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Assessment of Socio-Economic Well-Being in European Countries: A Multidimensional Comparative Analysis*

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Abstract

The aim of this study is to assess the level and differentiation of socio-economic well-being across European countries belonging to the European Union and the European Free Trade Association (EFTA). The analysis covered nine diagnostic variables representing multiple dimensions of well-being, including social, economic, educational, health, and environmental factors. Statistical data were obtained from Eurostat databases and refer to the year 2022.

Synthetic composite indicators were constructed using the Hellwig and TOPSIS methods to enable a comparative evaluation of countries in terms of their overall well-being. The results revealed that Northern and Western European countries (including Norway, Sweden, the Netherlands, and Finland) form a cluster characterized by the highest level of well-being and social equilibrium, while South-Eastern European countries (such as Greece and Latvia) exhibit lower levels of development and a higher housing cost burden. The correlation between the two methods (Pearson's r = 0.72) indicates a moderate but consistent relationship, confirming the robustness of the obtained rankings. Furthermore, the Ward's hierarchical clustering method distinguished four groups of countries with similar development profiles, highlighting the persistent regional disparities within Europe.

Keywords: quality of life, well-being, composite indicators, multivariate analysis, European countries.

Introduction

Since the 1950s, research on well-being, quality of life, and individual prosperity, has become a growing field of academic inquiry across many universities. In recent years, numerous cross-sectional studies have confirmed the causal relationship between income and happiness, although the strength of this relationship varies significantly between countries depending on their level of societal wealth. The most widely recognized macroeconomic indicator of national activity is the Gross Domestic Product (GDP). However, for some time there has been a growing awareness of the need to create new indicators that encompass a broader context of social and environmental determinants, enabling a better assessment and design of socio-economic policies (European Commission, 2009).

There are several examples of alternative approaches to assessing a country's level of development. For instance, the United Nations calculates the Human Development Index (HDI), which measures development by incorporating not only GDP but also health and education dimensions (UNDP, 2025). In 2009, the European Commission published a report (Stiglitz, Sen and Fitoussi, 2009) which emphasized that social development assessment should not focus solely on economic achievements but provide greater importance to the measurement of societal well-being.

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Research on well-being employs a variety of indicators reflecting income or wealth, social relations, safety, and housing conditions. The happiness index is a comprehensive measure that reflects the overall quality of life within societies and should not be disregarded by policymakers. Numerous studies have also proved a relationship between life satisfaction and health or disease incidence. Recently, an increase in various acts of kindness has been observed across societies, contributing to a higher sense of well-being among citizens. Such behaviors help counterbalance negative emotions experienced during crises, such as the COVID-19 pandemic or periods of social and economic uncertainty. A strong sense of social support is associated with higher perceived quality of life, as is the feeling of kindness within local communities. Conversely, loneliness, fear, increased violence, and mental health issues reduce perceived quality of life. Individuals enjoying good health tend to report higher well-being than those struggling with illness (WHR, 2025).

Despite the growing academic interest and awareness of the importance of well-being in shaping human life, most studies in the literature still focus on the individual (subjective) dimension or on selected aspects of quality of life. Relatively few analyses combine social, economic, health, and environmental factors within a single framework that comprehensively reflects the implementation of sustainable development strategies across European countries.

The aim of ~~this~~ ~~study~~ the following paper is to determine the level and differentiation of socio-economic well-being in European countries belonging to the European Union and the EFTA, with particular emphasis on social factors, using multidimensional statistical analysis methods.

Literature Review

When attempting to classify the factors influencing life satisfaction, it is necessary to refer to research on the quality of life, as these concepts are often used interchangeably. In analyses of quality of life, three main approaches are distinguished: objective**,** subjective**,** and integrative, which combines both perspectives.

In the objective approach, the quality of life is determined by material conditions such as property ownership, income, savings, and valuable possessions. Their level is compared with an optimal standard. The results obtained in such studies are therefore closer to the concept of standard of living than to life satisfaction.

In contrast, the subjective approach relies on individual self-assessment. The key role in such evaluations is played by perception, comparison, and individual value judgments. The assessment depends largely on a person's hierarchy of values, interests, and expectations.

These two perspectives on quality of life and happiness research differ substantially. Only by combining them into an interactive approach can one achieve a more comprehensive understanding of both the resources and the experiences of individuals (Cummins, 2000).

In recent years, there has been a clear shift in research on citizen well-being – from a narrow economic perspective to a multidimensional approach encompassing social, health, environmental, and psychological factors. Well-being is no longer associated solely with income level or GDP growth, but with overall living conditions, including social relationships, environmental quality, and a sense of security. As recent analyses by the OECD (2024) and the World Happiness Report (2025) show, in the post-pandemic period, social and health factors are increasingly determining assessments of quality of life in developed countries.

Research conducted since 2020 has increasingly emphasized that rising living costs, inflation, and housing difficulties significantly contribute to declining life satisfaction. Eurofound (2023) notes that housing affordability problems and high energy costs have become key factors of financial stress in Europe, particularly among younger households.

A growing body of scientific evidence confirms that social factors – relationships, trust, and support – are as important as economic factors. Research by Helliwell and Aknin (2018) demonstrated that social connections, especially a sense of belonging and support, are among the most enduring predictors of happiness in OECD countries. Okulicz-Kozaryn (2022) demonstrates in her article that the quality of social relationships, not their quantity, is what most enhances a sense of meaning and fulfilment. In the context of health, recent literature has emphasized its key role in the perception of well-being, particularly mental health. Diener and Chan (2011) argue that good health, both physical and mental, not only increases life satisfaction but also strengthens resilience to stress and negative events.

Environmental factors are gaining increasing importance as a key determinant of well-being, both physically and mentally. The concept of "environmental well-being," which encompasses the quality of the living environment, access to green spaces, air purity, and ecological safety, has emerged in the scientific literature. Countries with better environmental quality, lower greenhouse gas emissions, and a higher share of renewable energy sources

achieve higher social well-being indicators on average (OECD, 2024). High levels of environmental pollution, on the other hand, are associated with a sense of powerlessness and lower life satisfaction, even in high-income countries.

The latest European Quality of Life Survey (Eurofound, 2023) confirmed that respondents living in areas with better access to urban greenery and clean air reported a higher sense of happiness, regardless of age, education, or economic status. The World Happiness Report 2025 also emphasizes that environmental factors—particularly climate stability and low CO_2 emissions—are becoming an increasingly important element of well-being. In this context, citizens' well-being is increasingly perceived as fundamention of a balance between economic development, social relations, and environmental quality. The pursuit of a low-emission economy, energy transformation, and sustainable spatial planning are not only elements of climate policy, but also of social policy aimed at improving the quality of life.

One of the factors shaping citizens' well-being, most widely discussed in the literature, is income.

The Impact of Income on Perceived Well-Being

According to the assumptions of cardinal utility theory, also known as the consumer behavior theory developed by W.S. Jevons, K. Menger, and L. Walras, consumers make consumption decisions based on the principle of utility maximization**,** that is, seeking satisfaction and pleasure. In line with Gossen's Law of Diminishing Marginal Utility, satisfaction derived from consuming a given good decreases as the quantity consumed increases. This represents the subjective perception of benefit from consuming a specific good compared to the benefits derived from alternative goods. The same principle applies to income and material well-being**.**

Microeconomic theories of consumption mainly concern individual behaviour and do not take into consideration issues related to aggregation or the relationship between consumption and economic growth. However, it is difficult to deny the existence of a correlation between macroeconomic development at the national level and individual income. Therefore, economic growth influences the perception of individual well-being, which is considered at the microeconomic level.

When income is related to human needs, it becomes evident that once basic material needs are satisfied, other aspects of life, such as developmental needs, begin to play a more significant role in determining happiness, rather than further material improvement. This assumption aligns with the principle of diminishing marginal utility of income, a cornerstone of neoclassical utility theory. The diversity of human needs leads to the multidimensional and complex nature of the factors that determine well-being. The hierarchical structure of needs implies that the relative importance of factors influencing individual well-being varies across different levels of need. According to the Stolper–Samuelson theorem, factors that satisfy current individual needs are more important for achieving well-being (Li and Shi, 2019).

Interesting insights regarding the relationship between income and well-being were presented by Richard Easterlin. In his 1974 article, he asked whether economic growth improves people's lives and investigated well-being to answer this question (Easterlin, 1974). Easterlin (2005) demonstrated that over time, although incomes had risen, subjective well-being remained relatively constant. In contrast, studies by Hagerty and Veenhoven (2003), Stevenson and Wolfers (2008, 2013), and Inglehart, Foa, Peterson, and Welzel (2008) suggested that rising subjective well-being in many countries was associated with higher income levels. Well-being increased significantly in countries that experienced the highest income growth. Inglehart et al. (2008) also indicated that economic conditions may have a greater influence on life satisfaction than income growth alone.

Different forms of well-being may exhibit different levels of sensitivity to changes in income.

The Relationship Between Health and Well-Being

Reviews of the literature and meta-analyses on happiness and health generally indicate that subjective well-being can be beneficial for health and longevity (Diener, et al., 2017). Conversely, good health is often considered a prerequisite for happiness and well-being. Scholars agree that mental health plays a more significant role in the perception of well-being than income.

Empirical studies confirm a consistent, bidirectional relationship between health and subjective well-being. Individuals who enjoy good health also tend to report higher levels of well-being. As health improves, assessments of life quality increase, while the progression of illness leads to a decline in self-evaluation.

An interesting finding is that self-rated health appears to be a better predictor of psychological well-being than professional medical assessments (Diener, 2000). Subjective perception exerts a stronger influence on feelings of well-being than objective health status.

Negative emotions have been shown to impair cardiovascular functioning, whereas positive emotions help accelerate the physiological recovery to a desirable baseline (De Neve, et al. 2013). Individuals with predominantly negative emotional dispositions typically have weaker immune systems and higher risks of disease compared to those with positive emotional orientations (Barak, 2006).

A high level of subjective well-being can increase life expectancy by between four and ten years compared to the life expectancy associated with low levels of well-being. This result was obtained even after controlling for baseline health conditions such as depression, anxiety, coronary disease, and cancer (Diener and Chan, 2011). Chida and Steptoe (2008) found a significant reduction in all-cause mortality among individuals with higher self-reported happiness. Conversely, low levels of happiness may lead some individuals to engage in behaviours that negatively affect health, such as smoking, alcohol consumption, drug use, or physical inactivity (Boehm and Kubzansky, 2012).

The Impact of Social Interactions on the Level of Well-Being

In the literature on psychology, sociology, and the economics of happiness, it is increasingly emphasized that social interactions are among the key predictors of well-being—often stronger than material factors such as income or economic status (Diener and Seligman, 2002; Helliwell and Aknin, 2018). Studies conducted across various countries consistently present that the frequency and quality of contact with other people are strongly correlated with levels of life satisfaction and happiness (Helliwell and Putnam, 2004; Okulicz-Kozaryn, 2011).

Analyses based on Gallup World Poll and World Happiness Report data confirm that individuals who regularly maintain relationships with family, friends, and neighbours report higher happiness levels, regardless of age, gender, or income (Helliwell et al., 2023). Conversely, the absence of interpersonal contact, loneliness, or social isolation are risk factors for both mental and physical health, increasing the likelihood of depression, stress, and a diminished sense of life meaning (Hawkley and Cacioppo, 2010). Therefore, the more frequent and deeper the social relationships, the higher the level of well-being and the lower the risk of emotional problems.

An important aspect of social interaction is perceived social support—understood as the sense of being able to rely on the help and understanding of others. Meta-analyses (Cohen and Wills, 1985; Taylor, 2011) have shown that social support acts as a "buffer" against stress and negative emotions, protecting individuals in times of crisis. Moreover, social trust—defined as the belief in the kindness and honesty of others—is one of the strongest predictors of happiness in cross-country research (Helliwell and Wang, 2011; OECD, 2020). The social capital of happiness is built through trust and support, which enhance people's sense of security and life meaning.

Multidimensional panel studies (Meier and Stutzer, 2008; Binder and Freytag, 2013) show that participation in volunteering, social organizations, or local groups positively influences subjective well-being. This effect stems not only from altruism but also from the sense of belonging and purpose—key components of self-realization (Ryan and Deci, 2001). Volunteering increases the number of interpersonal contacts, strengthens trust, and fosters a sense of agency. According to OECD data (OECD 2020), people who engage in social or civic activities report, on average, 15–20% higher life satisfaction than those who do not, regardless of income level.

Not only the quantity but also the quality of interpersonal relationships matter for well-being. Results from the long-term Harvard Study of Adult Development, demonstrate that close, supportive relationships are the strongest predictors of happiness and health throughout life—stronger than wealth, recognition, or professional status. Individuals with enduring emotional bonds are more likely to report high life satisfaction and are less likely to experience depression (Waldinger and Schulz, 2023).

International organizations such as the OECD, WHO, and Eurostat recognize social interaction as one of the fundamental pillars of well-being. Within the OECD Better Life Initiative (OECD, 2020) and the SDG 3 and 16 indicators, the importance of the "social dimension of quality of life" is emphasized—encompassing relationships with others, community belonging, and civic engagement. The WHO (2015) defines mental health as "a state of well-being in which an individual realizes his or her abilities, can cope with the normal stresses of life, and is able to build social relationships."

Research Methodology

The study employed cluster analysis, the Hellwig synthetic development measure, and the TOPSIS method. Statistical variables can be either stimulants (the higher the value, the better) or destimulants (the lower the value, the better). Variables may have different units and ranges of variability, which makes their direct comparison impossible. To ensure comparability, they are transformed using procedures such as standardization, normalization, and unitarization, according to formulas (1) and (2) (Balicki, 2009; Zeliaś, 2000; Panek, 2009):

Standardization:

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{s_j}; \qquad (1)$$

The transformed variables have a mean $\bar{z}_j$ equal to 0 and a standard deviation $s_j = 1$.

Zero unitarization:

- for stimulants $z_{ij} = \frac{x_{ij-min\{x_i\}}}{max\{x_i\}-min\{x_i\}}$;

- for destimulants $z_{ij} = \frac{max\{x_i\}-x_{ij}}{max\{x_i\}-min\{x_i\}}$; (2)

Cluster analysis is an exploratory multivariate technique used to group objects that are similar to each other in terms of selected diagnostic features, while ensuring maximum differentiation between groups. The hierarchical Ward's method (Ward's D^2) minimizes the within-cluster variance and maximizes the variance between clusters, which makes it particularly suitable for socio-economic data analysis. The results of clustering allow for the identification of groups of countries with similar levels and structures of well-being determinants, providing a basis for comparative assessment.

The Hellwig Taxonomic Development Measure

The taxonomic method is based on classifying data sets in order to obtain a synthetic measure that arranges objects linearly according to the examined features. The normalized values of variables are aggregated to calculate the values z_i of the aggregate variable Z. The synthetic model variable was described and popularized by Hellwig (1968), who developed the taxonomic measure of development. In this approach, the development pattern is a multidimensional object with standardized coordinates defined as follows:

$$Q_0 = [z_{01} z_{02} \ldots z_{0k}] \qquad (3)$$

where the coordinates of the model object z_{01} (j = 1, …, k) are given by $z_{0j} = max\{z_{ij}\}$, according to formula (2).

The development pattern (3) allows the construction of the Hellwig taxonomic synthetic development measure:

$$z_i = 1 - \frac{d_{i0}}{d_0}, (i = 1, \ldots, m), \qquad (4)$$

where:

d_{i0} – is the Euclidean distance between the object Q_i (i = 1, …, m) and the hypothetical model object Q0, calculated using the following formula:

$$d_{i0} = \sqrt{\sum_{j=1}^{k} (z_{ij} - z_{0j})^2}; \qquad (5)$$

The obtained distance d_{i0} is used to compare the level of development of the analyzed objects. Its interpretation is as follows: the smaller the value of d_{i0} for a given object, the higher its level of development and structural organization.

The value of d_0 is expressed as:

$$d_0 = \bar{d}_0 - 2s_{0,} \qquad (6)$$

where:

$$\bar{d}_0 = \frac{1}{m} \sum_{i=1}^{m} d_{i0},$$

$$s_0 = \sqrt{\frac{1}{m}\sum_{i=1}^{m}(d_{i0} - \bar{d}_0)^2} \qquad (7).$$

The synthetic taxonomic measure of development defined by formula (4) is based on Euclidean distance. It is normalized and takes values in the range <0,1>. The higher the value of Qi, the closer the object is to the model (pattern) object Q_0, meaning that it represents a higher level of development.

The TOPSIS method

The TOPSIS method (Technique for Order Preference by Similarity to an Ideal Solution) compares the analysed objects with an ideal and an anti-ideal solution. The best-performing objects are those that are closest to the ideal pattern and farthest from the anti-ideal solution, indicating a higher level of development.

The ideal pattern is calculated as follows:

$$d_i^+ = \sqrt{\sum_{j=1}^{m}(z_{ij} - z_{0j}^+)^2} \qquad (8)$$

and the anti-ideal pattern is expressed as:

$$d_i^- = \sqrt{\sum_{j=1}^{m}(z_{ij} - z_{0j}^-)^2} \qquad (9)$$

where:

Z^+_{0j} = max z_{ij}, represents stimulants
Z^-_{0j2j} = min z_{ij}. represent destimulants

The synthetic development index in the TOPSIS method is expressed as:

$$C_i = \frac{d_i^-}{d_i^+ + d_i^-} \qquad (10)$$

The values of the C_i index range from 0 to 1; the higher the value, the closer the object is to the ideal solution, indicating a higher level of development.

Data

The study on the well-being of societies covered 27 European Union countries and four non-EU countries: Iceland, Norway, Switzerland, and the United Kingdom, resulting in a total of 31 analyzed countries. Nine statistical variables available in the Eurostat database for 2022 were used, which, according to the literature, have a strong impact on the perception of socio-economic well-being.

The following diagnostic variables were used in the present study (Table 1).

Table 1. Characteristics of variables used in the study.

No	Variable name	Average	Standard deviation	Max value	Min value
1.	Final consumption expenditure of households (Euros per capita)	19 489	8 701	42 940	7 650
2.	Domestic net greenhouse gas emissions [tonnes per capita]	7,98	5,29	33,4	1,0
3.	Housing cost overburden rate	8,41	5,04	26,7	2,5
4.	Population in private households by tertiary education [%]	33,61	7,64	46,1	17,1

5.	Persons having contacts every week with family (relatives) or friends [%]	41,59	7,25	54,7	21,2
6.	Persons participating in formal voluntary activities [%]	16,0	10,73	51,1	3,0
7.	Persons participating in informal voluntary activities [%]	21,12	20,04	79,8	2,4
8.	Persons getting together with family (relatives) or friends [%]	13,71	11,21	48,4	2,5
9.	Healthy life years in absolute value at 65 years	9,23	2,54	14,5	3,9

Source: own calculation.

Variable Final consumption expenditure of households refers to the value of goods and services purchased by households for private purposes, expressed in euros at current prices, serving as a substitute for GDP per capita. Domestic net greenhouse gas emissions represent the total net emissions of greenhouse gases, converted into CO2 equivalents.

Housing cost overburden rate indicates the percentage of people who spend more than 40% of their disposable income on housing costs (rent, utilities, electricity, etc.).

Population in private households by tertiary education refers to the percentage of the population aged 15–64 with tertiary education.

Persons having contacts every week with family (relatives) or friends represents the percentage of people who maintain contact with family or friends at least once a week (through meetings, conversations, social media, etc.). Persons participating in formal voluntary activities refers to the percentage of the population engaged in organized (registered) forms of volunteering, such as foundations or NGOs.

Persons participating in informal voluntary activities represents the percentage of people providing informal help to neighbours, family, friends, or strangers.

Persons getting together with family (relatives) or friends refers to the percentage of people reporting daily meetings with family or friends.

Healthy life years in absolute value at 65 years indicates the average number of years lived in good health after the age of 65.

Results

The analysis of social well-being disparities across European countries reveals clear differences in the level of development, social structure, and quality of life. This section presents the research findings that help explain how economic, educational, health, and social factors shape the current landscape of well-being in the examined European countries.

Table 2. Summary of the evaluation and classification results of European countries according to the level of socio-economic well-being.

Country	Cluster	Hellwig_index	Rank	TOPSIS	Rank
Austria	1	0,2735	14	0,4801	18
Belgium	1	0,3348	9	0,4856	14
Bulgaria	2	0,0925	28	0,4634	21
Croatia	3	0,1270	26	0,5019	11
Cyprus	2	0,2670	15	0,5836	3

Czechia	3	0,1440	25	0,4331	28
Denmark	1	0,3129	10	0,4808	17
Estonia	3	0,1761	20	0,4352	27
Finland	4	0,4016	5	0,5643	5
France	1	0,3048	13	0,4983	12
Germany	1	0,2527	16	0,4606	23
Greece	2	0,0873	30	0,3983	31
Hungary	3	0,1228	27	0,4529	25
Iceland	4	0,3094	12	0,4035	30
Ireland	1	0,3447	7	0,4967	13
Italy	3	0,1486	24	0,4658	20
Latvia	3	0,0891	29	0,4308	29
Lithuania	3	0,1650	22	0,4695	19
Luxembourg	1	0,3531	6	0,4841	15
Malta	3	0,2121	17	0,5087	9
Netherlands	4	0,4343	2	0,5993	2
Norway	4	0,5321	1	0,6499	1
Poland	3	0,1704	21	0,4487	26
Portugal	3	0,2036	18	0,5058	10
Romania	3	0,0149	31	0,4629	22
Slovakia	3	0,1531	23	0,5121	8
Slovenia	1	0,3362	8	0,5449	7
Spain	3	0,1817	19	0,4595	24
Sweden	1	0,4119	4	0,5772	4
Switzerland	1	0,4135	3	0,5478	6
United Kingdom	1	0,3095	11	0,4817	16

Source: own calculation.

The cluster analysis distinguished four groups of countries with similar levels of development, of which only two clusters — groups 1 and 3 — were statistically significant. The first group includes highly developed countries with a high income per capita but lower civic engagement and social capital, while the third group consists of less affluent countries — mainly Central and Eastern European states along with Portugal and Italy — characterized by moderate material and health conditions but weaker social relationships. The second group includes Bulgaria, Cyprus, and Greece, whereas the fourth cluster comprises Finland, Iceland, the Netherlands, and Norway. The second group represents countries with weaker material and health well-being but strong social relations, while the fourth cluster reflects countries with very high material status, strong social and health capital, low inequality, and favourable environmental conditions (except for Iceland, which records the highest greenhouse gas emissions among the analysed countries).

The ranking obtained using Hellwig's method allowed for ordering European countries according to their level of socio-economic development. The highest index values were achieved by Nordic (Norway, Sweden, Finland) and Western European countries (Netherlands, Switzerland, Luxembourg), indicating a high level of well-being encompassing both material and social dimensions. Lower values, typical of Southern (Greece, Croatia, Italy) and Central European countries (Romania, Bulgaria, Latvia, Hungary), reflect persistent disparities in health, education, and living conditions. In the middle of the ranking were Germany, Austria, Portugal, Spain, Cyprus, and Malta, characterized by high values for some indicators and low for others.

The TOPSIS method, a multi-criteria evaluation approach, assumes that the best object (e.g., a country) should be as close as possible to the ideal solution (the country with the best values of all indicators) and as far as possible from the anti-ideal solution (the country with the worst values). This method is sensitive to simultaneous

deviations across multiple dimensions, differentiating countries that perform very well in some areas but extremely poorly in others. It also favours countries with balanced performance, placing them higher in the ranking. Accordingly, in this study, the countries that achieved the highest quality-of-life rankings using TOPSIS were Norway, the Netherlands, Cyprus, Sweden, Finland, and Switzerland. Luxembourg, previously in the top group in Hellwig's ranking, moved to the middle, with Cyprus taking its place. The lowest positions were occupied by Greece, Iceland, Latvia, Czechia, Estonia, Poland, and Hungary, while Luxembourg, Belgium, Ireland, the United Kingdom, Denmark, and Austria occupied middle positions.

The case of Iceland should be mentioned. Its position in the TOPSIS ranking was significantly lower than in Hellwig's method. In Hellwig's ranking, Iceland ranked 12th, whereas in TOPSIS it dropped to 30th. This difference results from the construction of the TOPSIS method, in which the synthetic index depends on the distance from both the ideal and the anti-ideal solution. Iceland performs very well in most analyzed variables but records the highest greenhouse gas emissions due to its energy-intensive and high-emission heavy industry. This single deviation toward the anti-ideal significantly worsened its ranking position. The Hellwig method, being less sensitive to single extreme outliers, maintained a higher synthetic index value for this country.

The results of both methods were relatively consistent and positively correlated. The Pearson correlation coefficient between the synthetic Hellwig and TOPSIS indicators is presented in Table 3. The Spearman, Kendall, and Pearson coefficients were all statistically significant, indicating that many countries occupied similar positions in both rankings.

Table 3. Correlation between the Hellwig and TOPSIS synthetic development indices

Correlatiom measure	Value	Test value	p-value
Spearman	0,676	1606	4,646e-05***
Kendall	0,523	354	1,623e-05***
Pearson	0,720	5,589	4,951e-06***

Source: own calculation

Both Hellwig's and TOPSIS methods identified the dominant position of Scandinavian and Western European countries (Norway, the Netherlands, Finland, Sweden, Switzerland), while the lowest values were observed for Southeast European countries (Greece, Latvia).

The obtained results confirm the usefulness of both Hellwig's and TOPSIS methods as comparative tools for assessing the level of well-being across European countries.

Discussion and conclusions

The conducted study provided a comprehensive multidimensional assessment of the socio-economic well-being of European countries, with particular emphasis on social factors. The analysis included the following determinants of well-being: social (4 variables), economic, educational, health-related, and environmental. Consequently, social factors had a greater weight in the overall evaluation of well-being, allowing for an assessment of development not only in terms of a country's wealth but also in relation to the quality of life.

Although most of the analysed European countries belong to the group of high-income economies by global standards, clear differences remain in the determinants influencing the perception and level of well-being. The populations of countries grouped in cluster 3 tend to focus on improving economic and health conditions, often at the expense of social relations. In these countries, income levels remain relatively low compared to the cost of living (e.g., housing costs), and healthcare and social systems do not operate comprehensively or efficiently. As a result, citizens have limited opportunities to build broader social connections, often maintaining only family ties. The lack of state support forces longer working hours or the need to provide informal care for the elderly and disabled family members, which further limits time for social activities and community involvement.

Europe's current development strategy is oriented toward enhancing citizens' well-being, understood not only as economic growth but also as an improvement in quality of life, health, lifelong access to education, and social cohesion. The focus is placed on strengthening civic engagement and ensuring equal access to public services, particularly in the areas of health and education. Increasing attention is being paid to the subjective dimensions of well-being, such as the sense of fulfilment, security, and social belonging. As a result, European policy is moving toward a model of sustainable well-being that emphasizes social factors and quality of life rather than purely economic indicators. The implementation of the European Green Deal and the European Pillar of Social Rights reflects this paradigm shift toward a more inclusive and socially balanced model of development.

The presented results form a basis for further research on the determinants of well-being in its social, economic, and environmental dimensions across Europe.

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