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# FINANCIALIZATION AND LEVEL OF HAPPINESS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT. THE CASE OF CENTRAL AND EASTERN EUROPEAN COUNTRIES

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C O P E



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#### FINANCIALIZATION AND LEVEL OF HAPPINESS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT. THE CASE OF CENTRAL AND EASTERN EUROPEAN COUNTRIES

#### ABSTRACT

**The purpose of the article.** The article aims to identify and assess the impact of the financialization process on the level of happiness as an effect of sustainable development in selected Central and Eastern European countries in 2012–2022.

**Methodology.** The research used panel models. The World Happiness Index (WHI) was adopted as the dependent variable, taking into account social aspects of sustainable development. Financialization measures included the Financial Development Index (FDI) published by the International Monetary Fund and credit to the private sector (as a % of GDP). The models were estimated using OLS, fixed-effects and random-effects estimators. Macroeconomic variables were included in the set of explanatory variables. The most effective estimator was selected using Wald, Breusch-Pagan and Hausman tests. Robust standard errors were imposed on the models.

**Results of the research.** In the estimated models, the significance of parameters in the case of financialization varied depending on the estimator used. The Financial Development Index was an insignificant variable in all models. Clear significance was observed in relation to credit to the private sector (as % of GDP). Regardless of the financialization measure adopted and the estimator

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used, the obtained parameters for financialization indicators were negative. Although financialization may be an instrument for financing sustainable development, it does not have a positive impact on the level of happiness that results from it. The basic reasons may lie in the too low scale of financing activities related to sustainable development or in the inadequate structure of this financing. Changes in financing are needed and its redirection to activities aimed at achieving sustainable development and happiness. Future research should use other measures of financiakization and happiness that take into account aspects of sustainable development and include other countries to make a comparison.

**Keywords:** financialization, happiness, financial development index, credit to private sector, sustainable development, Central and Eastern European countries.

JEL Class: B26, E44.

### INTRODUCTION

Global warming, environmental degradation, and the associated risk of ecological disasters are among the greatest problems of the modern world (Yui & Furuya, 2023: 541). To solve them, individual countries should adopt the concept of sustainable development, which combines harmony from an economic, social, and environmental perspective (Mukoro et al., 2022: 1). In 1987, the report of the World Commission on Environment and Development, Our Common Future, was published. It includes, among other things, a definition of sustainable development. According to it, sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Płonka et al., 2022: 3). In 2015, a set of 17 sustainable development goals was developed, which were replaced by the so-called millennium goals (Karn & Kumar, 2024: 70). They were adopted by 193 countries to be implemented by 2030. Their effect, apart from protecting the environment and preserving biodiversity, is to maintain an appropriate quality of life, which inidcates the sense of happiness among citizens of individual countries (Aksoy & Bayram Arl, 2020: 385; Bonasia et al., 2022).

Achieving sustainable development goals and citizen happiness depends on adequate financing (Barua, 2020: 277), both public and private (Jomo et al., 2016: 1). According to UN estimates, their implementation will require between 5.4 trillion and 6.4 trillion dollars per year in 20232030. The main obstacle is the lack of financial resources, and as indicated in the report *Financing Sustainable Development* in 2024, the effects of the COVID-19 pandemic, including, among others: lowering interest rates, widening the existing financing gap. Another challenge will undoubtedly be the need to increase military spending in the coming years, limiting the pool of funds that could be allocated to the green transformation. This applies especially to the countries of Central and Eastern Europe due to their geographical location. Another threat may also be the launch

of the Excessive Deficit Procedure against six EU countries, including Poland, Slovakia, and Hungary, which will require maintaining appropriate fiscal discipline. Regardless of the source of financial resources, their increase leads to the acceleration of the financialization process, i.e., the growing importance of finance in various areas of operation of business entities, households, and the entire economy. However, it is not entirely clear whether financialization in its current form has a positive or negative impact on the key effect of sustainable development, which is the happiness of citizens. To the authors' knowledge, there is a lack of research in this area, which is the basis for addressing this issue in this article.

The article aims to identify and assess the impact of the financialization process on the level of happiness as an effect of sustainable development in selected Central and Eastern European countries in 2012–2022.

The article puts forward a research hypothesis according to which financialization, although it is an instrument for financing sustainable development, does not have a positive impact on the level of happiness that is its effect. The article poses the following research questions. Did the financialization process significantly affect the level of happiness in Central and Eastern European countries? Did the obtained significance and the direction of the impact of the estimated parameters differ depending on the measure of the financialization process used?

The research results confirmed hypothesis and showed an insignificant and negative impact of financialization on the level of happiness of the studied countries in the case of the financial development index and a significant one about credit to the private sector (as a % of GDP). The significance of the impact of measures of the financialization process on the level of happiness depended on the measure used, but the direction of the impact was the same.

## **1. THEORETICAL BACKGROUND**

The key effect of achieving sustainable development is to achieve the appropriate quality of life and happiness for the inhabitants of individual countries (Grum & Kobal Grum, 2020: 788). Happiness is a subjective category related to an individual's life satisfaction (Veenhoven, 2017). External effects, such as global warming and environmental pollution, generate many negative effects, including deterioration of health, which negatively affects the level of happiness. The well-being and happiness of citizens therefore depend largely on progress in achieving sustainable development (Aksoy & Bayram Arl, 2020: 386). Moreover, happier citizens are more willing to implement its rules (Zidansek, 2007). Ensuring an appropriate level of happiness for individuals is one of the social dimensions of sustainable development (Gamage et al., 2022).

Achieving sustainable development goals and citizen happiness requires adequate financing (Nykyist & Maltais, 2022). According to Mazzucato (2023: 14), the most important are public funds, which should mobilize private investments and be complementary to them. Due to the decreasing possibilities of financing with public funds, there is a need to use private funds, including bank financing, non-financial enterprises, and households. The financing gap is one of the greatest barriers to achieving the Sustainable Development Goals, especially in developing countries (Barua, 2020: 277). This gap has been widened by the development of the COVID-19 pandemic and the shocks it has caused (Mazzucato, 2023: 12). Another shock was the escalation of the Russian-Ukrainian conflict, which disrupted supply chains, leading to a sharp increase in energy and food prices around the world. These events required increased fiscal spending, which weakened the fiscal capacity of both developed and developing countries. This poses a threat to the financing of the SDGs (Arora & Sarker 2023: 1). Another challenge will undoubtedly be the need to finance additional military expenditure in the coming years, which will also limit the pool of funds that could be allocated to sustainable development. This particularly applies to the Central and Eastern European countries due to their geographical location of the abovementioned armed conflict. These expenses will be related to the modernization of the army, improving defense capabilities, and strengthening cyber security (Weiwei, 2023: 307). Another threat may be the launch of the Excessive Deficit Procedure against six EU countries, also against the CEE countries, including Poland, Slovakia, and Hungary.

The growing demand for financing sustainable development may be another factor driving the financialization of the economy. The growing importance of the financial sphere in the functioning of economic entities and the entire economy has its positive and negative consequences, which can be related to the level of happiness of citizens. The development of financial markets itself is positive, but its excessive growth in the economy has negative effects (Ratajczak, 2017: 30). The positive effects of financialization include growing access to financial market instruments. It is possible to finance consumption needs with loans and credits, related to current consumption as well as long-term consumption, e.g., the purchase of durable goods or real estate (Fernandez & Aalbers, 2016), leading to an increase in the level of happiness to some extent. However, financialization contributes to maintaining the wealth effect due to the increase in the value of owned assets and the tendency to further increase consumer spending (Ratajczak, 2012: 173), which may be negative. Another aspect is the financing of sustainable consumption with bank loans, e.g., in the context of renovation or purchase of a property with an ecological installation, or the purchase of electric vehicles reducing CO2 emissions (Sadorsky, 2010), which should be considered positive. Households also have access to capital market instruments, such as shares and bonds, which allow them to deposit surplus funds in the form of savings and make investments. However, this raises concerns about the development of speculative activities and the fight for short-term profits (Ratajczak, 2012: 173). Another aspect is the possibility of using insurance and pension security instruments, or bank deposits related to the sustainable development goals. Financialization understood as the growing importance of financial services and products in the economy may therefore be positive in this context, ensuring the security of invested funds and the possibility of increasing them. The associated financial stability may affect the increasing level of happiness. On the other hand, the effect of financialization may be an increase in the burden of servicing the incurred debt and the possibility of losing funds, which results from an inherent element of financial markets, which is a risk. If it materializes, there may be financial instability, loss of security, and a related decrease in happiness. Another aspect is the financing of industries that hurt the environment, which may also indirectly negatively affect the level of happiness.

The mentioned effects may vary between countries and depend on the characteristics of the financial market, the level of its development, the orientation of the financial system, the adequacy of the instruments offered, or the financial knowledge of clients of financial institutions. From the perspective of financialization as an instrument for financing sustainable development, it is important to offer financial products and services and provide financing that will have a positive impact on both sustainable development and the happiness of citizens. Access to financing is therefore one of the conditions for achieving sustainable development, and its goal and effect is to increase the level of happiness of citizens (Stasiak, 2022: 29; Kryk, 2012: 145). It is difficult to find studies on the impact of financialization on the effect of sustainable development, which is the happiness of citizens, which was the motivation for undertaking this research issue.

## 2. RESEARCH METHODOLOGY

The research used panel models. The selection of variables was made based on substantive and statistical criteria. The research included annual data for 11 Central and Eastern European countries belonging to the European Union, i.e., Bulgaria, Croatia, the Czech Republic, Estonia, Lithuania, Latvia, Poland, Romania, Slovakia, Slovenia, and Hungary. The rationale for the choice of countries is the proximity of the geographical location and the similarity of banking-oriented financial systems. They are also characterized by a relatively lower level of happiness and financialization compared to Western members of the European Union. It is a region of strategic importance that has experienced increased geopolitical risk in recent years (Huang, 2023: 1). The importance of environmental factors in achieving happiness is increasingly emphasized. In turn, happiness itself, related to the quality of life, is both the goal and the effect of sustainable development. For this reason, the World Happiness Index published annually by the Gallup Institute in World Happiness Reports was selected as the dependent variable. It takes into account the economic aspect, which is GDP *per capita*, and social issues, including social support, healthy life expectancy, freedom, generosity and corruption. The ranking is based on a person's self-assessment of life, in particular on his or her answers to the life assessment questions included in Cantril's ladder. The countries' results are based on a survey in which respondents rate the quality of their current life on a scale from 0 to 10. The higher the value of this indicator, the higher the level of happiness. This indicator has been published since 2012, which determined the choice of the beginning of the research period.

Two financialization indicators were included as explanatory variables. The first is the Financial Development Index (FDI) published by the International Monetary Fund, consisting of nine sub-indices measuring the quality of individual financial market segments. This measure was also used by Ha (2023) and Bui (2020). The research period for this indicator has been shortened to 2021. The second indicator of financialization was credit to the private sector (as a % of GDP). Credit is an adequate measure of financialization for Central and Eastern European countries with banking-oriented financial systems. This measure as a measure of financialization was used in the research by Adom et al. (2020).

The set of explanatory variables included control variables from the macroeconomic environment. Macroeconomic stability is a key factor both in the development of financial markets (Basyariah et al. 2021: 201) and in achieving sustainable development and high quality of life. It determines the supply of loans offered by banks as well as the demand for loans from potential borrowers. As shown in previous studies, macroeconomic variables significantly influence the level of happiness experienced by citizens of European Union countries (Akgun et al. 2023). Greater macroeconomic stability can also provide greater security and improve the situation of economic actors involved in achieving the Sustainable Development Goals. The macroeconomic variables included following other authors are GDP (Kwon et al., 2021), unemployment rate (Barros et al., 2023), public debt (as % of GDP) (Frey et al., 2014) and the current account balance (as % of GDP).

The characteristics of the variables used are presented in Table 1.

Symbol	Variable	Unit	Source	Mean	Min	Max	Standard deviation
ні	Happiness index	-	World Happiness Reports	5.94	3.99	7.04	0.59
FDI	Financial Development Index	-	IMF	0.35	0.20	0.50	0.10
С	Credit for private sector	% of GDP	Eurostat	81.64	43.70	130.10	19.60
GDP	Dynamics of Gross Domestic Product	%		2.71	-8.60	13.80	3.09
UR	Unemployment rate	%		7.57	2.00	17.30	3.35
PD	Public debt	% of GDP		47.59	8.20	86.10	20.61
CAB	Current account balance	% of GDP		-0.30	-9.10	7.30	3.10

Table 1. Characteristics of variables

Source: own study.

Then, tests for the stationarity of the variables were performed. The results of the Levin-Lin-Chu test indicate that all levels of the variables were stationary, as shown in Table 2.

Variable	Coefficient	t-Student	z-score	p value
HI	-0.270	-4.913	-2.817	0.002
FDI	-0.450	-5.716	-3.196	0.000
С	-0.135	-4.818	-3.661	0.000
GDP	-1.279	-14.281	-12.028	0.000
UR	-0.161	-5.377	-3.986	0.000
PD	-0.586	-7.106	-3.787	0.000
CAB	-0.540	-7.138	-4.040	0.000

Table 2. Results of Levin-Lin-Chu stationarity tests for variable levels

Source: own study.

Then, linear correlation coefficients between the variables were calculated. They are presented in Table 3.

Zmienna	HI	FDI	С	GDP	UR	PD	CAB
HI	1.00						
FDI	-0.10	1.00					
С	-0.50*	0.38*	1.00				
GDP	0.05	-0.11	-0.24*	1.00			
UR	-0.54*	-0.02	-0.38*	-0.19	1.00		
PD	0.08	0.52*	-0.09	-0.08	0.15	1.00	
CAB	-0.13	0.09	0.21	-0.22*	0.08	0.14	1.00

Table 3. Correlation matrix

\*means significance at the 0.10 level

Source: own study.

According to Schober et al. (2018), a strong correlation occurs when the correlation coefficient is 0.70 and above. In no case did the obtained correlation coefficients exceed the limit values. Therefore, the variables were included in one model. The strongest correlation occurred between HI and SB (0.54), and the weakest between HI and GDP (0.05). HI was positively correlated with GDP and DP, and negatively with other variables.

The following model was adopted for the OLS approach (Kufel, 2011):

$$y_{it} = x_{it}\beta + v_{it},\tag{1}$$

where:

 $\begin{array}{l} y_{it} - \text{dependent variable,} \\ x_{it} - \text{independent variable (in general, the vector of independent variables),} \\ \beta - \text{vector of the N dimension of the models' structural parameters,} \\ v_{it} - \text{total random error composed of the purely random part } \epsilon_{it} \text{ and individual effect } u_{it} \text{ pertaining to the specific i-th unit of the panel} \\ (v_{it} = \epsilon_{it} + u_{it}). \end{array}$ 

The model with fixed effects FE assumed the form:

$$y_{it} = x_{it}\beta + u_i + \varepsilon_{it}z, \qquad (2)$$

And the model with random effects RE looked as follows:

$$\widehat{\boldsymbol{\beta}}_{\text{RE}} = \left(\boldsymbol{X}^{\mathrm{T}} \boldsymbol{\Omega}^{-1} \boldsymbol{X}\right)^{-1} \boldsymbol{X}^{\mathrm{T}} \boldsymbol{\Omega}^{-1} \boldsymbol{y}, \tag{3}$$

## where:

 $\hat{\beta}_{RE}$  – generalized estimator of the least squarea of structural parameters,

X – matrix of independent variables,

y – vector of dependent variables,

 $\Omega$  – is a reversible matrix of variance and covariance of the total random error.

The validity of the models was assessed with the Wald, Breusch-Pagan and Hausman tests (Kośko et al., 2007).

## 3. RESULTS

The modeling was performed taking into account the OLS estimator, with fixed and random effects. After selecting the most effective estimator and testing the properties of the models, robust standard errors (robust HAC) were imposed. The modeling results are presented in Table 4.

The results of the Wald test (p-value = 0.000 < 0.05) indicated that the hypothesis that the OLS model is appropriate should be rejected in favor of the alternative hypothesis that the fixed-effects model is more appropriate. The results of the Breusch-Pagan test (p-value = 0.000 < 0.05) showed that the hypothesis that the OLS panel model is correct should be rejected in favor of the alternative hypothesis that the random-effects model is more appropriate. The decision was made based on the Hausman test, according to the results of which (p-value = 0.943 > 0.05) the hypothesis that the random effects model is appropriate should be accepted. After selecting the estimator, the model was diagnosed in terms presence of cross-sectional dependence, autocorrelation and of the heteroskedasticity. The results of the CD-Pesaran test (p-value = 0.751 > 0.05) indicate that there is no problem with cross-sectional dependence. The results of the Wooldridge test (p-value = 0.002 < 0.05) indicate the occurrence of autocorrelation. In turn, the results of the Wald test (p-value = 0.309 > 0.05) suggest no problems with heteroscedasticity. Robust HAC standard errors were therefore imposed on the estimator and the model was re-estimated. The value of the variance inflation factor (VIF) was also checked. Its value lower than 10 indicates the lack of multicollinearity between the variables (Sal-merón et al., 2020). For all variables, this condition was met.

The results of the estimated parameters indicate that FDI negatively affects the level of happiness. This parameter was significant only in the case of the OLS estimator. GDP also took a negative direction of effect, but it was insignificant regardless of the estimator used.

Variable	OLS	FE	RE	RE robust HAC	VIF
Const.	6.985*** (0.000)	6.403*** (0.000)	6.642*** (0.000)	6.642*** (0.000)	_
FDI	-1.945*** (0.001)	-0.864 (0.431)	-1.270 (0.151)	-1.270 (0.268)	1.41
GDP	-0.017 (0.245)	-0.010 (0.282)	-0.011 (0.231)	-0.011 (0.210)	1.11
UR	-0.109*** (0.000)	-0.104*** (0.000)	-0.103*** (0.000)	-0.103*** (0.000)	1.09
PD	0.011*** (0.000)	0.014** (0.027)	0.012** (0.012)	0.012* (0.087)	1.49
CAB	-0.033* (0.051)	-0.032** (0.030)	-0.033** (0.019)	-0.033 (0.182)	1.11
F-Stat./ LSDV F-Stat.	14.842 (0.000)	24.531 (0.000)	_	_	_
$R^2 / LSDV R^2$	0.416	0.800	_	_	_
Adj. R <sup>2</sup> / Within R <sup>2</sup>	0.388	0.527	_	-	_
Wald test	_	17.559 (0.000)	_	_	_
Breusch- Pagan test	—	_	180.639 (0.000)	_	-
Hausman test	_	_	1.218 (0.943)	_	_
CD-Pesaran test	_	_	0.317 (0.751)	_	_
Wooldridge test	_	_	17.374 (0.002)	_	_
Wald test	_	_	2.350 (0.309)	_	_

Table 4. Model estimation, dependent variable: HI, number of observations: 110

Source: own study.

A significant negative impact was recorded in the case of the unemployment rate. This is consistent with the research of Akgun et al. (2023), who proved that the situation on the labor market has the greatest impact on the level of happiness, and job loss generates many negative effects, both mental, social and economic. The parameter for public debt was, in turn, significant and positive for all parameters. It should be emphasized that public debt (as % of GDP) in individual CEE countries reached a much lower level in the analyzed period compared to other European Union countries. Moreover, in the case of CEE countries, there has been a gradual increase in social spending, including social spending, which may have a positive impact on the happiness of beneficiaries (www.1).

Additionally, during the period under review, the need to finance expenses related to the pandemic increased. The current account balance (as % of GDP) also had a significant negative impact on the level of happiness. It should be emphasized that it was negative in most CEE countries. A significant deterioration in SROB was additionally recorded in 2021–2022 (www.2).

The next stage of modeling was performed using credit to the private sector (as a % of GDP) as a variable representing financialization. The results are presented in Table 5.

Variable	OLS	FE	RE	RE robust HAC	VIF
Const.	7.255***	7.177***	7.250***	7.250***	_
	(0.000) -0.010***	(0.000) -0.013***	(0.000) -0.013***	(0.000) -0.013***	
FDI	(0.000)	(0.000)	(0.000)	(0.000)	1.30
GDP	-0.025*	-0.019**	-0.020**	-0.020***	1.11
GDI	(0.085)	(0.038)	(0.027)	(0.001)	1.11
UR	-0.080***	-0.069***	-0.070 **	-0.070 **	1.22
	(0.000)	(0.000)	(0.000)	(0.000)	
PD	0.004*	0.004	0.001	0.001	1.08
	(0.090)	(0.139)	(0.142)	(0.294)	
CAB	-0.013	-0.002*	-0.021**	-0.021**	1.11
-	(0.361)	(0.048)	(0.044)	(0.045)	
F- Stat./LSDV F-Stat.	17.315 (0.000)	29.699 (0.000)	_	-	-
R2 / LSDV R2	0.429	0.809	_	_	_
Adj. R2 / Within R2	0.405	0.572	—	-	_
Wald test	_	20.906 (0.000)	_	_	_
Breusch-Pa- gan test	_	—	232.117 (0.000)	_	_
Hausman test	_	_	1.630 (0.898)	_	_
CD-Pesaran test		_	2.477 (0.014)	_	_
Wooldridge test	_	_	23.472 (0.001)	_	_
Wald test	_	_	23.123 (0.210)	_	_

Table 5. Model estimation, dependent variable: HI, number of observations: 110

Source: own study.

The results of the Wald test (p-value = 0.000 < 0.05) indicated that the hypothesis that the OLS model is appropriate should be rejected in favor of the alternative hypothesis that the fixed-effects model is more appropriate. The results of the Breusch-Pagan test (p-value = 0.000 < 0.05) showed that the hypothesis that the OLS panel model is correct should be rejected, given the alternative hypothesis that the random effects model is more appropriate. The decision was made on the basis of the Hausman test, according to the results of which (p-value = 0.898 > 0.05) it should be assumed that the model with random effects is appropriate. After selecting the estimator, the model was diagnosed in terms of the presence of crosssectional dependence, autocorrelation and heteroske-dasticity. The results of the CD-Pesaran test (p-value = 0.014 < 0.05) indicate a problem with cross-sectional dependence. The results of the Wooldridge test (p-value = 0.001 < 0.05) indicate the occurrence of autocorrelation. In turn, the results of the Wald test (p-value = 0.210 > 0.05) indicate no problem with heteroscedasticity. Robust HAC standard errors were therefore imposed on the estimator.

The results of the estimated parameters indicate that credit to the private sector (as a % of GDP) has a negative impact on the level of happiness. This was a significant variable in all estimated models. A loan is one of the options for financing everyday consumption and the purchase of real estate. On the one hand, it should contribute to an increasing level of happiness due to the possibility of financing consumption and improving the quality of life. On the other hand, a loan involves the need to pay monthly installments and the risk of an increase in the costs of its servicing in the conditions of variable interest rates and an uncertain macroeconomic situation. Another argument is the increase in housing prices, the scale of purchasing luxury goods and the risk of developing gambling (Gudmundsdóttir et al., 2016). Similar results were obtained by Li et al. (2020) and Jantsch and Veenhoven (2019). The significance and direction of the influence of the remaining control variables were similar to those in the previous models.

To sum up, the conducted research confirmed the research hypothesis. The clear significance of financialization was recorded only in the case of credit to the private sector (as a % of GDP). In the context of sustainable development, this may mean that the financial systems of the surveyed countries are not geared towards the green transformation of the economy or the scale of green finance is still too low. In this regard, it is important to recommend activities aimed at financing technological projects that are environmentally friendly and increase the sense of happiness of citizens (Destek & Manga, 2021: 19). Loan burdens may also be too high, which may be due to the increase in interest rates in recent years. The robustness of the results was obtained by using several panel estimators and including macroeconomic indicators in the set of explanatory variables. The significance and direction of the influence of parameters determining macroeconomic variables were the same in each of the models.

## CONCLUSIONS

Achieving sustainable development is one of the greatest challenges of the modern world. Its main goal and effect is to achieve an appropriate quality of life, which is the basis for citizens' happiness. The multidimensionality of the Sustainable Development Goals requires adequate financing, both public and private. Financialization understood as the growing role of the sphere of finance in the functioning of individuals and in the economy may therefore be an instrument for achieving sustainable development. In this respect, it is important to study the impact of financialization on the key goal of sustainable development, i.e., citizens' happiness.

The conducted research confirmed the research hypothesis according to which financialization, albeit financialization is an instrument for achieving sustainable development, does not have a positive impact on its effect, which is the happiness of citizens. The parameter values of the estimated panel models for the countries of Central and Eastern Europe showed an insignificant, negative impact of the financial system development index on the happiness of citizens and a significant impact of credit to the private sector (as a % of GDP) on the world happiness index. Financialization is not good for the happiness of the inhabitants of Central and Eastern European countries. According to various studies, a negative impact is noted when the development of financial markets exceeds a certain level. However, this cannot be presumed in the case of the studied countries, because these are economies in which financialization is just developing and the scale of its development is relatively small compared to the United States or Western European countries (Gołębiowski & Szczepankowski 2015: 213). Therefore, changes are needed to achieve a positive impact of financialization on citizens' happiness and sustainable development. According to M. Mazzucato (2023), investments related to sustainable development are not attractive because they do not bring measurable profits immediately, only in the long term. Financialization, on the other hand, is associated with short-term profits. It is necessary to create incentives to make long-term investments in sustainable development, as well as to educate society in this area. Instruments in this area may be public-private partnerships or green financial instruments offered by financial institutions, including banks. According to statistics, the CEE countries are among the economies with the lowest levels of innovation and the scale of eco-innovations introduced (www.3).

The conducted research has some limitations. One of them was the adopted research period, which resulted from the availability of data on the World Happiness Index, which began to be published in 2012. For this reason, and in order to ensure greater robustness of the results, future research should also include other happiness indicators containing individual aspects of sustainable

development. Another possibility is to use other measures of the financialization process. Moreover, due to the lack of other studies aimed at estimating the impact of financialization on the level of happiness of citizens, more countries, e.g., the entire European Union, should be included.

## REFERENCES

- Adom, P.K., Amuakwa-Mensah, F. & Amuakwa-Mensah, S. (2020). Degree of financialization and energy efficiency in Sub-Saharan Africa: do institutions matter?. *Financial Innovation*, 6(33), 1–22. <u>http://dx.doi.org/10.1186/s40854-020-00192-3</u>
- Akgun, A.İ., Türkoğlu, S.P. & Erikli, S. (2023). Investigating the determinants of happiness index in EU-27 countries: A quantile regression approach. *International Journal of Sociology and Social Policy*, 43(1/2), 156–177. <u>http://dx.doi.org/10.1108/IJSSP-01-2022-0005</u>
- Aksoy, F. & Bayram Arlı, N. (2020). Evaluation of sustainable happiness with Sustainable Development Goals: Structural equation model approach. Sustainable Development, 28(1), 385–392. <u>http://dx.doi.org/10.1002/sd.1985</u>
- Arora, R.U. & Sarker, T. (2023). Financing for sustainable development goals (SDGs) in the era of COVID-19 and beyond. *The European Journal of Development Research*, 35(1), 1–19. http://dx.doi.org/10.1057/s41287-022-00571-9
- Barros, A., Dieguez, T. & Nunes, P. (2023). How unemployment may impact happiness: A systematic review. *Research Anthology on Macroeconomics and the Achievement of Global Stability*, 1–24. <u>http://dx.doi.org/10.4018/978-1-5225-5787-6.ch013</u>
- Barua, S. (2020). Financing sustainable development goals: A review of challenges and mitigation strategies. Business Strategy & Development, 3(3), 277–293. <u>http://dx.doi.org/10.1002/bsd2.94</u>
- Basyariah, N., Kusuma, H. & Qizam, I. (2021). Determinants of sukuk market development: Macroeconomic stability and institutional approach. *The Journal of Asian Finance, Economics,* and Business, 8(2), 201–211.
- Bonasia, M., De Simone, E., D'Uva, M. & Napolitano, O. (2022). Environmental protection and happiness: A long-run relationship in Europe. *Environmental Impact Assessment Review*, 93, 106704. <u>https://doi.org/10.1016/j.eiar.2021.106704</u>
- Bui, D.T. (2020). Transmission channels between financial development and CO2 emissions: A global perspective. *Heliyon*, 6(11), 1–9. <u>https://doi.org/10.1016/j.heliyon.2020.e05509</u>
- Destek, M.A. & Manga, M. (2021). Technological innovation, financialization, and ecological footprint: Evidence from BEM economies. *Environmental Science and Pollution Research*, 28, 21991–22001. <u>http://dx.doi.org/10.1007/s11356-020-11845-2</u>
- Fernandez, R. & Aalbers, M.B. (2016). Financialization and housing: Between globalization and varieties of capitalism. *Competition & change*, 20(2), 71–88. http://dx.doi.org/10.1177/1024529415623916
- Frey, B.S., Gallus, J. & Steiner, L. (2014). Open issues in happiness research. *International Review* of Economics, 61, 115–125. <u>http://dx.doi.org/10.1007/s12232-014-0203-y</u>
- Gamage, K.A., Munguia, N. & Velazquez, L. (2022). Happy sustainability: A future quest for more sustainable universities. *Social Sciences*, 11(1), 24. https://doi.org/10.3390/socsci11010024
- Gołębiowski, G. & Szczepankowski, P. (2015). Finansyzacja gospodarki krajów Europy Środkowo-Wschodniej. Ruch Prawniczy, Ekonomiczny i Socjologiczny, 77(4), 197–215.
- Grum, B. & Kobal Grum, D. (2020). Concepts of social sustainability based on social infrastructure and quality of life. *Facilities*, *38*(11/12), 783–800.
- Gudmundsdóttir, D.G., et al. (2016). How does the economic crisis influence adolescents' happiness? Population-based surveys in Iceland in 2000–2010. *Journal of Happiness Studies*, 17, 1219–1234.

- Ha, L.T. (2023). The role of financialization in stimulating environmental innovation implementation in the European region. *Environmental Science and Pollution Research*, 30(11), 28652–28675. <u>http://dx.doi.org/10.1007/s11356-022-23988-5</u>
- Huang, R. (2023). SDG-oriented sustainability assessment for Central and Eastern European countries. *Environmental and Sustainability Indicators*, 19, 100268. http://dx.doi.org/10.1016/j.indic.2023.100268
- Jantsch, A. & Veenhoven, R. (2019). Private wealth and happiness: A research synthesis using an online findings-archive. *Wealth(s) and subjective well-being*, 17–50. http://dx.doi.org/10.1007/978-3-030-05535-6\_2
- Jomo, K.S., Chowdhury, A., Sharma, K. & Platz, D. (2016). Public-private partnerships and the 2030 Agenda for Sustainable Development: fit for purpose?. DESA Working Paper, 148, 1–28.
- Karn, A. & Kumar, S. (2024). The Sustainable Development Goals: A Global Agenda for Transformative Change towards a Sustainable World. New Paradigms of Sustainability in the Contemporary Era, 70–83. <u>http://dx.doi.org/10.46679/9788195732289ch07</u>
- Kośko M., Osińska M. & Stempińska J. (2007). Ekonometria współczesna. Wydawnictwo TNOiK.
- Kryk, B. (2012). Jakość życia w kontekście zrównoważonego rozwoju. Handel Wewnętrzny, 1, 145–155.
- Kufel, T. (2011). Ekonometria. Rozwiązywanie problemów z wykorzystaniem programu GRETL. Wydawnictwo Naukowe PWN.
- Kwon, O.H., et al. (2021). Urban green space and happiness in developed countries. EPJ Data Science, *10*(1), 28. <u>http://dx.doi.org/10.1140/epjds/s13688-021-00278-7</u>
- Li, T., Zhong, J. & Xu, M. (2020). Does the credit cycle have an impact on happiness?. *International Journal of Environmental Research and Public Health*, 17(1), 183. <u>http://dx.doi.org/10.3390/ijerph17010183</u>
- Mazzucato, M. (2023). Financing the Sustainable Development Goals Through Mission-oriented Development Banks. UN DESA Policy Brief Special Issue.
- Mukoro, V., Sharmina, M. & Gallego-Schmid, A. (2022). A review of business models for access to affordable and clean energy in Africa: Do they deliver social, economic, and environmental value?. *Energy Research & Social Science*, 88, 102530. http://dx.doi.org/10.1016/j.erss.2022.102530.
- Nykvist, B. and Maltais, A. (2022). Too risky–The role of finance as a driver of sustainability transitions. *Environmental Innovation and Societal Transitions*, 42, 219–231. http://dx.doi.org/10.1016/j.eist.2022.01.001
- Płonka, A., et al. (2022). The idea of sustainable development and the possibilities of its interpretation and implementation. *Energies*, *15*(15), 5394. http://dx.doi.org/10.3390/en15155394
- Ratajczak, M. (2012). Finansyzacja i jej wpływ na dobrobyt społeczny. Studia Ekonomiczne/ Uniwersytet Ekonomiczny w Katowicach, 102, 168–176.
- Ratajczak, M. (2017). Wzrost gospodarczy w warunkach finansyzacji gospodarki. *Studia Oeconomica Posnaniensia*, 5(5), 23–37. <u>http://dx.doi.org/10.18559/SOEP.2017.5.2</u>
- Sadorsky P. (2010). The impact of financial development on energy consumption in emerging economies. *Energy Policy*, *38*, 2528–2535. <u>http://dx.doi.org/10.1016/j.enpol.2009.12.048</u>
- Salmerón, R., García C. and García J. (2020). Overcoming the inconsistences of the variance inflation factor: A redefined VIF and a test to detect statistical troubling multicollinearity. arXiv preprint arXiv:2005.02245, 1–22.
- Stasiak, A. (2022). Turystyka a jakość życia. In P. Różycki (Ed.) *Turystyka społeczna a jakość życia* (pp. 15–42). PTTK Centralny Ośrodek Turystyki Górskiej.
- United Nations (2024). Financing for Sustainable Development Report 2024.
- UNCTAD (2024). The costs of achieving the SDGs: About. https://unctad.org/sdg-costing/about
- Veenhoven, R. (2017). Measures of happiness: Which to choose? In G. Brulé and F. Maggino (Eds.), Metrics of subjective well-being: Limits and improvements (pp. 65–84). Springer. http://dx.doi.org/10.1007/978-3-319-61810-4\_4

- Weiwei, J. (2023). Prospects for security strategy in CEE countries in the context of the Russia-Ukraine conflict. New Chinese Initiatives for a Changing Global Security. Conference Proceedings, 307–324.
- Yui, S. & Furuya, K. (2023). V2X Products and Social Implementation in Japan-Prospects from a "Global Warming Problem" Perspective. *IEEJ Journal of Industry Applications*, 12(3), 541– 547. <u>http://dx.doi.org/10.1541/ieejjia.22008421</u>
- Zidansek, A. (2007). Sustainable development and happiness in nations. *Energy*, 32, 891–897. http://dx.doi.org/10.1016/j.energy.2006.09.016

(www.2) https://ec.europa.eu/eurostat/databrowser/view/tipsbp20\_custom\_12093402/default/tabl e?lang=en

(www.3) https://projects.research-and-innovation.ec.europa.eu/en/statistics/performanceindicators/european-innovation-scoreboard/eis-2024#/eis

#### FINANSYZACJA A POZIOM SZCZĘŚCIA W KONTEKŚCIE ZRÓWNOWAŻONEGO ROZWOJU. PRZYKŁAD KRAJÓW EUROPY ŚRODKOWO-WSCHODNIEJ

**Cel artykułu.** Celem artykułu jest identyfikacja i ocena wpływu procesu finansyzacji na poziom szczęścia jako efektu zrównoważonego rozwoju w wybranych krajach Europy Środkowo-Wschodniej w latach 2012–2022.

**Metoda badawcza.** W badaniach wykorzystano modele panelowe. Jako zmienną zależną, uwzględniającą społeczne aspekty zrównoważonego rozwoju, przyjęto Światowy Indeks Szczęścia (WHI). Miary finansyzacji obejmowały wskaźnik rozwoju system finansowego (FDI) publikowany przez Międzynarodowy Fundusz Walutowy oraz kredyt dla sektora prywatnego (jako % PKB). Modele oszacowano za pomocą estymatorów KMNK, efektów stałych i efektów losowych. Do zbioru zmiennych objaśniających włączono zmienne makroekonomiczne. Najbardziej efektywny estymator wybrano za pomocą testów Walda, Breuscha-Pagana i Hausmana. Na modele nałożono odporne błędy standardowe (robust HAC).

Wyniki badań. W estymowanych modelach istotność parametrów w przypadku finansyzacji różniła się w zależności od użytego estymatora. Wskaźnik rozwoju system finansowego był zmienną nieistotną we wszystkich modelach. Istotność zaobserwowano w przypadku kredytu dla sektora prywatnego (jako % PKB). Niezależnie od przyjętej miary finansyzacji kierunek wpływu uzyskanych parametrów był ujemny. Choć finansyzacja może być instrumentem finansowania zrównoważonego rozwoju, nie wpływa ona pozytywnie na poziom szczęścia badanych krajów. Podstawowymi przyczynami mogą być zbyt mała skala finansowania działań związanych ze zrównoważonym rozwojem lub nieodpowiednia struktura tego finansowania. Konieczne są zmiany w finansowaniu i przekierowanie go na działania mające na celu osiągnięcie zrównoważonego rozwoju i szczęścia. W przyszłych badaniach należy wykorzystać inne miary finansyzacji i szczęścia uwzględniające aspekty zrównoważonego rozwoju oraz uwzględnić pozostałe kraje UE w celu dokonania porównań.

**Słowa kluczowe:** finansyzacja, szczęście, wskaźnik rozwoju systemu finansowego, kredyt dla sektora prywatnego, zrównoważony rozwój, kraje Europy Środkowo-Wschodniej.

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