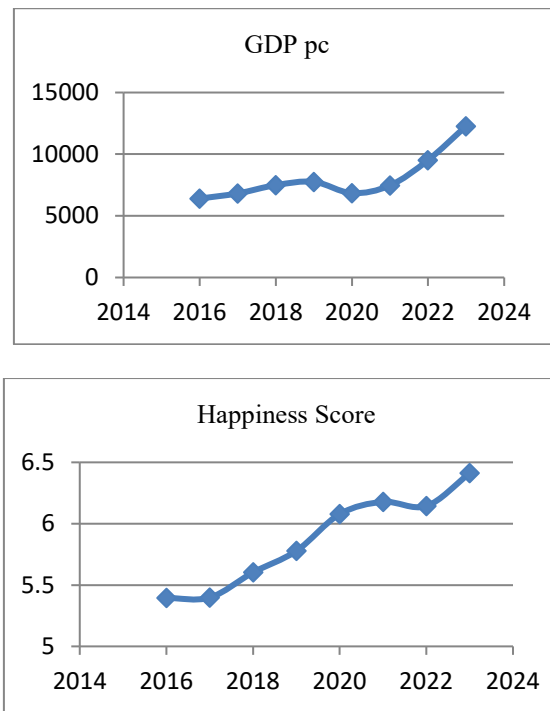
To explore whether the correlation coefficient changes at different income levels, we divided all countries into quintiles based on GDP per capita, and calculated the correlation coefficient for each quintile. The results are shown in Table 1.

**Table 1:** Correlation Coefficients by GDP Quintiles

GDP quintiles	Correlation Coefficients
1	0,408
2	0,103
3	-0,082
4	0,362
5	0,519

Correlation coefficients decline from the first to the third quintile, with the third quintile even exhibiting a negative correlation, implying that in these countries, higher GDP per capita is associated with lower happiness scores. This provides support for the Easterlin Paradox. In the fourth and fifth quintiles, however, the correlation becomes positive and strengthens, which contradicts Easterlin paradox.

To check whether Easterlin Paradox exists within a single country, it is necessary to assess whether long-term increases in GDP per capita correspond to significant rises in average happiness. We examined this relationship in the case of Serbia, analyzing data from 2016 to 2023. The charts of GDP per capita and happiness score for the period 2016 to 2023 are given in Figure 2.



**Figure 2:** GDP per Capita and Happiness Score for Serbia, 2016-2023

It can be observed that GDP per capita rises in the period 2016-2019. In 2020, there is a decline and then, in the following years, it continues to rise. On the other hand, Happiness Score increase in all years but 2022. However, its increase in years 2020-2022 is not that intense. Further analysis is necessary to check if Easterlin paradox is present.

## 5. CONCLUSION

Although GDP and other neoclassical indicators of welfare remain relevant for shaping economic policies, there is a growing recognition of the need to incorporate subjective well-being indicators and measures based on informed preferences. The fields of behavioral welfare economics and happiness economics offer both theoretical and empirical frameworks for understanding the complex determinants of human welfare that go beyond material indicators—such as social support and freedom of personal choice.

High happiness levels in Nordic countries are not solely attributable to high GDP levels, but rather to a synergistic combination of economic, social, psychological, and institutional factors.

At the global cross-country level, we find a strong positive correlation between GDP per capita and subjective happiness, indicating that higher wealth of countries is associated with higher happiness. However, detailed analysis across GDP quintiles reveals that this relationship is not linear. In lower and middle quintiles, the correlation weakens and, in the third quintile, even becomes negative, indicating a saturation effect in the income-happiness relationship. These findings lend support to the Easterlin Paradox and related concepts such as relative income, adaptation, and shifting expectations. Nevertheless, in the fourth and fifth quintiles, the correlation rises again, which runs counter to the Easterlin hypothesis. An analysis of long-term trends in Serbia further explores the relationship between wealth and happiness at the national level.

The findings of this study carry significant policy implications. Economic and public policies should not focus solely on promoting economic growth but should also aim to improve quality of life, strengthen social cohesion, enhance access to healthcare and education, and foster environments that empower individuals to make choices conducive to long-term well-being. Policies grounded in such a holistic approach are more likely to support sustainable development and bring about genuine improvements in individual and collective welfare.

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