Global Sustainable Competitiveness for Countries on the Way Toward EU Integration

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Abstract - In modern conditions, the challenges caused by the growth of uncertainty lead to the formation of new conceptual views on the competitiveness of countries and the high importance of their practical application, which is especially relevant for countries on the path of integration into the European Union. This article delves into the issue of competitiveness within countries' socioeconomic systems, considering the influence of contemporary confrontational globalization. It argues that the concept of global sustainable competitiveness, along with its corresponding model, is fitting for addressing these challenges. The research is based on empirical methods, such as panel regression and structural equation modeling. This model concept can be used as a methodological framework in the process of building policies increasing competitiveness of the country. The results of the study are interesting for the systems representation of the problem of sustainability of the countries on the way to the EU membership, for the formation of the appropriate mechanisms for rise of promoting their sustainable competitiveness in the face of modern globalization.

 ${\it Keywords}$ - Global sustainable competitiveness, EU integration, systemic development of economic and social spheres.

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1. Introduction

First and foremost, it is important to recognize the confrontational distinctively character globalization, which took the place of turbulent globalization in the current conditions of the development of world civilization. The findings of the study suggest that when confrontational globalization takes place against the backdrop of rising insecurity, new macrosystemic issues and difficulties arise. Systemic and macroeconomic factors have become increasingly significant for each state in the context of the global economy. These factors include the socioeconomic stability of the nation, maintaining macroeconomic stability, the extent of economic decline brought on by external shocks and the postcrisis recovery, the appropriateness of anti-crisis regulations, and the regulation of other negative socioeconomic effects [1].

Keeping in mind that uncertainty is only going to increase, maintaining a nation's competitiveness is a significant issue. The challenge of maintaining a nation's competitiveness while taking into consideration certain sustainability factors is significant due to the rise in uncertainty. Particularly for nations pursuing EU admission and integration, the problem of sustainability and competitiveness is crucial.

2. Literature Review

In the studies and publications by various authors, modern globalization is discussed by putting forward its individual aspects [2], [3], [4], [5], [6]. However, it is important to have a systematic representation of the global process and to reveal new challenges to individual countries [1], [7].

In relation to this, it is important to form some new views on the concept of the competitiveness of countries, although the traditional and undoubtedly interesting concepts and their practical aspects [8], [9], [10], [11], [12], undoubtedly, have a special place in the field of socio-economic theory and politics.

As for the integration of the countries in the European Union and in this process meeting the relevant requirements from the side of the candidate countries [13], the structures and institutions of the European Union clearly define and help the respective countries in the realization of the requirements necessary for membership, both in economics and in other areas of society.

Considering the challenges of modern globalization, integration into the European Union should mean special attention to the competitiveness of the EU membership candidate country, which is also important for the country itself.

The analysis of the literature shows that the mentioned issues have not been thoroughly studied, and the presented article is dedicated to the study of this problem.

3. Research Methods and Methodology

In turn, the country's global sustainable competitiveness can be defined as the ability to maintain or increase the well-being of citizens in a globalized dynamic environment of competitive economies without reducing future opportunities [14].

Global sustainable competitiveness in its essence implies the ability to effectively function and develop the entire socio-economic system of the country under conditions of uncertainty (the problem of measuring and predicting global uncertainty is an important separate research topic - [15]) in the globalized environment [16], [17], [18].

Global sustainable competitiveness as a system and the corresponding integral global sustainable competitiveness index (GSCI), according to its modern concept, includes [14], [19] such blocks as natural capital NC (Natural Capital) encompasses the given environmental conditions, including the availability of resources and the extent of resource depletion within that environment. RE (Resource Intensity and Efficiency) measures how effectively available resources are utilized, serving as an indicator of operational competitiveness in a world where resources are limited. SC (Social Capital) refers to the collective well-being within a country, including factors such as health, safety, freedom, equality, and overall life satisfaction. IC (Intellectual Capital and Innovation) reflects a nation's capacity to create wealth and employment opportunities through innovation and the development of value-added industries in the context of global markets. EC (Economic and Business Sustainability) dimension assesses a country's ability to generate wealth through sustainable economic development practices. GE (Governance Effectiveness) evaluates effectiveness of government across various sectors and investments, such as infrastructure, market regulation, and employment structures, in providing the necessary conditions for sustainability and the creation of sustainable wealth.



Figure 1. Concepion of Global Sustainable Competitiveness Source: [19]

Throughout the research process, various methodologies were employed, including induction, deduction, qualitative and quantitative analyses, comparisons, statistical examinations. benchmarking. The research encompassed a review of existing literature, analysis of statistical data, categorization, and quantitative analysis of gathered information, as well as the incorporation of expert opinions. Statistical data were primarily sourced from the International Monetary Fund (IMF), World Bank (WB), and United Nations (UN) [20], [21], [22], [23], [24]. Also, empirical methods of panel regression and structural equation modeling (SEM) were used.

4. Empirical Analysis

The aim of this segment is to examine target countries' economic, social, and global competitiveness peculiarities. For this purpose, we use empirical methods like Panel regressions and Structural Equation Modeling (SEM) analysis.

Panel regressions serve as a robust analytical tool, allowing us to discern and quantify the relationships between variables over time and across different entities. Panel data offers several advantages over pure time series or cross-sectional data. It provides richer information, greater variability, and improved efficiency. Additionally, panel data can help reduce estimation biases that might occur when combining groups into a single time series [25].

SEM analysis provides a comprehensive framework to examine the complex interplay between latent constructs, allowing us to delve into the intricate web of factors influencing global competitiveness.

5. Explanation of Data

In our research, we gather diverse data from multiple origins. The data contains 20 variables which describe social, economic, political, and environmental peculiarities of 36 countries (EU members – 27 and EU candidates – 9). For each variable we took the 2015-2022 years range to have a closer look at nearest past patterns. We do not consider 2023 year's data, because it is not proven yet. The description of the variables is given in table below:

Table 1. Description of variables

Table 1. Description of variables					
Variable	Description	Time Period	Source		
CO2	CO ₂ emissions(kt)	2015- 2022	Our World in Data		
CC	Control of Corruption	2015- 2022	Worldwide Governance Indicators		
GDPpc	Gross Domestic Product per capita	2015- 2022	World Bank		
GND	Governing National Development	2015- 2022	The GSCI		
GE	Government Effectiveness	2015- 2022	Worldwide Governance Indicators		
GSCI	Global Sustainability Competitiveness Index	2015- 2022	The GSCI		
HDI	Human Development Index ¹	2015- 2022	<u>Human</u> <u>Development</u> <u>Reports</u>		
IC	Intellectual Capital	2015- 2022	The GSCI		
LIFEEXP	Life expectancy at birth, total (years)	2015- 2022	Life expectancy at birth		
NC	Natural Capital	2015- 2022	The GSCI		
EXRATE	Official Exchange Rate (LCU per US\$, period average)	2015- 2022	World Bank		

¹ HDI value in 2022 is forecasted by authors applying exponential smoothing techniques.

PSAVT	Political Stability and Absence of Violence/Terro- rism	2015- 2022	Worldwide Governance Indicators
RI	Resource Intensity	2015- 2022	The GSCI
RQ	Regulatory Quality	2015- 2022	Worldwide Governance Indicators
RL	Rule of Law	2015- 2022	Worldwide Governance Indicators
SC	Social Capital	2015- 2022	The GSCI
TRADE	Trade (% of GDP)	2015- 2022	World Bank
UNEMP	Unemployment, total (% of total labor force) (modeled ILO estimate) ²	2015- 2022	World Bank
VA	Voice and Accountability	2015- 2022	Worldwide Governance Indicators

Clarification of some variables:

Control of Corruption (CC) – describes the degree to which individuals perceive public authority being exploited for personal benefit, encompassing both minor and major instances of corruption, as well as the influence of elites and private interests over governmental functions.

Government Effectiveness (GE) – indicates how people perceive the excellence of public services, the competence and impartiality of civil servants, the level of their independence from political influences, the effectiveness of policy creation and execution, and the government's trustworthiness in adhering to these policies.

Political Stability and Absence of Violence/Terrorism (PSAVT) – assesses the perceived likelihood of political unrest or violence driven by political motives, including acts of terrorism.

Regulatory Quality (RQ) – indicates how people view the government's capacity to create and enforce effective policies and regulations that facilitate and encourage the growth of the private sector.

² For objective reasons, the data on the unemployment rate for Ukraine in 2022 is not provided. Instead, we rely on the IMF forecast. Details: <u>World Economic Outlook (October 2023) - Unemployment rate (imf.org)</u>

Rule of Law (RL) — measures the degree to which individuals trust and adhere to societal rules, including the effectiveness of contract enforcement, protection of property rights, reliability of law enforcement agencies, the judiciary system, and the probability of criminal activities and violence.

Voice and Accountability (VA) – indicates how much citizens believe they can engage in the process of choosing their government, along with the level of freedom of speech, freedom to associate with others, and the presence of an independent media [26].

6. Panel Data Analysis

Since we are going to describe economic, social, and global sustainable conditions of countries, we consider that it makes sense to group variables by mentioned terms. It is common knowledge that one of the main indicators to describe economic conditions is gross domestic product (GDP), especially GDP per capita. So, for the economic model the target variable will be GDP per capita (GDPpc). For the social conditions we consider life expectancy (LIFEEXP) to be the target variable. Finally, for the global sustainable conditions we have chosen GSCI as the target variable.

The study will build pooled ordinary least squares (POLS) regression, also model with fixed effects (FE) and random effects (RE). The results for GDP per capita are given below.

Table 2. Regressions results for GDP per capita

	POLS		FE		RE	
Predic tors	Coefficients	S.E.	Coefficients	S.E.	Coefficients	S.E.
(Intercept)	7.04416 ***	0.57661			9.45338 ***	0.13566
EXRATE	0.00351 ***	0.00081	0.00102	0.00058	0.00055	0.00059
GND	0.02478 **	0.00843	0.00002	0.00076	-0.00003	0.00081
RI	0.02495 ***	0.00470	0.00188 ***	0.00042	0.00193 ***	0.00044
TRADE	0.00366 ***	0.00070	0.00243 ***	0.00037	0.00257 ***	0.00038
UNEMP	0.02853 **	0.01051	0.01181 ***	0.00189	0.0117 ***	0.00199
Observations	288		288		288	
R^2/R^2 adjusted	0.393 / 0.38	2	0.507 / 0.42	.7	0.456 / 0.44	6

Note: * p < 0.05 ** p < 0.01 *** p < 0.001

Source: Authors' computations.

The POLS model introduces our data as one large, pooled time series. It shows that exchange rate and unemployment have negative impact on GDP per capita and this impact is statistically significant (p<0.05). On the other hand, governing national development, resource intensity and trade have a positive, but also significant impact on target variable.

FE model shows that only unemployment has negative impact on GDP per capita. Also, we should note that the exchange rate and governing national development in this model is not statistically significant. RE model shows that unemployment and governing national development has negative impact on GDP per capita. The similarity between FE and RE models is that in RE model exchange rate and

governing national development is also non-significant.

Then, we can analyze the results of LIFEEXP model (Table 3). The POLS model shows that intellectual capital, natural capital, and rule of law have negative impact on life expectancy. CO2 emissions have no significant impact on target variable. FE and RE models show similar output with only differences in statistical significance of some variables. It is necessary to highlight that for all models HDI is a very important variable. There is a difference between POLS and FE, RE models. The POLS model indicates that social capital exerts a positive influence on the target variable, whereas alternative models show no such effect.

The results of LIFEEXP model are given below.

Table 3. Regression results for life expectancy

	POL	S	FE	1	RE	
Predic tors	Coefficients	S.E.	Coefficients	S.E.	Coefficients	S.E.
(Intercept)	21.539907 ***	4.705446			37.417136 ***	4.629849
CO2 [log] ¹	0.125610	0.089570	0.235184	0.496032	0.160434	0.203599
IC	0.064943 **	0.023845	0.014794	0.011457	0.016116	0.011411
NC	0.035654 *	0.014493	0.035362 **	0.010953	0.033055 **	0.010654
PSAVT	0.681481 *	0.302853	0.076955	0.309660	0.105785	0.295062
RL	1.142408 **	0.417352	1.208691 *	0.556948	0.173983	0.392288
SC	0.022236	0.023646	0.014689	0.009872	0.016918	0.009918
HDI	69.07885 ***	5.786546	33.41379 ***	7.203209	49.14054 ***	5.295414
Observations	288		288		288	_
R^2/R^2 adjus ted	0.734 / 0.727		0.176 / 0.035		0.317 / 0.300	

Note: *p < 0.05 **p < 0.01 *** p < 0.001. ¹CO2 variable is log-transformed.

Source: Authors' computations.

Table 4. Regression results for GSCI

	POL	S	FF	E	RE	
Predic tors	Coefficie nts	S.E.	Coeffici ents	S.E.	Coefficie nts	S.E.
(Interc ept)	47.778 79 ***	0.52 667			48.483 88 ***	0.83 934
CC	3.1549 6 ***	0.67 449	2.429 56	1.47 381	3.6263 1 ***	0.95 054
RQ	0.7059 8	0.99 478	1.647 11	1.44 277	0.4215 2	1.21 476
VA	1.9129 9 **	0.70 145	5.560 96 **	2.06 153	0.3265	1.20 403
Observ ations	288		288		288	
R^2 / R^2 adjusted	0.537 / 0	.532	0.038 /	0.109	0.192 / 0	.184

Note: * p < 0.05 ** p < 0.01 *** p < 0.001

Source: Authors' computations.

Finally, we can explore the results of the GSCI model. In this case, POLS shows that control of corruption and VA are statistically significant, and both have positive impact on target variables. Regulatory quality has negative and non-significant impact.

FE model shows the same in the case of RQ, but the opposite with VA. Also, control of corruption is not significant in this model.

RE model is like POLS in the case of CC and RQ, but also differs in the case of VA. Comparing to both other models, VA in RE is not significant.

As we can see all models show different results. To decide which model is better, we should use some tests. First is the F test for individual effects. It tells us which model is better - POLS or FE. The null hypothesis states for POLS, the alternative for FE. The result of this test is shown below.

Table 5. Results of F test for individual effects

Model	Test Statistic	P-value
GDPpc	1513.26	0.00
LIFEEXP	59.25	0.00
GSCI	7.73	0.00

Source: Authors' computations

According to Table 5, we can say that in all cases the FE model is better than POLS. It appears plausible because achieving linear independence within panel groups is improbable, making POLS rarely suitable for panel data models.

After that, we should decide which model is better, FE or RE? To answer this question, we are going to use the Hausman test. The null hypothesis suggests that the RE model demonstrates superior performance compared to the FE model, with alternative hypotheses formulated for the FE model. Results are given below.

Table 6. Results of Hausman test

Model	Test Statistic	P-value
GDPpc	32.79	0.00
LIFEEXP	11.09	0.13
GSCI	16.88	0.00

Source: Authors' computations

According to Table 6, for GDPpc and GSCI models we have enough evidence to reject the null hypothesis, so we conclude that FE model is better in these cases. For LIFEEXP model we can't reject the null hypothesis and RE model is better. But to dive deeper we should compare two groups: EU members and EU candidates and check whether they have similar patterns. Going through the same procedure as we did for full dataset, we got following results: For both EU members and candidate countries in case of all 3 models the best was model with random effects – RE. The results are given below.

Table 7. GDP per capita model results for EU member and candidate countries

	Memb	er	Candi	date
Predictors	Coeffici ents	S.E.	Coeffici ents	S.E.
(Intercept	9.85932 **	0.1437 4	8.14111 **	0.2319 6
EXRATE	0.00082	0.0005	0.00014	0.0019 5
GND	0.00085	0.0008	0.00456 *	0.0022 5
RI	0.00209 **	0.0004	0.00059	0.0012
TRADE	0.00254 **	0.0004	0.00275 **	0.0008
UNEMP	0.01158 **	0.0029	0.00982 **	0.0030 7
Observa tions	216		72	
R^2 / R^2 adjusted	0.490 / 0.477		0.460 / 0.419	9

Note: **p*<0.05 ***p*<0.01 ****p*<0.001

Source: Authors' computations.

According to these results we can highlight that: EXRATE variable is nonsignificant for both groups. GND is nonsignificant and has a negative impact for member countries, while for candidates it is significant and has a positive impact. RI is the opposite, significant and a positive impact for members, nonsignificant for candidates. TRADE variable is significant and has a positive impact for both members and candidates. We would like to draw your attention to the fact that the magnitude of this coefficient for both groups is approximately similar. UNEMP is statistically significant and has a negative impact for both groups.

We can compare the results of LIFEEXP model too. The results are given in Table 8. Notable, that CO2 coefficient is positive and statistically significant for member countries, but nonsignificant and negative for candidate countries. The logic behind it can be fact that member countries have a focus on "Green Economics". So, they care about climate sustainability, among other things, CO2 emission. On the other hand, candidate countries, that are mostly developing countries, do not obtain neither technologies nor priorities to do it.

Table 8. Life expectancy model results for EU member and candidate countries

	Memb	er	Candidate		
Predictor s	Coeffici ents	S.E.	Coeffici ents	S.E.	
(Inter cept)	35.48736 **	5.1850 8	37.80588 ***	11.0013	
CO2 [log]	0.43840 *	0.2184	0.13007	0.30047	
IC	0.02989 **	0.0091	0.02761	0.04155	
NC	0.01362	0.0089	0.01205	0.03439	
PSAV T	0.28731	0.3174	1.22688	0.63435	
RL	0.03980	0.3585	1.92666	1.32149	
SC	0.01235	0.0076	0.17283 ***	0.04285	
HDI	46.27636 **	5.0194	60.43223 **	14.2808 1	
Observ a tions	216		72		
R ² / R ² adjuste d	0.354 / 0.332		0.387 / 0.320		

Note: *p<0.05 **p<0.01 ***p<0.001 Source: Authors' computations.

The results of GSCI model are given in Table 9: Table 9. GSCI model results for EU member and candidate countries

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	Membe	er	Candidate		
Predictors	Coeffici ents	S.E.	Coeffici ents	S.E.	
(Intercept	53.16494 *	1.8070 7	45.37462 *	0.9869 4	
CC	5.50748 ***	1.1799 7	0.31479	1.6643	
RQ	1.89705	1.3164	1.85290	2.0553	
VA	3.72628	2.2663	0.00344	1.2175 9	
Observa tions	216		72		
R^2 / R^2 adjusted	0.133 / 0.120		0.048 / 0.006		

Note: * p < 0.05 ** p < 0.01 *** p < 0.001

Source: Authors' computations.

RQ and VA variables are similar in significance between groups. However, for members, both variables have a negative impact. CC variable, that represents control of corruption is statistically significant for members and has a positive impact, while for candidates it is not significant and has a negative impact.

The next part of our panel data analysis is to compare if is there any significant differences between full dataset and 3 new candidate countries, which are: Georgia, Moldova, and Ukraine. Using the procedure mentioned above, we found that the best GDPpc model for these 3 countries is model with fixed effect – FE. The same result is for LIFEEXP model. But for GSCI model the best was POLS model. We would like to note that the RE model was not estimated for this case, because there were only 24 observations. When we use POLS, we should investigate the stability of this model. We use pool test for model stability, where the null hypothesis stands for POLS model stability. There was not enough evidence to reject the null hypothesis (p-value > 0.05). This means that we can conclude that GSCI model for our selected countries is stable. The results of comparison between full data set and selected countries are given in Table 10.

Table 10. GDP per capita model results for full and selected datasets

	Ful	1	Selected ¹		
Predictors	Coeffici ents	S.E.	Coeffici ents	S.E.	
EXRATE	0.00102	0.00058	0.02214	0.01324	
GND	0.00002	0.00076	0.00917 *	0.00407	
RI	0.00188 ***	0.00042	0.00096	0.00270	
TRADE	0.00243 ***	0.00037	0.00152	0.00183	
UNEMP	0.01181 ***	0.00189	0.01943 **	0.00649	
Observa tions	288		24		
R^2 / R^2 adjusted	0.507 / 0.427	7	0.501 / 0.28	33	
Note: * p<0.05 ** p<0.01 *** p<0.001. ¹ Georgia, Moldova, Ukraine					

Source: Authors' computations.

For full dataset RI, TRADE, UNEMP are important variables. For selected countries GND and UNEMP are statistically significant. Note that RI variable is different for full and selected dataset.

For the LIFEEXP model the results are given below.

Table 11. Life expectancy model results for full and selected datasets

	F	ull	Sele	cted
Predic tors	Coeffici ents	S.E.	Coeffici ents	S.E.
CO2 [log]	0.2351	0.49603	7.22409	1.66701
IC	0.0147 9	0.01146	0.02689	0.04062
NC	0.0353 6 **	0.01095	0.01553	0.03629
PSAVT	0.0769 6	0.30966	0.89643	0.72971
RL	1.2086 9 *	0.55695	2.49682	2.26020
SC	0.0146 9	0.00987	0.16372	0.04752
HDI	33.413 79 ***	7.20321	104.386 17 **	28.5340 9
Observa tions	288		24	
R ² / R ² adjus ted	0.176 / 0.	035	0.712 / 0.5	527

Note: * p<0.05 ** p<0.01 *** p<0.001

Source: Authors' computations.

The main difference in this model is following CO2 for full dataset has positive impact and it is nonsignificant. For the selected countries, we see that CO2 variable has a negative significant impact. It can be explained in the same way we explained it in comparison between EU members and candidates, but we can also note that we have only 24 observations for selected countries and this result may be the bias in coefficient or even Simpson's paradox [26], [27], [28].

The obtained GSCI model results can be seen in Table 12

Table 12. GSCI model results for full and selected datasets

	Full		Selected	
Predictors	Coeffici ents	S.E.	Coeffici ents	S.E.
(Intercept	47.77879 **	0.5266 7	46.44999 **	1.8882
CC	3.15496 ***	0.6744 9	1.19294	3.3167
RQ	0.70598	0.9947 8	1.53782	3.7327 1
VA	1.91299 **	0.7014 5	4.89372	6.2575 9
Observa tions	288		24	
R^2 / R^2 adjusted	0.537 / 0.532		0.307 / 0.203	

Note: **p*<0.05 ***p*<0.01 ****p*<0.001

Source: Authors' computations.

In this model, CC variable is important for full dataset, but nonsignificant for selected countries. Note that none of these variables is significant for Georgia, Moldova, and Ukraine. We can highlight that these variables show the areas where selected countries are comparatively weak and can be developed.

7. SEM Analysis

Structural equation modeling (SEM) is widely used in research. It enables us to assess whether a hypothesis is supported or refuted by analyzing both the direct and indirect impacts of variables. Latent variables help explain relationships between observed variables. They are unmeasurable, but their presence can be inferred from the variations in observed indicators [29].

For our research we considered building SEM that includes all 3 conditions we wanted to analyze: economic, social, and global competitiveness. For this purpose, we declared economic and social conditions as latent variables. The scheme is provided below.

$$\begin{split} Economic &= CC + GE + GND + RI + RQ \\ Social &= CO_2 + HDI + IC + LIFEEXP + NC \\ &+ PSAVT + RL + SC + VA \\ GSCI &= Economic + Social \end{split}$$

For our scheme, we get the following results (Figure 2).

Figure 2 shows the relationships between latent and observed variables. There is also a relationship between economic, social conditions and GSCI. The most important part of this graph is the impacts of variables.

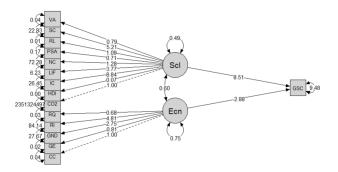


Figure 2. SEM model results Source: Authors' computations.

The numbers are coefficients that express the strength of the relationship between latent and observed indicators. The magnitude of the coefficients indicates the strength of the relationship. Larger absolute value suggests a stronger association between variables. For economic conditions the larger absolute value is RI, which indicates resource intensity. For social conditions the larger absolute value is IC, which indicates intellectual capital. We want to note that there are also coefficients between latent variables and GSCI which is observed target variable. So, we see that the magnitude of social conditions is way bigger than Economic.

This can mean that in our model, changes in the social latent variable have a relatively stronger impact on the GSCI variable compared to changes in the economic latent variable.

8. Conclusion

Based on the findings presented in the conducted research and outlined in the article, the following primary conclusions can be drawn: Modern world, global, and national economies are characterized by features of the new confrontational globalization, in addition, a high level of insecurity is an important challenge at the stage of confrontational globalization. In the context of confrontational globalization, the concept of the country's competitiveness is still relevant and acquires greater importance in relation to the European integration processes of the countries.

In the conditions of modern confrontational globalization with the context of European integration, it is adequate and very relevant to use the concept of global sustainable competitiveness of the country and to make practical socio-economic policy decisions. Empirical analysis based on econometric models shows that fixed effect models were better for all conditions of our research object, both in economic and social and global aspects. Together with this, the Hausman test showed that in terms of economic and global competitiveness the model with fixed effects is better, but for social conditions the random effects model is more suitable. When comparing EU member and EU candidate countries, it was found that the best choice for all conditions (economic, social, and global) was the random effects model. It was also revealed that despite the obvious differences between these two groups of countries, some variables, for example, trade volume as a percentage of GDP, have a similar impact on the target variables for both groups and have the same magnitude. After repeating the same procedure for the 3 new candidate countries for EU membership (Georgia, Moldova, and Ukraine), it was found that the fixed effect model was the best for economic and social conditions. In this case, a pooled least squares regression model was more appropriate for global conditions. The main difference in this case was the CO2 effect, which was found to have a positive and non-significant effect on the full dataset, but a negative significant effect on selected countries, possibly a result of Simpson's paradox. Using structural equation modeling method, the study incorporated economic and social latent variables described by observed variables such as corruption control, government efficiency, resource intensity, human development index, intellectual capital, and social components. The research showed that the most important variable in determining economic conditions was resource intensity, and in the case of social conditions it was intellectual capital. Also, we found that according to the results of our model, the magnitude of social conditions was greater than economic, which clearly indicates that social conditions are very important, especially in the world of global uncertainty and competition.

References:

- [1]. Bedianashvili G. (2023). Macrosystemic Challenges of Uncertainty under the Conditions of Confrontational Globalization. *Bulletin of the Georgian National Academy of Sciences*, 17(2), 174-179.
- [2]. Acemoglu D., (2022). Confronting the challenges of the post-Covid world. *Prospects of the Global Economy after Covid-19*. Centre for Economic Policy Research, L., EC1V 0DX. 7-38.
- [3]. Bedianashvili G. (2021). Macroeconomic and Cultural Determinants of the COVID-19 pandemic crisis. *Bulletin of the Georgian National Academy of Sciences*, 15(2),191-197
- [4]. Papava V. (2022). Pandemic, War and Economic Sanctions: From Turbulent to Confrontational Globalization. Eurasia Review. Retrieved from: https://www.eurasiareview.com/23052022-pandemic-war-and-economic-sanctions-from-turbulent-to-confrontational-globalization-oped/?fbclid=IwAR1zLFJs1kUFJWgp6qRXRWhLOy 2OWnWjwIVUjMwjphnjqs0OKoUQSi12Z4I [access ed: 17 November 2023].
- [5]. Silagadze A. (2022). Contemporary Global Economic Trends: Transitional Economies During Covid-Depression. *Bulletin of the Georgian Natinal Academy of Sciences*, 16(3), 130-135.
- [6]. Veshapidze S. & Karchava L. (2022). Contradictions of globalization under the COVID-19 pandemic. Bulletin of the Georgian National Academy of Sciences, 16(4), 152-157.
- [7]. Papava V., Maisaia V. (2023). On Economic Security under Confrontational Globalization and the Main Concepts of Geo-Economic Warfare. *Bulletin of the Georgian National Academy of Sciences*, 17(3), 116-120.
- [8]. Bochko, O. Y., Maletska, O. I., Tsitska, N., & Kapral, O. R. (2022). Paradigm of a Country Competitiveness Under Conditions of Digital Economy. Review of Economics and Finance, 20, 572–580. Doi:10.55365/1923.X2022.20.65
- [9]. Del-Aguila-Arcentales, S., Alvarez-Risco, A., & Yáñez, J. A. (2023). Innovation and its effects on compliance with Sustainable Development Goals and competitiveness in European Union countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(3).
- [10]. Despotovic, D., Cvetanovic, S., Nedic, V., & Despotovic, M. (2016). Economic, social and environmental dimension of sustainable competitiveness of European countries. *Journal of Environmental Planning and Management*, 59(9),1656–1678.

 Doi:10.1080/09640568.2015.1085370.
- [11]. Falkowski, K. (2023). Sustainable competitiveness of the visegrad group countries. *Optimum. Economic Studies*, *I*(111),3–19. Doi:10.15290/oes.2023.01.111.01
- [12]. Marčeta, M., & Bojnec, Š. (2022). Analysis of the Economic Performance and Competitiveness of the European Union Countries. *Serbian Journal of Management*, 17(1), 219–236.

- [13]. Mrasori, F. (2022). The Role of the Unilateral Harmonization to the EU Integration. *Lex Portus*, 8(2), 54–77.
 Doi:10.26886/2524-101X.8.2.2022.3
- [14]. SolAbility (2022). Global Sustainability Competitiveness Index. Retrieved from: https://solability.com/the-global-sustainable-competitiveness-index/methodology [accessed: 03 January 2024].
- [15]. Ahir H., Bloom N., & Furceri D, (2023). Global Economic Uncertainty Remains Elevated, Weighing on Growth. Imf Blog. Retrieved from: https://www.imf.org/en/Blogs/Articles/2023/01/26/global-economic-uncertainty-remains-elevated-weighing-on-growth [accessed: 02 February 2024].
- [16]. Bedianashvili, G. (1995). State, Power Structure and Socio-Economic Reform of Society. Tbilisi, Mecniereba.
- [17]. Jia, J., & Li, Z. (2020). Does external uncertainty matter in corporate sustainability performance?. *Journal of Corporate Finance*, 65, 101743.
- [18]. Ernst, R., & Haar, J. (2019). Globalization, competitiveness, and governability: The three disruptive forces of business in the 21st century. Springer.
- [19]. SolAbility (2024). The GSCI: Global Sustainability Competitivenes Index. Solability. Retrieved from: https://solability.com/the-global-sustainablecompetitiveness-index/the-index/downloads [accessed: 09 January 2024].
- [20]. Our World in Data. (2023). Per capita, national, historical: how do countries compare on CO2 metrics?. Our World in Data. Retrieved from: https://ourworldindata.org/co2-emissions-metrics [accessed: 12 January 2024].
- [21]. World Bank Open Data (2024). Free and open access to global development data. World Bank Open Data. Retrieved from: https://data.worldbank.org [accessed: 08 January 2024].
- [22]. The World Bank (2024). Worldwide Governance Indicators. The World Bank. Retrieved from: https://www.worldbank.org/en/publication/worldwide-governance-indicators

[accessed: 12 January 2024].

- [23]. UNDP (2024). Human Development Index (HDI). HDR. Retrieved from: https://hdr.undp.org/data-center/human-development-index#/indicies/HDI [accessed: 16 January 2024].
- [24]. INED (2024). *Life expectancy at birth*. Ined. Retrieved from:

 <a href="https://www.ined.fr/en/everything_about_population/data/europe-developed-countries/life-expectancy/faccessed: 16 January 2024].
- [25]. Bedianashvili, G., & Kokhreidze, G. (2023). Public debt and Foreign Direct Investment in small countries in the context of economic growth. *Social Sciences Bulletin*, 36(1), 7-28.

- [26]. Kock, N., & Gaskins, L. (2016). Simpson's paradox, moderation and the emergence of quadratic relationships in path models: An information systems illustration. *International Journal of Applied Nonlinear Science*, 2(3), 200–234.
- [27]. Norton, H. J. & Divine, G. (2015). Simpson's paradox ... and how to avoid it. *Significance*, *12*(4), 40-43. Doi:10.1111/j.1740-9713.2015.00844.x
- [28]. Pearl, Judea (2014). Understanding Simpson's Paradox. *The American Statistician*, 68(1). 8-13. Doi:10.2139/ssrn.2343788
- [29]. Wah, N. K., Fitriana, M., & Arumugam, T. (2023). Assumptions for Structure Equation Modeling (SEM), Normality of Data Distribution Analysis & Model Fit Measures. *Journal of Clinical Epidemiology & Toxicology*, 1-5.