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The impact of income and health on overall happiness. Polish-Ukrainian comparative studies.

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Abstract

Despite a common post-communist transition, Poland and Ukraine have followed different economic paths, impacting citizens' subjective well-being. This study assesses the influence of income and health on the overall happiness in both nations. It is hypothesized that life satisfaction in Poland and in Ukraine differs significantly from each other. The analysis uses the European Social Survey data (2004–2012), representing the latest available period for Ukraine prior to the war triggered by the Russian aggression. The results confirm a significant disparity in subjective well-being between the two nations, driven by individuals' assessments of their financial situation and overall health. Furthermore, access to credit markets emerges as a critical factor in shaping subjective income perceptions.

Key words: happiness, well-being, income, health, social risks.
JEL: I00, I31, I12, D31, P51.

1. Introduction

Following the collapse of communism, Poland and Ukraine followed divergent paths. Poland embraced European integration and institutional reform, fostering a resilient economy and stability. Conversely, Ukraine's trajectory was marked by political instability and corruption, resulting in a more challenging developmental narrative. These disparities extend beyond economic statistics, impacting the tangible well-being of citizens. Poland's institutional strength contributes to higher quality of life and security, whereas Ukraine's ongoing struggles have directly influenced public morale. This study posits that national progress is reflected in citizens' well-being, making societal happiness a critical metric for evaluating these contrasting transformations.

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The research is motivated by a paradigm shift in economics, moving from objective metrics like GDP toward the more complex field of happiness economics. This shift was catalyzed by the Easterlin Paradox, which observes diminishing marginal returns of income on happiness (Behera et al., 2024; Singh et al., 2023; Bartolini and Sarracino, 2014; Mentzakis and Moro, 2009). Happiness economics incorporates subjective measures, such as health and social relationships, to provide a more human-centric gauge of development. This study adopts this perspective to evaluate the outcomes of national policies in Poland and Ukraine.

The primary objective of this research is to analyze and quantify the influence of two key factors, perceived income and general health, on the overall happiness levels in a comparative context. The central hypothesis posits that a significant disparity in subjective well-being exists between Poland and Ukraine (for the study period). This divergence is predominantly driven by individuals' personal evaluations of their financial situation and general health. To investigate this, the study employs secondary data sourced from the European Social Survey (ESS) for both nations. The analysis encompasses ESS rounds 2 through 6, corresponding to the years 2004 to 2012 (ESS, 2025a; IFiS PAN, 2025 a-d). This timeframe is strategically significant, as it represents the latest available data for Ukraine before major geopolitical upheavals that began with the 2014 annexation of Crimea and the subsequent full-scale Russian invasion. By focusing on this pre-conflict period, the research aims to isolate societal well-being indicators from the profound distortions of war, thereby providing a clearer picture of the baseline relationship between health, income and happiness.

2. Poland and Ukraine as countries after an economic transition - similarities and differences

Poland and Ukraine share a historical legacy tied to the post-communist transition from centrally planned to market economies, facing similar initial challenges such as privatization, price liberalization and the creation of democratic institutions (Balcerowicz and Rzońca, 2010; Borodiuk and Frolova, 2009). Both nations suffered early shocks, including hyperinflation and deep recessions. However, Ukraine's crisis was far more severe, with inflation exceeding 10,000% in 1993 and a GDP contraction of over 60% during the first decade (IMF, 2025a; IMF, 2025b). Both countries also contended with mass unemployment following the closure of inefficient, state-owned enterprises (Balcerowicz and Rzońca, 2010; Bondarchuk, 2010).

Despite these common origins, their developmental paths diverged sharply. Poland prioritized European and transatlantic integration, culminating in EU membership in 2004. This integration provided access to the single market and structural funds, totaling EUR 245.5 billion between 2004-2023, what catalyzed industrial modernization and

investor confidence (Kawecka-Wyrzykowska, 2024). In contrast, Ukraine remained outside these structures, hindered by geopolitical pressures and a lack of support mechanisms.

Institutional quality further distinguishes the two nations. Poland's relative political stability facilitated business growth, evidenced by high rankings in the World Bank's Ease of Doing Business (WBG, 2025). Conversely, Ukraine's transformation was plagued by persistent instability, systemic corruption and an oligarchic structure. These disparities are reflected in the 2024 Corruption Perception Index, with Poland ranking 53rd and Ukraine 105th (CPI, 2024).

These factors resulted in vastly different economic outcomes. Poland successfully transitioned to a developed economy, with GDP per capita rising from roughly $1,800 in 1989 to over $26,000 in 2025 (IMF, 2025a). Ukraine, constrained by conflict and corruption, maintained significantly lower growth, with GDP per capita reaching approximately $6,260 in 2025 (IMF, 2025b). A detailed comparison of these economic indicators is presented in Table 1, which contrasts data from the beginning and end of our study period with current figures at the end of 2025.

Table 1. Poland and Ukraine economies comparison

Criteria	Poland			Ukraine			Comment
	2004	2012	2025	2004	2012	2025	
Basic macro indicators							
GDP, current prices, billions of U.S. $	256.45	498.15	1.04 ths.	67.22	182.59	212.9	Poland has an economy more than 4.5 times larger.
GDP per capita, current prices U.S. ths. $ per capita	6.72	13.09	28.37	1.43	4.02	6.5	The standard of living is ~ 4.3 times higher in Poland.
Inflation rate, average consumer prices, annual % change	3.5	3.7	3.6	9.0	0.6	12.7	High, but stabilized after the shocks of war.
Economic growth							
Real GDP growth, annual % change	5.1	1.5	3.6	11.8	0.2	1.8	Ukraine is growing from a low base.
Foreign trade							
Current account balance, % of GDP,	-6.0	-4.1	-0.7	10.3	-7.8	-15.0	Poland is a significant exporter in the EU. Poland is Ukraine's main trading partner.
Implied PPP conversion rate, national currency per U.S. $	1.69	1.8	1.91	0.89	2.69	12.86	
Public finance							
General government gross debt, % of GDP	45.0	54.5	58.8	23.9	36.1	108.7	Ukraine's high debt is related to the war.
Interest paid on public debt, % of GDP	2.7	2.68	2.2	0.93*	1.92	3.98*	*Data from 2024 is the latest available.

Table 1. Poland and Ukraine economies comparison (cont.)

Criteria	Poland			Ukraine			Comment
	2004	2012	2025	2004	2012	2025	
Labor market							
Population, millions of people	38.19	38.06	36.5	47.1	45.37	32.76	Unemployment in Ukraine has risen due to the war.
Unemployment rate, %	19.3	10.1	3.1	8.6	7.2	11.6	
Since the start of the full-scale invasion, the State Statistics Service has not published unemployment data. the data may be significantly underestimated.							
Other information							
Current structure of the economy (in 2025), % of GDP	Agriculture: ~ 2%; Industry: ~ 28%; Service: ~ 70%			Agriculture: ~ 12%; Industry: ~ 23%; Service: ~ 65%			
In Ukraine agriculture is of great strategic importance. Poland is a strongly service-oriented economy.							
Foreign direct investment	High, stable inflows			Very low since 2022			The war stopped the inflow of capital
Currency	zloty (PLN)			hryvnia (UAH)			
Membership	A key systemic difference determining development. **POL:** EU (since 2004), NATO (since 1999); Other international organizations: WTO, WHO, ONZ, OECD; **UA:** EU candidate, NATO candidate; Other international organizations: WTO, WHO, ONZ, OECD - potential member status.						

Source: own study based on IMF (2025a; 2025b) and NBU (2025).

Poland and Ukraine exemplify divergent post-transformation trajectories. While Poland utilized European integration and institutional stability to achieve developed economic status, Ukraine's progress was hindered by corruption, political instability and conflicts. These contrasting outcomes underscore how strategic political and geopolitical decisions shape long-term economic success and, by extension, the societal well-being and happiness levels analyzed in this study.

3. From the economics of welfare to the economics of happiness

For decades, welfare economics prioritized maximizing social utility through production and consumption, treating GDP per capita as the primary indicator of societal well-being (Duczkowski, 2024; Dymnich, 2018; Babula and Kamińska, 2013; Kot et al., 2004). However, behavioral research challenged this, revealing that self-reported life satisfaction often stagnates despite GDP growth - a phenomenon known as the Easterlin Paradox (Behera et al., 2024; Singh et al., 2023; Mentzakis and Moro, 2009; Bartolini and Sarracino, 2014). This paradox highlights the diminishing marginal returns of income on happiness once basic needs are met (Behera et al., 2024; Singh et al., 2023;

Mentzakis and Moro, 2009; Bartolini and Sarracino, 2014). Consequently, the economics of happiness emerged, expanding analysis to include subjective well-being alongside traditional data (Babula and Kamińska, 2013; Frey and Stutzer, 2002). This field identifies critical non-monetary determinants, such as physical and mental health, political stability, personal freedom, environmental quality and social relationships, which often outweigh income in wealthier societies (Behera et al., 2024; Singh et al., 2023). The paradigm shift mentioned above marks a move toward holistic development, where governments increasingly integrate subjective well-being into decision-making, as seen in the World Happiness Report (WHR, 2025). As this field matures, it provides pragmatic tools for understanding the human condition (Singh et al., 2023; Frey and Stutzer, 2002), reflected in the diverse development indices summarized in the following sections.

3.1. The evolution of the concept of welfare - a brief outline

The evolution of welfare economics underscores that income and consumption alone fail to capture holistic human contentment (Behera et al., 2024; Duczkowski, 2024; Singh et al., 2023; Dymnich, 2018; Babula and Kamińska, 2013; Frey and Stutzer, 2002). To illustrate this transition and identify the key determinants of happiness, some well-being indices are presented in Table 2.

Data in Table 2 demonstrate a clear transition from narrow, objective economic metrics toward comprehensive, multi-dimensional frameworks. This evolution began with GDP, a single-variable measure of output (Vanham, 2021). It progressed to the Human Development Index (HDI), which introduced objective non-economic factors like health and education (UN, 2021). Finally, indices like HPI and GNH integrated subjective measures, signaling that perceived well-being is as significant as economic production (NEF, 2025; GNH, 2025; Duczkowski, 2024). Modern indices, such as BLI and GNH, represent a mature understanding of progress by integrating subjective perceptions with objective indicators, including social relations, safety and environmental health (OECD, 2025; GNH, 2025). This holistic approach reflects a consensus that national prosperity requires a balance between economic output, personal contentment and sustainability.

The evolution of these indicators motivated this study. As seen in Table 2, while older metrics focused solely on GDP, modern frameworks consistently prioritize income and health. Given their universal presence in advanced well-being indicators and their critical role in the post-communist transition, these two variables were selected as the primary factors for comparing Poland and Ukraine.

Table 2. Comparison of selected indices of social development

Index name (abbreviation)		GDP	HDI/IHDI	HPI	GNH	BLI	WTBB
Creator		Simon Kuznets	United Nations	New Economics Foundation	King of Bhutan	OECD	The Economist
Date of first publication		1934	1990/ 2010	2006	2008	2011	2013
Source		(Vanham, 2021)	(UN, 2021)	(NEF, 2025)	(GNH, 2025)	(OECD, 2025)	(The Economist, 2017)
Index components	**Subjective component**	-	-	+ (happiness level)	+ (well-being)	+ (happiness level)	-
	Objective component	+	+	+	+	+	+
	Economic situation	+ (GDP)	+ (GDP per capita)	-	+ (standard of living)	+ (disposable income and net wealth)	+ (GDP per capita)
	Inequalities	-	+ (for IHDI)	-	+ (cultural diversity)	-	+ (gender equality)
	Other factors	**HDI/IHDI:** health, education; **HPI:** health, ecology; **GNH:** housing conditions, health, education, ecology, society, free time; **BLI:** housing conditions, labor market, health, education, ecology, society, safety, free time, fundamental freedoms; **WTBB:** labor market, health, ecology, society, safety, fundamental freedoms					

Note: The abbreviations of the indexes mean respectively: GDP- Gross Domestic Product, HDI / IHDI- Human Development Index /Inequality adjusted HDI, HPI- Happy Planet Index, GNH- Gross National Happiness, BLI- Better Life Index, WTBB- Where-to-be-born Index.

Source: own study based on: OECD (2025), NEF (2025), GNH (2025), Duczkowski (2024), Vanham (2021), UN (2021), Poskrobko (2021), The Economist (2017).

3.2. Key factors influencing happiness levels - literature review

The literature on happiness is broad and multi-dimensional, spanning factors from income to environmental conditions. Key determinants, along with selected supporting research, are presented in Table 3.

The literature presented in Table 3 confirms that income is a primary, but complex driver of happiness. Empirical findings regarding the Easterlin Paradox remain debated: while several studies validate the diminishing returns of income (Bartolini and Sarracino, 2014; Mentzakis and Moro, 2009; Behera et al., 2024), others contest this, suggesting rising GDP does not necessarily increase happiness (Angeles, 2011; Behera et al., 2024). Furthermore, relative income and social comparisons significantly influence subjective well-being (Paul and Guilbert, 2013; La et al., 2020), often moderated

by cultural or situational factors (Asadullah et al., 2018). Collectively, the literature confirms income remains a critical component of human happiness assessments (Behera et al., 2024).

Table 3. Key factors influencing happiness levels

Key factors influencing happiness levels	Selected research papers
income	Mentzakis and Moro (2009); Angeles (2011); Paul and Guilbert (2013); Bartolini and Sarracino (2014); Asadullah et al. (2018); La et al. (2020); Ugur (2021a); Behera et al. (2024)
social support	Karademas (2006); Mitchell et al. (2011); Siedlecki et al. (2014); Mei et al. (2021); Dymnich (2021); Behera et al. (2024)
freedom of choice	Inglehart et al. (2008); Verme (2009); Belasen and Hafer (2013); Spruk and Keseljevic (2016)
perception of corruption	Arvin and Lew (2014); Ciziceno and Travaglino (2019); Behera et al. (2024)
individual's health (physical, mental and emotional well-being)	Efklides et al. (2003); Lucas (2007); Selim (2008); Kahneman and Deaton (2010); Verme (2011); De Souto Barreto (2014); Richards et al. (2015); Mehrdadi et al. (2016); Lathia et al. (2017); Sujarwoto et al. (2018); Jovanovic and Joshanloo (2022); Singh et al. (2023)
environmental health	Welsch (2006, 2007); Luechinger and Raschky (2009); MacKerron and Mourato (2009); Cunado and De Gracia (2013); Behera et al. (2024)
other	Schyns (1988); Mookerjee and Beron (2005); Meisenbarg and Woodley (2015); Audette et al. (2019); Ugur (2021b); Behera et al. (2024)

Source: own study based on Behera et al. (2024) and Singh et al. (2023).

Research presented in Table 3 also establishes a relatively strong link between health and well-being (Singh et al., 2023). Positive determinants, such as regular physical activity (Singh et al., 2023; Lathia et al., 2017; Mehrdadi et al., 2016; Richards et al., 2015; De Souto Barreto, 2014), good health status, healthy diet, insurance coverage and effective medical care (Singh et al., 2023), consistently correlate with higher happiness levels. Conversely, poor health, disability (Lucas, 2007), perceived illness (Efklides et al., 2003) and advancing age (Singh et al., 2023) negatively impact life satisfaction. Ultimately, both objective health and its subjective perception are vital determinants (Singh et al., 2023). These findings motivate the research presented in this paper. Given the established importance of income and health in academic discourse, these variables serve as the core factors for comparing the well-being of Poland and Ukraine.

4. Research method

This chapter details the research methodology, based on processed secondary data from the European Social Survey (ESS). An ordered logistic regression (logit) model is utilized to capture multi-level relationships between key variables. The chapter concludes by addressing research limitations.

4.1. Data source and variables used in the study

Research presented in this paper utilizes secondary data from the European Social Survey (ESS), a premier transnational initiative monitoring societal trends across Europe since 2001 (ESS, 2025a; IFiS PAN, 2025 a-c). The ESS questionnaire comprises core modules, covering socio-political and socio-economic topics, including subjective well-being and demographics, as well as rotational modules addressing specific societal challenges (ESS, 2025 a-c; IFiS PAN, 2025b). Methodological rigor is maintained through strict protocols, including probabilistic random sampling, standardized questionnaire translation, comprehensive quality control, ensuring international data integrity and comparability (ESS, 2025a; IFiS PAN, 2025d). Due to its thematic breadth and accessibility, the ESS serves as an essential resource for academic research and public policy (ESS, 2025a; IFiS PAN, 2025 a-d). Table 4 outlines the variables employed in this research, excluding all incomplete responses from the final analysis (ESS, 2025c).

To ensure consistent interpretation of the econometric models, all variables were harmonized to function as stimulants. The preliminary comparative analysis was conducted using the original, untransformed variables to preserve their authentic distribution and scale. For variables originally acting as destimulants, specifically subjective general health (*health*) and feelings about household income (*hincfel*), a transformation was applied using the following formula (1):

$$New_value = (Max + Min) - Old_value \quad (1)$$

Table 4. List of variables used in the research with their description

Variable name	Variable Description	Accepted values in the ESS database and related categories
happy	How happy are you	0- extremely unhappy, 1- 1, 2- 2, 3- 3, 4- 4, 5- 5, 6- 6, 7- 7, 8- 8, 9- 9, 10- Extremely happy. 77- Refusal, 88- Don't know, 99- No answer; The final values of the variable in the model are between 0 and 10.
health	Subjective general health	1- Very good, 2- Good, 3- Fair, 4- Bad, 5- Very bad. 7- Refusal, 8- Don't know, 9- No answer. The final values of the variable in the model are between 1 and 5.
hincfel	Feeling about household's income nowadays	1- Living comfortably on present income, 2- Coping on present income, 3- Difficult on present income, 4- Very difficult on present income, 7- Refusal, 8- Don't know*, 9- No answer; The final values of the variable in the model are between 1 and 4.
hinctnt	Household's total net income, all sources	1- 1st decile, 2- 2nd decile, 3- 3rd decile, 4- 4th decile, 5- 5th decile, 6- 6th decile, 7- 7th decile, 8- 8th decile, 9- 9th decile, 10- 10th decile, 77- Refusal, 88- Don't know, 99- No answer; The final values of the variable in the model are between 1 and 10.
brwmny	Borrow money to make ends meet, difficult or easy	1- Very difficult, 2- Quite difficult, 3- Neither easy nor difficult, 4- Quite easy, 5- Very easy, 7- Refusal, 8- Don't know, 9- No answer. The final values of the variable in the model are between 1 and 5.
cntry	Country	PL- Poland- 0, UA- Ukraine- 1. The final values of the variable in the model are 0 and 1.

Source: own study based on ESS (2025 a-c).

This adjustment ensures that higher values for all analyzed variables consistently indicate a more positive assessment, aligning them with the primary outcome variable, overall happiness (*happy*). Details regarding the harmonization and transformation of individual variables are presented in Table 5.

Table 5. List of variable names used in econometric models

No.	Original variable name	Variable type	Was it recalculated?	Variable name used in econometric models (new variable name)
1	happy	Stimulant	No	happy_s = happy
2	health	Destimulant	Yes	health_s
3	hincfel	Destimulant	Yes	hincfel_s
4	hinctnt	Stimulant	No	hinctnt_s = hinctnt
5	brwmny	Stimulant	No	brwmny_s = brwmny
6	cntry	Neutral	No	cntry_s = cntry

Source: own study

As already mentioned, the study utilizes ESS data from rounds 2 through 6 (2004-2012), chosen to isolate the period preceding the conflict in Ukraine, caused by Russian aggression. After removing records with missing values, the final dataset contains 7,967 data points: 5,198 for Poland (65.24%) and 2,769 for Ukraine (34.76%). Despite the smaller sample size for Ukraine, the data remain sufficiently large for robust statistical inference and reliable econometric estimation. The primary causes for excluded data and the disparity in sample sizes are the high frequency of missing values in the *hinctnt* and *brwmny* variables.

4.2. Research procedure and research limitations

The research procedure follows a two-stage approach. Preliminary exploratory analysis, including Spearman's rank correlation, was conducted to assess variable associations before constructing econometric models.

The first stage of analysis focuses on income, evaluating the relationship between objective income, subjective financial perception and borrowing capacity, as subjective assessments could significantly influence household debt (Duczkowski and Słowik, 2022). This stage includes comparing objective income distributions, analyzing the link between subjective income (*hincfel*), objective decile groups (*hinict*) and evaluating the correlation between *hincfel* and the ability to borrow cash (*brwmny*). It concludes with Model 1, an ordered logit regression, where subjective income (*hincfel_s*) is the dependent variable, explained by objective income (*hincit_s*), borrowing ability (*brwmny_s*) and country (*cntry*_s).

The second stage of analysis conducts a direct comparative analysis of happiness (*happy*) as a function of financial and health perceptions. This stage concludes with two models utilizing ordered logistic regression (logit model). Model 2 uses subjective happiness (*happy_s*) as the dependent variable, with health status (*health_s*), country

(*cntry_s*) and subjective financial assessment (*hincfel_s*) as explanatory variables. Additionally, Model 3 was also prepared. It is a variant of Model 2, in which the original 11-point scale of the dependent variable (*happy_s*) is aggregated into fewer categories to facilitate more robust and reliable estimation results (*happy_s_new*). All econometric calculations for both stages were performed using RStudio.

Despite the rigorous statistical process, this study has some limitations. The primary limitation is the temporal constraint imposed by Ukraine's limited participation in the European Social Survey (ESS), which restricts the analysis to rounds 2-6 (2004-2012). Consequently, the research excludes the profound geopolitical shifts and armed conflicts triggered by Russian aggression in 2014, meaning the findings represent only the pre-conflict era (war undoubtedly had a significant and negative influence on the population's assessments of satisfaction, income and health). A second limitation is the disparity in sample sizes between the two countries. The dataset contains 5,198 observations for Poland and 2,769 for Ukraine (65.24% of the total sample). While the Ukrainian sample remains sufficiently large to ensure statistical reliability, this imbalance prevents a perfectly symmetrical cross-national comparison. Despite these constraints, the indicated limitations do not affect the study's results or the conclusions.

5. Research results and discussion

This section presents the study results, following the procedure outlined in Chapter 4. The analysis focuses on the relationship between income, health and happiness in the Polish-Ukrainian context. Beyond testing the main hypothesis, the study reveals significant insights regarding credit market access, which surprisingly influences income assessment in both countries. These results and their implications are discussed in the following sub-sections.

5.1. Spearman's rank correlation analysis

The research process included a preliminary assessment of variable operationalization and descriptive statistics (Sections 5.2 and 5.3). However, to explore associations between key happiness determinants, a Spearman rank correlation was performed, presented in Table 6.

Table 6. Spearman's rank correlation values

Variable	happy_s	health_s	brwmny_s	hincfel_s	hinctnt_s
happy_s	1	0.43	0.28	0.41	0.26
health_s	0.43	1	0.26	0.4	0.27
brwmny_s	0.28	0.26	1	0.42	0.26
hincfel_s	0.41	0.4	0.42	1	0.45
hinctnt_s	0.26	0.27	0.26	0.45	1

Source: own study based on ESS data (ESS, 2025b).

The results presented in Table 6 reveal positive interdependencies among happiness (*happy_s*), subjective health (*health_s*), borrowing capacity (*brwmny_s*), income perception (*hincfel_s*) and net income (*hinctnt*_s). All identified correlations are positive, indicating that improvements in these determinants are associated with higher reported happiness. The strongest correlations exist between income perception and borrowing capacity (0.45) and between happiness and subjective health (0.43). These findings confirm a consistent, moderate synergy between health, financial stability and overall well-being, justifying their inclusion as primary predictors in the subsequent econometric models presented in this paper.

5.2. Comparative income assessment analysis

Based on the first stage of the analysis, a comparison of the positional statistics was conducted for the entire sample as well as individually for Poland and Ukraine. The results are presented in Table 7.

Table 7. Key positional measures analysis for selected variables

Sample	Variable	Min	Max	Mean	St. dev.	Median	Q1	Q2	Q3
cntry: 0 & 1	***hincfel***	1	4	2.60	0.79	3.00	2.00	3.00	3.00
cntry: 0 / PL	***hincfel***	1	4	2.31	0.66	2.00	2.00	2.00	3.00
cntry: 1 / UA	***hincfel***	1	4	3.14	0.72	3.00	3.00	3.00	4.00
cntry: 0 & 1	***hinctnt***	1	10	4.35	2.49	4.00	2.00	4.00	6.00
cntry: 0 / PL	***hinctnt***	1	10	4.51	2.49	4.00	3.00	4.00	6.00
cntry: 1 / UA	***hinctnt***	1	10	4.05	2.46	4.00	2.00	4.00	6.00
cntry: 0 & 1	***brwmny***	1	5	2.54	1.10	2.00	2.00	2.00	3.00
cntry: 0 / PL	***brwmny***	1	5	2.75	1.11	3.00	2.00	3.00	4.00
cntry: 1 / UA	***brwmny***	1	5	2.15	0.97	2.00	1.00	2.00	3.00

Source: own study based on ESS data (ESS, 2025b).

Table 7 highlights significant disparities in the perception of household financial situations between Poland and Ukraine. Regarding the *hincfel* variable (feeling about household income), Polish respondents report a substantially better situation, with a mean of 2.31 and a median of 2.00, indicating they are generally "managing on present income". In contrast, Ukrainian respondents report greater difficulty, with a mean of 3.14 and a median of 3.00. The combined population mean of 2.60 reflects this clear national divide. The *hinctnt* variable (income deciles) presents a different picture, showing highly similar objective income distributions across both countries. All groups share a median of 4.00 and a standard deviation of approximately 2.49, suggesting comparable levels of income inequality. These findings are particularly noteworthy given the stark contrast in subjective income perceptions previously observed. Finally, the

brwmny variable (ease of borrowing money) reveals that Poles perceive borrowing as easier (mean 2.75; median 3.00) compared to Ukrainians (mean 2.15; median 2.00), who predominantly find borrowing "quite difficult". Furthermore, the greater range in Polish data suggests higher polarization regarding access to credit among Polish respondents compared to their Ukrainian counterparts.

The next step of the comparative analysis involved an examination of the bivariate distributions (Figure 1) between the subjective income assessment (*hincfel*) and the objective income deciles (*hinctnt*), as well as between the subjective income assessment (*hincfel*) and the ease of borrowing funds (*brwmny*). The key observations from the presented charts (Figure 1) are outlined below.

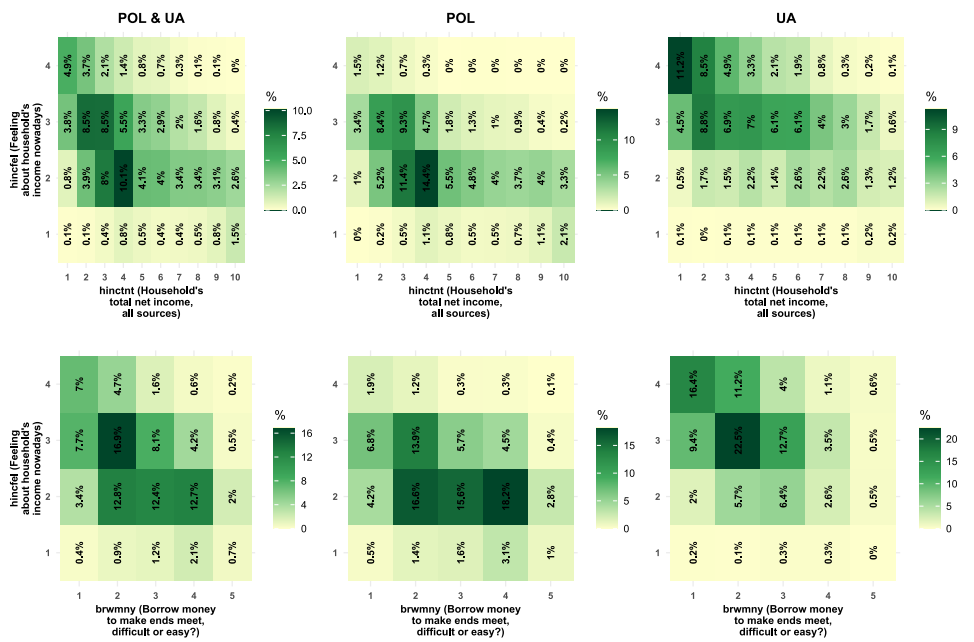


Figure 1. The share of respondents in a given category for the entire study population (POL and UA)

Source: own study based on ESS data (2025b).

The analysis of *hincfel* and *hinctnt* confirms a sharp divergence: despite similar objective income levels, Ukrainians report significantly more negative financial perceptions than Poles. Polish households with lower objective incomes maintain a stronger sense of stability than their Ukrainian counterparts, suggesting that non-income structural factors play a vital role in perceived security for Polish respondents. Regarding the relationship between *hincfel* and *brwmny*, a positive correlation exists in both nations. In Poland, financial stability aligns with moderate credit access, whereas in Ukraine,

financial difficulty is compounded by restricted borrowing access. Ultimately, perceived access to credit acts as a non-income determinant of financial well-being. A functional credit market appears to mitigate the negative subjective impact of lower household income in both countries.

The final step in the first stage of the research, building upon the positional measures and bivariate analysis, was the estimation of an econometric model (Model 1), the results of which are presented in Table 8. To ensure consistency in interpretation, all variables were harmonized to function as stimulants.

Table 8. Results of the econometric model estimation (Model 1)

Dependent variable		hincfel_s	
Independent variables		hinctnt_s, brwmny_s, cntry_s (Ukraine)	
Independent variables	**Coefficient (Value)**	**Std. Error**	**t-value**
hinctnt_s	0.3988	0.0110	36.34
brwmny_s	0.5702	0.0236	24.13
cntry_s (Ukraine)	-2.2907	0.0564	-40.60
Intercepts			
	Value	**Std. Error**	**t value**
1|2	-0.4078	0.0759	-5.38
2|3	2.5298	0.0775	32.66
3|4	6.5442	0.1149	56.97
Model diagnostics			
Pseudo R2 (McFadden)		0.2557	

Source: own study based on ESS data (2025b).

The estimation of the ordered logit model (Table 8) confirms that all selected determinants significantly influence the subjective assessment of household income (*hincfel_s*). Both household income deciles (*hinctnt_s*, coefficient = 0.3988) and borrowing capacity (*brwmny_s*, coefficient = 0.5702) positively impact perceived financial comfort, with the latter serving as a stronger predictor than objective income. The dummy variable for Ukraine (*cntry_s*=1) shows a large, highly significant negative coefficient (-2.2907), indicating that, ceteris paribus, Ukrainians report significantly lower financial satisfaction than Poles. Model diagnostics, including McFadden's Pseudo R^2 of 0.2557, demonstrate a satisfactory fit for social science data, validating the chosen predictors. Finally, the estimated thresholds reveal that reaching the highest level of financial satisfaction requires a more substantial improvement in predictors, as evidenced by the wider gap between the second (2.53) and third (6.54) thresholds.

The results presented in Table 8 confirm that subjective financial assessments (*hincfel_s*) are shaped by both objective resources and broader institutional contexts. The model demonstrates that higher objective income (*hinctnt_s*) and greater access to financial buffers (*brwmny_s*) significantly increase the probability of reporting higher

financial comfort. Notably, the effect of borrowing capacity exceeds that of direct income, suggesting that perceived security is heavily dependent on financial flexibility. Furthermore, the significant negative coefficient for the Ukrainian context reveals that institutional factors exert an independent influence on financial self-assessment that cannot be fully explained by income alone. Overall, the model's robust fit and threshold structure indicate that achieving the highest level of financial satisfaction requires substantial, systemic improvements, rather than mere marginal gains in income.

5.3. Comparative happiness assessment analysis

Following the second stage of research, positional statistics for the entire sample and both countries individually were compared. This analysis focuses on subjective happiness (*happy*) and self-reported health (*health*), providing the descriptive foundation for the subsequent econometric models of happiness. The results are presented in Table 9.

Table 9. Key positional measures analysis for selected variables

Sample	Variable	Min	Max	Mean	St. dev.	Median	Q1	Q2	Q3
cntry: 0 & 1	***happy***	0	10	6.43	2.34	7.00	5.00	7.00	8.00
cntry: 0 / PL	***happy***	0	10	6.98	2.12	7.00	5.00	7.00	8.00
cntry: 1 / UA	***happy***	0	10	5.40	2.38	5.00	4.00	5.00	7.00
cntry: 0 & 1	***health***	1	5	2.63	0.95	3.00	2.00	3.00	3.00
cntry: 0 / PL	***health***	1	5	2.43	0.92	2.00	2.00	2.00	3.00
cntry: 1 / UA	***health***	1	5	3.02	0.87	3.00	2.00	3.00	4.00
cntry: 0 & 1	***hincfel***	1	4	2.60	0.79	3.00	2.00	3.00	3.00
cntry: 0 / PL	***hincfel***	1	4	2.31	0.66	2.00	2.00	2.00	3.00
cntry: 1 / UA	***hincfel***	1	4	3.14	0.72	3.00	3.00	3.00	4.00

Source: own study based on ESS data (2025b).

Table 9 reveals clear disparities in subjective well-being and health between the two countries (the *hincfel* variable is discussed in Section 5.2). Regarding happiness (*happy*), Polish respondents report significantly higher levels, with a mean of 6.98 and a median of 7.00, placing the majority in the "quite happy" category. In contrast, Ukrainian respondents report lower levels, with a mean of 5.40 and a median of 5.00, reflecting an intermediate sense of happiness. The combined population mean (6.43) reflects the higher sentiment observed in Poland. As for self-reported health (*health*), Polish respondents perceive their status more favorably, with a mean of 2.43 and a median of 2.00, generally rating their health as "good". Conversely, the dominant assessment in Ukraine (mean 3.02; median 3.00) is "fair". While both nations share broadly similar ratings, Polish respondents consistently report a slightly higher status than their Ukrainian counterparts.

The subsequent step involved analyzing the bivariate distributions between happiness (*happy*) and subjective income (*hincfel*), as well as between happiness and self-rated health (*health*), presented in Figure 2. The bivariate analysis of happiness (*happy*) and subjective income (*hincfel*) confirms a positive relationship between financial adequacy and well-being in both nations. In Poland, respondents typically cluster at high happiness levels (7-9) while reporting they are "managing" on their income (value 2), suggesting that moderate financial stability supports high happiness. Conversely, Ukrainian respondents cluster at intermediate happiness levels (value 5) while reporting financial difficulty (value 3). This indicates that financial constraints exert a more restrictive influence on happiness in Ukraine than in Poland. Regarding happiness and health (*health*), the data confirm health as a fundamental, universal determinant of well-being. Polish respondents with high happiness (7-9) overwhelmingly report good-to-very-good health (1-2). In Ukraine, the correlation remains strong, but respondents cluster toward intermediate happiness (5-6) and "fair" health (3 or lower). These distributions collectively underscore that while good health is an indispensable prerequisite for well-being in both countries, the generally lower self-rated health in Ukraine functions as a structural barrier to achieving higher national happiness levels.

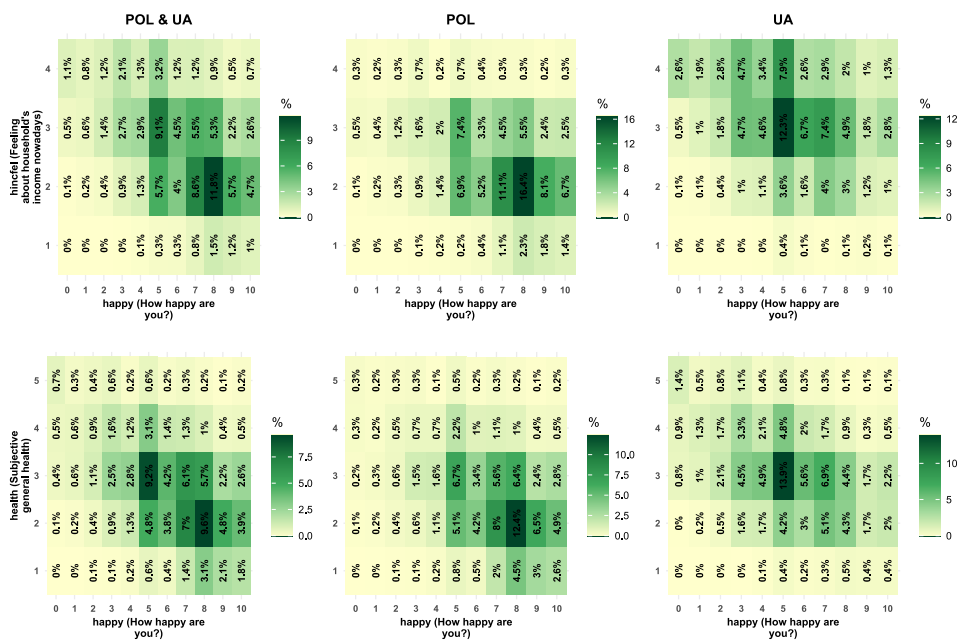


Figure 2. The share of respondents in a given category for the entire study population (POL and UA).

Source: own study based on ESS data (2025b).

The final step in the second stage of the research, following the analysis of positional measures and bivariate distributions for happiness-related variables, was the estimation of an econometric model (Model 2), presented in Table 10. To ensure consistent interpretation, all variables were harmonized as stimulants.

Table 10. Results of the econometric model estimation (Model 2)

Dependent variable	happy_s		
Independent variables	health_s, hincfel_s, cntry_s (Ukraine)		
Independent variables	**Coefficient (Value)**	**Std. Error**	**t-value**
health_s	0.6777	0.0244	27.82
hincfel_s	0.6386	0.0313	20.37
cntry_s (Ukraine)	-0.4769	0.0489	-9.76
Intercepts			
	Value	**Std. Error**	**t value**
0|1	-0.9972	0.1279	-7.80
1|2	-0.2574	0.1136	-2.27
2|3	0.4556	0.1070	4.26
3|4	1.2740	0.1046	12.17
4|5	1.8093	0.1046	17.29
5|6	2.9917	0.1072	27.92
6|7	3.5155	0.1090	32.24
7|8	4.3395	0.1123	38.63
8|9	5.5100	0.1174	46.93
9|10	6.4159	0.1220	52.58
Model diagnostics			
Pseudo R^2 (McFadden)	0.0725		

Source: own study based on ESS data (2025b).

The ordered logit model (Table 10) confirms that both health (*health_s*) and financial adequacy (*hincfel_s*) are positive drivers of life satisfaction (*happy_s*). Health exerts the strongest impact, followed by financial adequacy, reinforcing that subjective well-being is heavily reliant on physical vitality and economic assessment. The dummy variable for Ukraine indicates lower life satisfaction compared to Poland, suggesting that national-level structural factors exert an influence beyond individual health and income. While McFadden's Pseudo R^2 of 0.0725 is lower than in Model 1, this is expected given the higher complexity and variance inherent in the 0-10 happiness scale. Finally, the non-uniform intercepts reveal that while transitions at the lower end of the happiness scale require smaller shifts in the latent well-being index, reaching the highest levels of satisfaction demands significantly greater increases in the explanatory predictors, reflecting diminishing marginal returns in subjective happiness.

In summary, Model 2 confirms that better health (*health_s*) and higher financial security (*hincfel_s*) are key drivers of life satisfaction. While the Ukrainian context remains a significant negative predictor, the model's Pseudo R^2 (0.0725) is lower than in Model 1. This is expected, as life satisfaction is a multidimensional construct influenced by diverse psychological factors and the 11-point scale introduces higher variance.

To test this, a third model (Model 3) was developed using a re-categorized variable (*happy_s_new*), aggregating the 11-point scale into three ordinal levels: low (0–3), medium (4–7), and high (8–10). Applying the same ordered logit framework to this transformed variable, as presented in Table 11, resulted in a noteworthy nearly two-fold improvement in McFadden's Pseudo R^2, confirming that the measurement scale significantly impacts model fit.

Table 11. Results of the econometric model estimation (Model 3)

Dependent variable	happy_s_new		
Independent variables	health_s, hincfel_s, cntry_s (Ukraine)		
Independent variables	**Coefficient (Value)**	**Std. Error**	**t-value**
health_s	0.7202	0.02792	25.79
hincfel_s	0.6481	0.05544	-9.531
cntry_s (Ukraine)	-0.5284	0.03599	18.01
Intercepts			
	Value	**Std. Error**	**t value**
1|2	1.3566	0.1169	11.6046
2|3	4.4549	0.1283	34.7199
Model diagnostics			
Pseudo R^2 (McFadden)	0.1422		

Source: own study based on ESS data (2025b).

Models 2 and 3 confirm that individual happiness is rooted in health and economic comfort. While these factors do not account for all variance, they underscore that happiness is a multidimensional construct influenced by material, physical and national-environmental factors.

Collectively, this analysis highlights the multifaceted determinants of well-being in Poland and Ukraine. Financial adequacy and credit access are decisive in shaping economic evaluations, while self-rated health is as influential as financial variables in predicting life satisfaction. Persistent country effects confirm that institutional and cultural differences substantially modify both financial self-assessments and reported happiness. Ultimately, well-being must be understood as an interplay between material resources, health and national context. The robust "country effect" captures the influence of the distinct post-transformation paths of Poland and Ukraine. This suggests that national progress is intrinsically reflected in citizen well-being, making societal happiness a critical metric for evaluating the true outcomes of these contrasting development journeys.

6. Conclusions

This study compared key factors influencing happiness in Poland and Ukraine, focusing on income and health. Findings confirm that while both factors positively impact subjective well-being in both nations, their influence is modulated by unique historical and socio-economic contexts. In Poland, stable integration with the EU and improved living standards have made income an important yet less volatile driver of happiness. Conversely, in Ukraine's more unstable transition, income exerts a stronger impact, reflecting basic financial security and stability.

The analysis further highlights that health is a primary determinant of happiness in both societies and reveals a significant link between credit market access and well-being, underscoring the role of financial opportunities in meeting aspirations. Ultimately, this study demonstrates that social policies cannot rely on universal assumptions. Instead, they must be tailored to specific national challenges, balancing economic and health factors with broader institutional contexts.

Given the notable country effect and the importance of non-income variables, further research should prioritize deeper institutional and cultural analyses. Future studies should quantify the impact of specific indicators, such as market trust, corruption perception and public service quality, on subjective well-being across post-transformation states. Additionally, longitudinal research is required to track how evolving geopolitical and socio-economic changes influence financial perceptions and happiness disparities in the region.

References

Angeles, L., (2011). A closer look at the Easterlin paradox. *The Journal of Socio-Economics,* 40(1), pp. 67–73. https://doi.org/10.1016/j.socec.2010.06.017.

Arvin, M., Lew, B., (2014). Does income matter in the happiness-corruption relationship? *Journal of Economic Studies,* 41(3), pp. 469–490. https://doi.org/10.1108/JES-02-2013-0024.

Asadullah, M. N., Xiao, S. and Yeoh, E., (2018). Subjective well-being in China, 2005-2010: The role of relative income, gender, and location. *China Economic Review,* 48, pp. 83–101. https://doi.org/10.1016/j.chieco.2015.12.010.

Audette, A. P., Lam, S., O'Connor, H. and Radcliff, B., (2019). (E)quality of life: A cross-national analysis of the effect of gender equality on life satisfaction. *Journal of Happiness Studies,* 20, pp. 2173–2188. https://doi.org/10.1007/s10902-018-0042-8.

Babula E., Kamińska, T., (2013). Uwarunkowania dobrobytu w sferze realnej. *Wydawnictwo Uniwersytetu Gdańskiego*, Gdańsk.

Balcerowicz, L., Rzońca, A., (2010). Zagadki wzrostu gospodarczego. Siły napędowe i kryzysy- analiza porównawcza, *C.H. Beck*, Warszawa.

Bartolini, S., Sarracino, F., (2014). Happy for how long? How social capital and economic growth relate to happiness over time. *Ecological Economics*, 108, pp. 242–256. https://doi.org/10.1016/j.ecolecon.2014.10.004.

Behera, D. K., Rahut, D. B., Padmaja, M. and Dash, A. K., (2024). Socioeconomic determinants of happiness: Empirical evidence from developed and developing countries, *Journal of Behavioral and Experimental Economics*, Vol. 109. https://doi.org/10.1016/j.socec.2024.102187.

Belasen, A. R., Hafer, R. W., (2013). Do changes in economic freedom affect well-being. *Journal of Regional Analysis & Policy*, 43(1), pp. 56–64, 10.22004/ag.econ.243948.

Borodiuk, V., Frolova, H., (2009), Privatization of state property in the context of the economic development of post-socialist Ukraine. *Formuvannia rynkovoi ekonomiky: zbirnyk naukovykh prats*, 22, pp. 7–17, Kyiv National Economic University named after Vadym Hetman. Kyiv.

Bondarchuk, K., (2010). Unemployment of the economically active population and ways to improve the mechanism of its reduction. *Formuvannia rynkovoi ekonomiky: zbirnyk naukovykh prats*, 24, pp. 204–214. Kyiv National Economic University named after Vadym Hetman. Kyiv.

Ciziceno, M., Travaglino, G. A., (2019). Perceived corruption and individuals' life satisfaction: The mediating role of institutional trust. *Social Indicators Research,* 141(2), pp. 685–701. https://doi.org/10.1007/s11205-018-1850-2.

CPI, (2024). Corruption Perceptions Index 2024. https://www.transparency.org/en/cpi/2024, available as of 17.11.2025.

Cunado, J., De Gracia, F. P, (2013). Environment and happiness: New evidence for Spain. *Social Indicators Research,* 112, pp. 549–567. https://doi.org/10.1007/s11205-012-0038-4.

De Souto Barreto, P., (2014). Direct and indirect relationships between physical activity and happiness levels among older adults: a cross-sectional study. *Aging & mental health*, 18(7), pp. 861–868. https://doi.org/10.1080/13607863.2014.896863

Duczkowski, N., (2024), Wpływ dobrobytu społecznego na wydatki gospodarstw domowych na ubezpieczenia. Rozprawa doktorska, Szkoła Główna Handlowa. https://sgh.bip.gov.pl/fobjects/download/1692988/rozprawa-doktorska-mgr-norberta-czeslawa-duczkowskiego-pdf.html, available as of 17.11.2025.

Duczkowski, N., Słowik, L., (2022). The impact of financial situation subjective assessment on household debt, *The Polish Statistician/Wiadomości Statystyczne*, 67/8. https://doi.org/10.5604/01.3001.0015.9701.

Dymnich, O, (2018). Current state of pension reform in Ukraine. *Social and labour relations: theory and practice*, 8(2), pp. 75–85, https://doi.org/10.21511/slrtp.8(2).2018.08.

Dymnich, O., (2021). Trends and factors determining social protection expenditures in the world. *Scientific Notes*, 22(1). Kyiv National Economic University named after Vadym Hetman, Kyiv 2021. https://drive.google.com/file/d/ 1g2kNpTPZWPq_DBTgfl3XJfVGS8qW1SGp/view, available as of 17.11.2025.

Efklides, A., Kalaitzidou, M. and Chankin, G., (2003). Subjective quality of life in old age in Greece: The effect of demographic factors, emotional state and adaptation to aging. *European psychologist*, 8(3), pp. 178–191. https://doi.org/10.1027/1016-9040.8.3.178.

ESS, European Social Survey, (2025a). About ESS. https://www.europeansocialsurvey.org/about-ess, available as of 17.11.2025.

ESS, European Social Survey (2025b), ESS Data Builder (Wizard). https://ess.sikt.no/en/data-builder/, available as of 17.11.2025.

ESS, European Social Survey (2025c), ESS variable list. www.europeansocialsurvey.org/sites/default/files/2023-06/ESSDE1-7e01_variable_list.pdf, available as of 17.11.2025.

Frey, B., Stutzer, A., (2002). What Can Economists Learn from Happiness Research? *Journal of Economic Literature*, 40/2, pp. 402–35. https://www.jstor.org/stable/2698383, available as of 17.11.2025.

GNH, Centre for Bhutan and GNH Studies, (2025). Index resources Gross National Happiness. https://www.grossnationalhappiness.com/articles/, available as of 17.11.2025.

IFiS PAN, Instytut Filozofii i Socjologii Polskiej Akademii Nauk (2025a). O Europejskim Sondażu Społecznym. https://ess.ifispan.pl/o-ess/, available as of 17.11.2025.

IFiS PAN, Instytut Filozofii i Socjologii Polskiej Akademii Nauk (2025b). Tematyka Europejskiego Sondażu Społecznego. https://ess.ifispan.pl/tematyka-europejskiego-sondazu-spolecznego/, available as of 17.11.2025.

IFiS PAN, Instytut Filozofii i Socjologii Polskiej Akademii Nauk (2025c). Historia ESS. https://ess.ifispan.pl/historia-ess-2/, available as of 17.11.2025.

IFiS PAN, Instytut Filozofii i Socjologii Polskiej Akademii Nauk (2025d). Metodologia Europejskiego Sondażu Społecznego. https://ess.ifispan.pl/metodologia-europejskiego-sondazu-spolecznego/, available as of 17.11.2025.

IMF, International Monetary Fund, (2025a). Datamapper for Poland. https://www.imf.org/external/datamapper/NGDPDPC@WEO/POL, available as of 17.11.2025.

IMF, International Monetary Fund, (2025b), Datamapper for Ukraine. https://www.imf.org/external/datamapper/profile/UKR, available as 19.09.2025.

Inglehart, R., Foa, R., Peterson, C. and Welzel, C., (2008). Development, freedom, and rising happiness: A global perspective (1981–2007). *Perspectives on Psychological Science,* 3(4), pp. 264–285. https://doi.org/10.1111/j.1745-6924.2008.00078.x.

Jovanovic, V., Joshanloo, M., (2022). The contribution of positive and negative affect to life satisfaction across age. *Applied Research in Quality of Life,* 17(2), pp. 511–524. https://doi.org/10.1007/s11482-020-09903-5.

Kahneman, D., Deaton, A., (2010). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences,* 107(38), pp. 16489–16493. https://doi.org/10.1073/pnas.1011492107.

Karademas, E. C., (2006). Self-efficacy, social support and well-being: The mediating role of optimism. *Personality and Individual Differences,* 40(6), pp. 1281–1290. https://doi.org/10.1016/j.paid.2005.10.019.

Kawecka-Wyrzykowska, E., (2024), Financial flows between Poland and the EU in 2004-2023 and prospects for their changes. *Gazeta SGH*. https://gazeta.sgh.waw.pl/en/people-events/financial-flows-between-poland-and-eu-2004-2023-and-prospects-their-changes, available as of 17.11.2025.

Kot, S. M., Malawski, A. and Węgrzecki, A., (2004). Dobrobyt społeczny, nierówności i sprawiedliwość dystrybutywna, *Wydawnictwo Akademii Ekonomicznej w Krakowie*, Kraków.

La, B. T., Lim, S., Cameron, M. P., Tran, T. Q. and Nguyen, M. T., (2021). Absolute income, comparison income and subjective well-being in a transitional country: Panel evidence from Vietnamese household surveys. *Economic Analysis and Policy,* 72, pp. 368–385. https://doi.org/10.1016/j.eap.2021.09.008.

Lathia, N., Sandstrom, G. M., Mascolo, C., Rentfrow, P. J., (2017). Happier people live more active lives: Using smartphones to link happiness and physical activity. *PloS one*, 12(1), e0160589. https://doi.org/10.1371/journal.pone.0160589.

Luechinger, S., Raschky, P. A., (2009). Valuing floods disasters using the life satisfaction approach. *Journal of Public Economics,* 93(3-4), pp. 620-633. https://doi.org/10.1016/j.jpubeco.2008.10.003.

Lucas, R.E., (2007). Long-term disability is associated with lasting changes in subjective well-being: evidence from two nationally representative longitudinal studies. *Journal of personality and social psychology*, 92(4), 717. https://doi.org/10.1037/0022-3514.92.4.717.

MacKerron, G., Mourato, S., (2009). Life satisfaction and air quality in London. *Ecological Economics,* 68, pp. 1441–1453. https://doi.org/10.1016/j.ecolecon.2008.10.004.

Mehrdadi, A., Sadeghian, S., Direkvand-Moghadam, A. and Hashemian, A., (2016). Factors affecting happiness: a cross-sectional study in the Iranian youth. *Journal of clinical and diagnostic research: JCDR*, 10(5), VC01. https://doi.org/10.7860/JCDR/2016/17970.7729.

Mei, S. T. L., Ni, A. O. Z., Sivaguru, S. A. and Cong, C. W., (2021). Social support, resilience, and happiness in response to COVID-19. *Journal of Cognitive Sciences and Human Development,* 7(1), pp. 134–144. https://doi.org/10.33736/jcshd.2882.2021.

Meisenbarg, G., Woodley, M. A., (2015). Gender differences in subjective well-being and their relationships with gender equality. *Journal of Happiness Studies,* 16, pp. 1539–1555. https://doi.org/10.1007/s10902-014-9577-5.

Mentzakis, E., Moro, M., (2009). The poor, the rich and the happy: Exploring the link between income and subjective well-being. *The Journal of Socio-Economics,* 38(1), pp. 147–158. https://doi.org/10.1016/j.socec.2008.07.010.

Mookerjee, R., Beron, K., (2005). Gender, religion and happiness. *The Journal of Socio-Economics,* 34(5), pp. 674–685, https://doi.org/10.1016/j.socec.2005.07.012.

Mitchell, M. E., Lebow, J. R., Uribe, R., Grathouse, H. and Shoger, W., (2011). Internet use, happiness, social support and introversion: A more fine grained analysis of person variables and internet activity. *Computers in Human Behavior,* 27(5), pp. 1857–1861. https://doi.org/10.1016/j.chb.2011.04.008.

NBU, National Bank of Ukraine (NBU), (2025). Commentary of the National Bank on the inflation rate in May 2025. https://bank.gov.ua/ua/news/all/komentar-natsionalnogo-banku-schodo-rivnya-inflyatsiyi-v-travni-2025-roku, available as of 17.11.2025.

NEF, New Economics Foundation (NEF), (2025). Index resources Happy Planet Index. https://happyplanetindex.org/, available as of 17.11.2025.

OECD, (2025). Index resources Better Life Index, https://www.oecdbetterlifeindex.org/, available as of 17.11.2025.

Paul, S., Guilbert, D., (2013). Income-happiness paradox in Australia: Testing the theories of adaptation and social comparison*, Economic Modelling, Elsevier,* 30(C), pp. 900–910. https://doi.org/10.1016/j.econmod.2012.08.034.

Poskrobko, T., (2021). Jak zmierzyć rozwój? Wskaźniki poszerzone i alternatywne. https://weif.uwb.edu.pl/uploads/tiny/Tomasz%20Poskrobko%20-%20pliki/Ekonomia%20rozwoju/ 03.%20Alternatywne%20mierniki%20rozwoju.pdf, available as 19.09.2025.

Richards, J., Jiang, X., Kelly, P., Chau, J., Bauman, A. and Ding, D., (2015). Don't worry, be happy: cross-sectional associations between physical activity and happiness in 15 European countries. *BMC public health*, 15(1), pp. 1–8. https://doi.org/10.1186/s12889-015-1391-4.

Schyns, P., (1998). Crossnational differences in happiness: Economic and cultural factors explored. *Social Indicators Research,* 43, pp. 3–26. https://doi.org/10.1023/A:1006814424293.

Selim, S., (2008). Life satisfaction and happiness in Turkey. *Social Indicators Research,* 88 (3), pp. 531–562. https://doi.org/10.1007/s11205-007-9218-z.

Siedlecki, K. L., Salthouse, T. A., Oishi, S. and Jeswani, S., (2014). The relationship between social support and subjective well-being across age. *Social Indicators Research,* 117, pp. 561–576. https://doi.org/10.1007/s11205-013-0361-4.

Singh, S., Kshtriya, S. and Valk, R., (2023). Health, Hope, and Harmony: A Systematic Review of the Determinants of Happiness across Cultures and Countries. *International Journal of Environmental Research and Public Health*, 20(4), 3306. https://doi.org/10.3390/ijerph20043306.

Spruk, R., Keseljevic, A., (2016), Institutional origins of subjective well-being: Estimating the effects of economic freedom on national happiness. *Journal of Happiness Studies, 17*(2), pp. 659–712. https://doi.org/10.1007/s10902-015-9616-x.

Sujarwoto, S., Tampubolon, G. and Pierewan, A. C., (2018), Individual and contextual factors of happiness and life satisfaction in a low middle income country. *Applied Research in Quality of Life,* 13(4), pp. 927–945. https://doi.org/10.1007/s11482-017-9567-y.

The Economist, (2017). Index resources Where-to-be-born Index (formerly Quality of Life Index). https://www.worldatlas.com/articles/the-where-to-be-born-index-the-highest-and-lowest-scoring-countries.html, available as of 17.11.2025.

Ugur, Z. B., (2021a), Does money buy happiness in Turkey? *Applied Research in Quality of Life,* 16(3), pp. 1073–1096. https://doi.org/10.1007/s11482-019-09805-1.

Ugur, Z. B., (2021b), How does inequality hamper subjective well-being? The role of fairness. *Social Indicators Research,* 158(2), pp. 377–407. https://doi.org/10.1007/s11205-021-02711-w.

UN, United Nations, (2021). Index resources: Human Development Index / Inequality-adjusted Human Development Index. https://hdr.undp.org/en/2020-report, available as of 17.11.2025.

Vanham, P., (2021). A brief history of GDP - and what could come next, *Word Economic Forum*. https://www.weforum.org/stories/2021/12/stakeholder-capitalism-episode-1-a-brief-history-of-gdp/, available as of 17.11.2025.

Verme, P., (2009). Happiness, freedom and control. *Journal of Economic Behavior and Organization,* 71(2), 146-161. https://doi.org/10.1016/j.jebo.2009.04.008.

Verme, P., (2011). Life satisfaction and income inequality. *Review of Income and Wealth,* 57(1), pp. 111–127. https://doi.org/10.1111/j.1475-4991.2010.00420.x.

WBG, World Bank Group, (2025). Doing Business archive. https://archive.doingbusiness.org/en/data, available as of 17.11.2025.

Welsch, H., (2006). Environment and happiness: Valuation of air pollution in ten European countries. *Ecological Economics,* 58(4), pp. 801–813. https://dx.doi.org/10.1016/j.ecolecon.2005.09.006

Welsch, H., (2007). Environmental welfare analysis: A life satisfaction approach. *Ecological Economics,* 62(3), pp. 544–551. https://doi.org/10.1016/j.ecolecon.2006.07.017.

WHR, (2025). World Happiness Report 2025. https://www.worldhappiness.report/, available as of 17.11.2025.