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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: *The role and importance of socially responsible business in the last few years has been recognized in various economic activities. In addition to its importance in various economic activities, corporate social responsibility plays an important role for sustainable development. The aim of the work is based on the examination of the achieved level of corporate social responsibility (CSR) in large organizations in R. Serbia in relation to in relation to the sector, economic activity, type of ownership, level of business on the market. The research was conducted in the period from 2019 to 2021 on the territory of the Republic of Serbia, in which 165 large organizations participated. Statistical techniques of the Mann Whitney non-parametric test were used in the paper using a statistical program (SPSS version 25.0). By reviewing the professional and scientific literature on corporate social responsibility, also through the analysis of the obtained results, the authors proved that the hypothesis was partially*

confirmed between the average dimensions of CSR and by sector, economic activity, type of ownership, level of business in the market. Statistically significant differences exist in the level of corporate social responsibility in organizations in Serbia in relation to economic activity, between company headquarters, between types of companies, while there are no statistically significant differences in the level of CSR in organizations in Serbia in relation to the sector, the level of business on the market.

Key words: *Corporate Social Responsibility, Business level, R. Serbia*

Апстракт: *Улога и значај друштвено одговорног пословања у последњих неколико година препознат је у различитим привредним делатностима. Поред значаја у различитим привредним делатностима, корпоративна друштвена одговорност има битну улогу за*

одрживи развој. Циљ рада базира се на испитивању достигнутог нивоа корпоративне друштвене одговорности (КДО) у великим организацијама у Р. Србији у односу на сектор, привредну делатност тип власништва и ниво пословања на тржишту. Истраживање је спроведено у периоду од 2019. до 2021. године на територији Републике Србије у коме је учествовало 165 великих организација. У раду су коришћене статистичке технике непараметарског теста Ман Витни и Крускал Валис помоћу статистичког програма (СПСС верзија 25.0). Прегледом стручне и научне литературе о корпоративној друштвеној одговорности, такође кроз анализу добијених резултата, аутори су доказали да је хипотеза делимично потврђено између просечних димензија КДО и на сектор, привредну делатности, тип власништва, ниво пословања на тржишту. Статистички значајне разлике постоје у нивоу корпоративне друштвене одговорности у организацијама у Србији у односу на привредну делатност, између седишта компаније и између врста компанија, док не постоје статистички значајне разлике у нивоу КДО у организацијама у Србији у односу на сектор и ниво пословања на тржишту.

Кључне ријечи: корпоративна друштвена одговорност, ниво пословања, Р. Србија

JEL classification: M14, O15

1. INTRODUCTION

The concept of Corporate Social Responsibility (CSR) has been the subject of various interpretations and understandings, and as a result, the very definition of this concept varies. The notion of corporate social responsibility is still not precisely defined because there is no clear consensus on the groups of elements encompassed by this business concept (Carroll, 1999; Garriga & Melé, 2004). In addition to the dilemmas among theorists related to the concept itself, the boundaries of the concept are also not precisely delineated.

The field of corporate social responsibility research is characterized by the fact that there is no single CSR definition that allows for the development of general and applicable measurement models (Pérez & Rodríguez del Bosque, 2013). Some existing theories draw on the concept of social state development, while others are linked to the strategy for economic sector development in a new environment. In practice, the lack of consensus on the definition of CSR has led to various measurement mechanisms and

approaches for assessing this business concept (Barauskaite & Streimikiene, 2021; Aleksić et al., 2022).

The benefits of corporate social responsibility (CSR) in business activities are evident in the context of globalization, technological changes, environmental protection issues, and the development of civil society.

This has spurred research, debates, and the emergence of theories that place this development in a broader context. Some existing theories are partially based on the concept of social state development, while others are linked to the strategy for economic sector development in a new environment (Zailani, Amran & Jumadi, 2011; Biočanin, Sarjanović, Berezljjev & Čolaković, 2019).

To implement a policy of social responsibility, organizations employ various means:

- Organizational Codes of Conduct (Successful organizations with a strong CSR policy typically have formulated values and principles based on which they establish codes of conduct) (Collier & Esteban, 2007).
- Periodic Reporting (As the number of stakeholders demanding information and transparency increases, organizations publish a growing number of reports on their business activities, encompassing economic, environmental, and social dimensions) (Amran, Lee, & Devi, 2014).
- Leadership Role (The active application of the corporate social responsibility concept has led to a process in which corporate leadership becomes a key player both within the organization and in the broader societal context) (Waldman, Siegel & Javidan, 2006).
- Environmental Initiatives and Standards (Clear guidelines for organizations striving to improve their business operations and report on all social and environmental actions taken) (Torelli, Balluchi, & Furlotti, 2020).
- Key Actors and Their Roles (Successfully implementing corporate social responsibility requires a societal-wide change. The business sector, as a key player in corporate social responsibility, coordinates the efforts of other business organizations, educational institutions, professional associations, media, governments, and non-governmental organizations) (Ansu-Mensah, Marfo, Awuah, & Amoako, 2021).
- Partnership Building (Partnerships represent a form of engagement among various actors with a common goal, involving trust, responsibility, openness to new knowledge, and collaboration with different sectors) (Morawska-Jancelewicz, 2022).

The utilization and application of corporate social responsibility (CSR) mechanisms are highly diverse and numerous, primarily because this practice is often not regulated by law, and therefore not obligatory. It is typically devised at the corporate management level (Waagstein, 2011). Additionally, since socially responsible corporate activities are oriented towards stakeholders (employees, business partners, suppliers, communities), various mechanisms are employed, which also vary from one environment to another in which they are implemented (Prior, Surroca, & Tribó, 2008).

Regarding developed economies, the emphasis is mostly placed on enhancing the quality of labor relations, knowledge and technology transfer, raising ethical standards and business norms, ensuring product quality, human resource development, equal employment opportunities, and addressing issues such as corruption (Hopwood, Mellor, & O'Brien, 2005). Developing countries, like the Republic of Serbia, tend to focus on short-term humanitarian goals (donating medicines, reducing prices, building local healthcare capacities, financial donations).

In this context, this study has conducted research related to the implementation and impact of corporate social responsibility on business practices in the Republic of Serbia, involving the participation of 165 large organizations.

2. RESEARCH METHODOLOGY

The impact assessment of the level of corporate social responsibility (CSR) in large organizations in Serbia concerning sector, economic activity, ownership type, market business level was conducted on a sample of 165 managers in large organizations within the territory of the Republic of Serbia. Of these, 56% of the managers are male, and 44% are female. The highest representation

among the total number of managers belongs to those in top management and middle management positions.

The segment of questions related to CSR dimensions comprises 27 questions categorized into six groups.

The first group of questions pertains to community responsibility, the second group to environmental responsibility, the third group relates to employee responsibility, followed by investor responsibility, the fifth group addresses customer responsibility, and the last group focuses on supplier responsibility. The questionnaire used for this research was developed by Rettab and colleagues (2009). A five-point Likert scale was employed during the investigation for this group of questions.

The question related to ownership type in the questionnaire is defined as, "Does your organization belong to the public or private sector?" Meanwhile, the questions related to the business level pertain to the type of market (local, regional, national, international, and global), economic activity, the organization's headquarters (Republic of Serbia, European Union, non-EU European countries), and the type of organization (national company, subsidiary of a national company, international company, subsidiary of an international company) concerning corporate social responsibility (Aleksić, 2022).

The research hypothesis H1 states: There are statistically significant differences in the level of CSR in organizations in Serbia concerning sector, economic activity, ownership type, and market business level.

3. RESEARCH RESULTS AND DISCUSSIONS

Table 1: The arithmetic mean, standard deviation, minimum, and maximum values of the CSR level according to the stakeholder approach

	Community	Environment	HRM	Investors	Customers	Supplaires	CSR
AS	4.4182	4.7106	4.5530	4.3818	4.7167	4.5539	4.5564
SD	.74957	.52958	.63245	.74365	.49273	.62805	.48977
Min	1.00	1.50	1.75	1.00	2.00	2.00	1.79
Max	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Source: the authors

Based on the results obtained in Table 1, it can be concluded that the mean values of corporate social responsibility dimensions are at a high level.

The dimension related to the community has a score of 4.42, the dimension related to the environment has a score of 4.71, the dimension related to employees has a score of 4.55, the average dimension related to investors is 4.38, the dimension related to customers has a score of 4.72, while the average dimension related to suppliers is 4.55.

The average of all dimensions according to the stakeholder approach is 4.55.

After presenting the mean values of corporate social responsibility dimensions, the next part of the study will display the results of non-parametric tests (Mann–Whitney U test and Kruskal–Wallis test). For the first analysis, the Mann–Whitney U test was used to assess the achieved levels of CSR concerning whether the organization belongs to the public or private sector.

This test is used when comparing two groups to determine differences. Meanwhile, to determine differences among multiple groups (market served, organization's activity, organization's headquarters, and organization type) regarding CSR levels, the non-parametric Kruskal–Wallis test was applied.

Table 2: Mann-Whitney U Test for Companies in the Republic of Serbia Regarding the Sector and CSR Level

Your organization belongs to?	N	Rank
Public sector	13	67,31
Private sector	152	84,34
Total	165	
CSR level		
Mann-Whitney U		784.000
Wilcoxon W		875.000
Z		-1.236
Asump. Sig.		.216
a. Grouping Variable: Does your organization belong to the public or private sector?		

Source: the authors

By applying the non-parametric Mann-Whitney U test and based on the research results presented in Table No. 2, it is concluded that there is no statistically significant difference in CSR levels

between organizations in the Republic of Serbia belonging to the public or private sector. The Z value is -1.236 ($p > 0.05$, $p = 0.216$).

Table 3: Kruskal-Wallis Test for Companies in the Republic of Serbia Regarding the Market Served and CSR Level

Your organization serves which market?	N	Rank
Local	6	52,83
Regional	28	89,64
National	60	72,51
International	43	87,43
Global	28	98,50
Total	165	
CSR level		
df		2
Chi-Square		5,486
Asump. Sig.		,057
a. Kruskal Wallis Test		
b. Grouping Variable: Which market does your organization serve?		

Source: the authors

Table No. 3 presents the application of the non-parametric Kruskal-Wallis test, showing that there are no statistically significant differences between organizations serving different types of markets and their levels of corporate social responsibility ($p > 0.05$, $p = 0.057$). Additionally, the average

rank values in the CSR domain indicate that organizations serving the global market have the highest average rank (MP = 98.50), while organizations serving the local market have the lowest average rank, which is (MP = 52.83).

Table 4: Kruskal-Wallis Test for Companies in the Republic of Serbia Regarding the Organization's Activity and CSR Level

To which activity does your organization belong?	N	Rank
Processing industry	84	84.80
Wholesale and retail trade, repair of motor vehicles and motorcycles	14	92.46
Financial and insurance activities	17	87.88
Construction	2	66.75
Transport and storage	9	64.44
Public administration and defense; compulsory social security	1	75.00
Healthcare and social assistance	1	57.50
Other service activities	4	92.63
Mining	4	46.38
Administrative and support service activities	3	77.33
Information and communication	7	130.79
Water supply, wastewater management, waste removal, and similar activities	1	3.00
Agriculture, forestry, and fishing	10	50.00
Accommodation and food service activities	1	37.50
Supply of electricity, gas, steam, and air conditioning	4	104.00
Real estate activities	2	84.50
Education	1	108.00
Total	165	
CSR level		
df		16
Chi-Square		27,851
Asupm. Sig.		,033
a. Kruskal Wallis Test		
b. Grouping Variable: To which activity does your organization belong?		

Source: the authors

Based on the results shown in Table 4, it can be concluded that the non-parametric Kruskal-Wallis test demonstrates statistically significant differences between organizations based on their activities and the average values of corporate social responsibility ($p > 0.05$, $p = 0.033$). According to the presented data in Table No. 4,

organizations engaged in information and communication have the highest average rank (MP = 130.79), while organizations involved in water supply, wastewater management, waste removal, and similar activities have the lowest average rank, which is (MP = 3.00).

Table 5: Kruskal-Wallis Test for Companies in the Republic of Serbia Regarding the Organization's Headquarters and CSR Level

Where is your organization headquartered?	N	Rang
Republic of Serbia	121	76.14
EU	38	106.86
Non-EU European countries	2	71.00
Other	4	69.88
Total	165	
CSR level		
df		2
Chi-Square		9,152
Asump. Sig.		,027
a. Kruskal Wallis Test		
b. Grouping Variable: Where is your organization headquartered?		

Source: the authors

Based on the presented results in Table 5 and the application of the non-parametric Kruskal-Wallis test, it is concluded that there are statistically significant differences between the headquarters and the average values of corporate social responsibility ($p > 0.05$, $p = 0.027$). The average

rank values indicate that organizations headquartered in EU countries have the highest average rank (MP = 106.86), while organizations headquartered in other countries have the lowest average rank, which is (MP = 69.88).

Table 6: Kruskal-Wallis Test for Companies in the Republic of Serbia Regarding the Type of Organization and CSR Level

What is the type of your organization?	N	Rank
National company	108	75.56
Branch of a national company	8	83.56
International company	30	99.27
Branch of a international company	19	99.34
Total	165	
CSR level		
df		3
Chi-Square		4,440
Asump. Sig.		,022
a. Kruskal Wallis Test		
b. Grouping Variable: What is the type of your organization?		

Source: the authors

Table No. 6 shows the results of the non-parametric Kruskal-Wallis test, indicating that there are statistically significant differences between the types of organizations, namely national or international companies, and branches of national or international companies, in terms of their corporate social responsibility levels ($p > 0.05$, $p = 0.022$). Approximately the highest average rank values concerning CSR are held by organizations classified as international companies (MP = 99.27) and branches of international companies (MP = 99.34). Organizations classified as national companies (MP = 75.56) and branches of national companies (MP = 83.56), which

operate within the territory of the Republic of Serbia, have a lower average rank.

CONCLUSION

The contemporary approach to conducting business in large organizations should incorporate an ecological mindset. Organizations should pay attention to the products or services they produce and ensure that every aspect of their operations complies with environmental regulations. This is particularly relevant to organizations engaged in processing activities due to the harmful materials generated during production, which can negatively impact the environment. By analyzing the obtained results, it can be concluded that hypothesis (H1) is

partially confirmed because there are no statistically significant differences in the COD levels in organizations in Serbia concerning the public or private sector, the level of business operations in local, regional, national, international, and global markets. Statistically significant differences exist in the level of corporate social responsibility in organizations in Serbia concerning economic activities, between the company's headquarters, types of companies, such as national or international companies, and national or international company branches.

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SUMMARY

In the conditions of increasing globalization, strong economic and political changes, development of information technologies, ecological crises and an enormous level of environmental pollution, as well as demographic and cultural changes, approaches that do not aim exclusively at material benefits, but also wider social and environmental benefits. One of these concepts is corporate social responsibility (CSR). CSR implies the organization's interaction with different groups of interested parties (stakeholders): employees, clients, suppliers, local community, governmental and non-governmental organizations. Companies that have formal organizational strategies and policies (codes, strategies) have a higher level of CSR in the business environment of the Republic of Serbia. The proposal of measures for the management team is reflected in the fact that the mentioned documents are developed and adopted in organizations to an increasing extent because they are in some way guidelines for employees and organizations, that is, the frequent use of KDO activities has a positive effect on the entire organization.



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INDEBTEDNESS INDICATORS IN THE SERBIAN TEXTILE INDUSTRY

ИНДИКАТОРИ ЗАДУЖЕНОСТИ У ТЕКСТИЛНОЈ ИНДУСТРИЈИ СРБИЈЕ

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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: *The company's financing structure is one of the main factors of its successful functioning, as well as finding an adequate balance between its own financing and debt financing. Debt financing is a common way for companies to raise funds for their operations, investments, and other business activities. It involves borrowing money from lenders or investors and agreeing to repay the borrowed amount along with interest over a specified period. Companies can obtain loan financing from various sources such as banks, credit unions, private investors, and bonds. There are many internal determinants that can have a positive or negative impact on the trend of the company's indebtedness. In this study, the authors observed a period of 15 years and 10 companies of the Serbian textile industry, defining a model of internal determinants of companies' indebtedness. The authors used POLS and a fixed effects model to generate an adequate model of determinants. The results indicated a greater adequacy of the POLS model and at the same time showed a negative impact on indicators of financial stability, current liquidity, and profit on assets.*

Key words: *Indebtedness, debt, textile industry*

Анстракт: *Структура финансирања компаније представља један од главних фактора успешног функционисања исте, као и проналазак адекватне равнотеже између сопственог финансирања и финансирања уз помоћ дуга. Финансирање дуга је уобичајен начин да компаније прикупе средства за своје пословање, инвестиције и друге пословне активности. То укључује позајмљивање новца од зајмодаваца или инвеститора и престанак на отплату позајмљеног износа заједно са каматом током одређеног временског периода. Компаније могу добити кредитно финансирање из различитих извора као што су банке, кредитне уније, приватни инвеститори и обвезнице. Постоји мноштво интерних детерминанти који могу да имају позитиван или негативан утицај на кретање задужености компаније. Управо у овој студији аутори посматрајући период од 15 година и 10 компанија текстилне индустрије Србије дефинишући модел интерних детерминанти*

задужености компанија. Аутори су употребили ПОЛС и модел фиксних ефеката ради генерисања адекватног модела детерминанти. Резултати су указали на већу адекватност ПОЛС модела и уједно показали негативан утицај показатеља финансијске стабилности, текуће ликвидности и добити на активу.

Кључне ријечи: Задуженост, дуг, текстилна индустрија

JEL classification: G3, G32, C23

1. INTRODUCTION

The textile industry has been a significant part of the Serbian economy for many years, with a long history of textile production. However, the industry has faced challenges in recent years due to globalization, increased competition, and changing consumer trends. In the past, Serbia's textile industry relied heavily on state-owned enterprises, but after the country's transition to a market economy, many of these enterprises were privatized or closed.

As a result, the industry has become more fragmented, with smaller private companies playing a more significant role in the sector. Of the numerous financial indicators of business, indebtedness indicators represent one of the most important items in the analysis of the business of any company.

Unfortunately, there is no magic number of debts that a business can take on. A key measure of balance sheet strength is a company's ability to prudently and proportionately use equity and debt to support its assets. An excellent indicator of investment quality is a healthy capital structure that shows a low amount of debt and, accordingly, a high level of capital (Ramachandran, Madhumathy, 2016, p. 4).

Businesses should include more debt in their capital structure because it will improve organizational performance (Ullah, Kashif & Ullah, 2017, p. 6).

Company performance is considered a source of long-term growth and one of the most critical variables that investors examine (Vieira, Neves & Dias, 2019, p. 2). As a result, financial analysis can be used to assess the development of a company, which is a key component of financial management (Tobisova, Senova, & Rozenberg, 2022, p. 5).

2. THEORETICAL OVERVIEW OF THE RESEARCH

Numerous studies have been conducted to examine the impact of capital structure on company performance, and one of the biggest challenges facing financial managers is understanding the impact of capital structure, and the use of debt, on company performance (Singh, Baga, 2019, p. 4).

Ullah, Pinglu, Ullah, Zaman & Hashmi (2020), examined the impact of capital structure on the financial performance of 90 textile companies in Pakistan and found that the debt-to-equity variable has a negative and significant relationship with financial performance, while asset turnover ratio and firm performance showed a negative and statistically insignificant relationship.

Mahmood, Iqbal, Zafar & Khalid (2017), investigating Pakistani textile companies, found a significant inverse relationship between companies' debt levels and return on assets.

In addition, a strong positive correlation was also found between the debt-to-equity ratio and the firm's return on equity. Ashraf & Rezika (2020) investigated and found that profitability, firm size, and liquidity have a significant positive relationship with the debt ratio of the studied firms.

The study dealt with the textile industry of Bangladesh. Another interesting study, conducted by Jubaedah, Yulivan, & Hadi (2016), looked at the Indonesian textile industry and found that the ratio of short-term debt to total assets had no significant effect on firm value, while the ratio of long-term debt to total assets did. significant positive relationship with firm value.

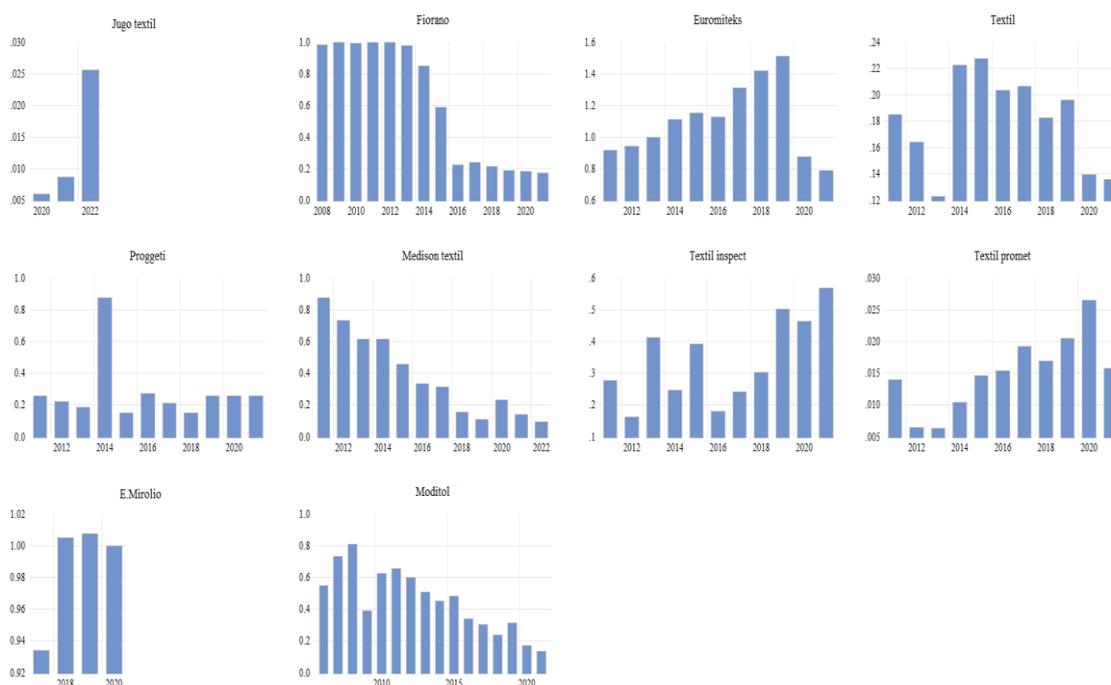
2.1. Financial indicator of indebtedness

Indebtedness refers to the state of owing money to someone or something. It can be held by individuals, businesses, or governments, and can be the result of borrowing money, taking out loans, or other financial obligations. Indebtedness can have both positive and negative effects.

On the one hand, it can allow individuals or businesses to invest in opportunities that might not be possible without borrowing.

On the other hand, it can lead to financial difficulties if the borrower is unable to repay their debts, resulting in high interest rates, collection calls, or even legal action. It is important to manage debt carefully and only take on debts that can realistically be repaid. This includes understanding the terms and conditions of any loan or credit agreement and creating a repayment plan that takes into account one's income and expenses.

Graph 1. The level of indebtedness of companies



Source: Author's

The graph above provides a more detailed insight into the trend of the indebtedness indicators of the companies that are the subject of this analysis. The study covered the period from 2006 to 2021. As is noticeable, this period was not applied to every company that is the subject of this study due to the limited availability of data.

At companies such as Fiorano, Euromiteks, Tekstil, Madison Tekstil, and Moditol, there is a decrease in the level of indebtedness, while at other companies that are the subject of this study,

there is a noticeable increase in the level of debt used in the capital structure.

3. METHODOLOGICAL FRAMEWORK

In this paper, the authors use the data of the 10 largest companies in the textile industry of Serbia. The analysis data were organized in the form of unbalanced panel data. The analysis also covers the period from 2006 to 2021. In table no. 1, below, the authors present the dependent and independent variables used in the analysis.

Table 1. Used variables

	Symbol	Formula	Source
Debt to assets	Dug	Total debt / Assets	Companies financial statements
Return on assets	Roa	Net profit / Assets	Companies financial statements
Return on equity	Roe	Net profit / Capital	Companies financial statements
General Liquidity	Gl	Current assets / Current liabilities	Companies financial statements
Current liquidity	Rl	(Current assets – inventory – receivables) / Current liabilities	Companies financial statements
Financial stability	Stab	Capital / Assets	Companies financial statements

Source: Author's

Based on the presented dependent and independent variables, the authors define the following regression model:

$$Y = \alpha + \beta_1 Roa_{it} + \beta_2 Roe_{it} + \beta_3 Gl_{it} + \beta_4 Rl_{it} + \beta_5 Stab_{it} + \varepsilon$$

Where are:

- Y represents the dependent variable of the company's indebtedness
- Roait represents the return on the company's assets and in time t
- Roeit represents the return on capital of the company and in time t
- Glit represents the general liquidity of the company and in time t
- Rlit represents the rigorous liquidity of the company and in time t
- Stabit represents the financial stability of the company in time t

Based on the model defined above and the dependent and independent variables shown, the authors present the following main and auxiliary hypotheses:

H0: Internal factors do not have a statistically significant effect on the indebtedness of companies in the textile industry.

H1: Internal factors have a statistically significant effect on the indebtedness of companies in the textile industry.

Auxiliary variables:

H2: Return on assets has a statistically significant effect on indebtedness.

H3: Return on equity has a statistically significant effect on leverage.

H4: General liquidity has a statistically significant effect on indebtedness.

H5: Rigorous liquidity has a statistically significant effect on indebtedness.

H6: Financial stability has a statistically significant effect on indebtedness.

The paper consists of four main parts. The first and second sections of the paper include an overview of the theoretical aspect of indebtedness as well as previous research conducted on the subject of indebtedness and the financial structure of the company's capital. In the third section, the authors present the main dependent and independent variables used in the analysis, along with defining the regression model, and main and auxiliary hypotheses. In the last part of the study, the authors present and comment on the obtained results and propose future research.

The unit root tests (Peasan, 2012, p. 5), used to determine the stationarity of the data, and the correlation matrix (Rebonato, Jackel, 2011, p. 7), used to reject multicollinearity, are the two most significant tests used. The likelihood ratio is used to create and analyze POLS and fixed effects models in the final part of the study (Fan, Zhang & Zhang, 2001, p. 10).

4. FINDINGS AND DISCUSSION

After presenting the main dependent and independent variables as well as defining the basic panel regression model used in this study, the authors in this part of the study present the results of the analysis. In table no. 2, descriptive statistics of the used variables are presented.

According to the results, it is noticeable that general liquidity (Gl) contains the highest level of standard deviation of 20.118, which means that it is general liquidity that has the largest oscillation between the maximum and minimum values. Also, indicators of rigorous liquidity (Rl) and return on capital (Roe) show high amounts of standard deviation.

Table 2. Descriptive statistics

Variables	Mean	Std. Dev	Max	Min
Dug	0,440	0,377	1,512	0,006
Roa	0,095	0,191	1,115	-0,283
Roe	-0,490	4,490	4,500	-41,488
Gl	6,741	20,118	165,340	0,100
Rl	2,879	5,405	39,900	0,080
Stab	1,059	0,467	2,400	0,000

Source: Author's

Through the analysis of data and descriptive statistics, the maximum value of the indebtedness indicator of 1,512 was achieved by Euromitek in 2019. The maximum values of indicators of return on assets and return on capital in the amount of 1,115 and 4,500 were achieved by the companies Tekstil Inspect and Fiorano in 2011 and 2013,

respectively. The highest level of financial stability was achieved by the company Progetti in 2013. The level of general liquidity and rigorous liquidity of 165.34 and 39.9 were achieved by the companies Jugo Tekstil and Tekstil Promet in 2020 and 2012, respectively.

Table 3. Corelation matrix

Varibales	Dug	Roa	Roe	GI	RI	Stab
Dug	1,000	-0,339	-0,232	-0,287	-0,403	-0,655
Roa	-0,339	1,000	0,231	-0,042	0,048	0,247
Roe	-0,232	0,231	1,000	0,042	0,073	0,047
GI	-0,287	-0,042	0,042	1,000	0,490	0,094
RI	-0,403	0,048	0,073	0,490	1,000	0,278
Stab	-0,655	0,247	0,047	0,094	0,278	1,000

Source: Author's

In this study, the authors, before conducting the panel regression, present the results of the data stationarity and multicollinearity analysis.

It is these two concepts and their rejection that represent the key points of implementing a valid regression model.

In table no. 3, the authors use a correlation matrix to analyze the potential presence of multicollinearity. Multicollinearity represents the

presence of a high amount of correlation between the used independent variables in the model.

The analysis showed that between the independent variables, the correlation coefficient does not exceed the level of 0.70, which helps the authors reject the null hypothesis of the existence of multicollinearity between the variables used.

What is interesting about the results is that all the independent variables used have a negative relationship with the indebtedness indicator.

Table 4. Unit root tests

Variables	Levin, Lin & Chu		Im, Peasan, and Shin	
	Level	1st diff	Level	1st diff
Dug	-1,154 (0,1242)	- 3,337 (0,0004)*	0,374 (0,6457)	-4,483 (0,0000)*
Roa	- 1,941 (0,0661)	-1,960 (0,0250)*	-0,669 (0,2515)	-3,415 (0,0003)*
Roe	-1,994 (0,0681)	-4,926 (0,0000)*	-1,186 (0,1177)	-5,004 (0,0000)*
GI	-0,191 (0,4243)	-8,599 (0,0000)*	0,328 (0,6286)	-3,064 (0,0011)*
RI	-1,562 (0,0592)	-4,017 (0,0000)*	-0,185 (0,4267)	-3,232 (0,0006)*
Stab	-0,591 (0,2774)	-2,265 (0,0371)*	0,489 (0,6878)	-2,861 (0,0213)*

Source: Author's

Table no. 4 above shows the results of the unit root analysis.

The authors used two unit root tests, Levin, Lin & Chu, and Im, Peasan and Shin. The results indicate that at the level of analysis, the data are non-

stationary, but after differentiation, the results show the absence of non-stationarity of the data. After satisfying the diagnostic tests, the authors continued the analysis using the POLS model and the Fixed Effects model.

Table 5. Panel regression model

Variables	Pols	Fixed
Roa	-0,581 (0,0000)**	-0,492 (0,0000)
Roe	0,001 (0,5407)	0,005 (0,1086)
Gl	-0,002 (0,0835)*	-0,002 (0,2123)
Rl	0,002 (0,5103)	0,002 (0,4661)
Stab	-0,307 (0,0000)*	-0,322 (0,0000)
C	-0,019 (0,1245)	-0,019 (0,1360)
R - squared	0,4684	0,5886
Prob.	0,0000	0,0000

Source: Author's

Table 6. Likelihood ratio

Statistic	D.f	Prob
1,598517	(15,82)	0,092
26,420531	15	0,034

Source: Author's

Based on the results of the analysis, it is noticeable that the POLS method represents a more adequate panel regression model. The results indicate a statistically significant negative impact of indicators of return on assets and financial stability with a level of statistical significance of 5%.

These findings agree with those of (Ullah, Uddin, Abdullah & Islam, 2017, p. 7; Ashraf & Rezina, 2020, p. 4; Ullah, Pinglu, Ullah, Zaman & Hashmi, 2020, p. 7; Jubaedam, Yulivan & Hadi, 2016, p. 4), and adjacent to the sites (Singh & Bagga, 2019, p. 8; Asad, Iftikhar & Jafary, 2019, p. 10).

There is also a noticeable negative impact of general liquidity with a statistical significance level of 10%. The growth of indicators of return on assets, general liquidity, and financial stability by 1% causes a decrease in the level of indebtedness by 0.581%, 0.002%, and 0.307% respectively. Considering the results of the study, the authors reject the null hypothesis H0 and auxiliary hypotheses H3, and H5, while accepting the hypothesis H1 and auxiliary hypotheses H2, H4, and H6.

CONCLUSION

In conclusion, the findings of this paper indicate a significant level of indebtedness in the textile

industry in Serbia, as well as the negative impact of increased liquidity, profitability, and financial stability on the company's debt level. The analysis shows that many companies in this sector have struggled to manage their finances, leading to a significant increase in their debt levels. This issue is further exacerbated by the current economic climate and increasing competition in the industry. The research also reveals that the textile industry in Serbia faces a number of challenges, including outdated production methods, lack of investment, and weak institutional support. These factors have contributed to high levels of leverage in the industry, making it difficult for companies to remain competitive and sustainable. To meet these challenges, policymakers, industry leaders, and investors must work together to support the modernization of the sector, facilitate access to finance and credit, and implement effective debt management strategies. Companies in the textile industry must adopt more efficient and sustainable production methods and explore new business models to improve their competitiveness and financial stability. Limitations of this study are the use of only 10 companies from the textile industry. The authors suggest that the topics of future research should be comparative analyses of the textile industries of several countries.

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SUMMARY

The subject of this study is the textile industry of the Republic of Serbia. The aim of the study and the main problem is the analysis of the level of indebtedness of the company as well as the level of influence of certain internal variables on it. In the analysis, the authors used panel data of the 10 largest textile industry companies in the period from 2006 to 2021. PLS model and fixed effects model were used to analyze the influence of independent variables. The results showed a negative impact on RoA indicators, general liquidity, and financial stability. The study provides precise insight into the impact of performance companies on debt levels and serves financial managers in the textile industry as a basis for creating a more successful company capital structure. The analysis showed that many companies in this sector were struggling to manage their finances, which led to a significant increase in their debt levels. The current economic climate and increasing competition in the industry worsen the current situation of the sector. The research also reveals that the textile industry in Serbia faces a number of challenges, including outdated production methods, lack of investment, and weak institutional support. These factors have contributed to high levels of leverage in the industry, making it difficult for companies to remain competitive and sustainable.



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HUMAN RESOURCE MANAGEMENT IN THE CONDITIONS OF GEOPOLITICAL CHANGES

УПРАВЉАЊЕ ЉУДСКИМ РЕСУРСИМА У УСЛОВИМА ГЕОПОЛИТИЧКИХ ПРОМЕНА

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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: For businesses, geopolitics is observed and addressed at the national and regional levels. Given that human resources play a central role in the functioning of enterprises, the ongoing challenge is to employ a variety of human resource management practices in response to crises. Therefore, organizational human resource management policies deserve a strong examination in terms of their impact on the business of enterprises, especially in times of crisis, as a result of geopolitical changes. The paper presents a survey on the attitudes of employees, and it was done on the territory of the Republic of Serbia, through a questionnaire. The questionnaire was distributed via a link, where the questions were with the answers offered, and also presented through the five-point Likert scale. The results are calculated through the SPSS program. Research can serve as a backbone for businesses to improve human resource management, especially in times of crisis. In accordance with the received answers, companies will get an insight into the importance of employee attitudes, and guidelines for further growth and development.

Key words: Human resources, geopolitical changes, employee attitudes

Анстракт: За предузећа, геополитика се посматра и решава на националном и

регионалном нивоу. Како људски ресурси представљају окосницу пословања предузећа, потреба за коришћењем вишеструких пракси управљања људским ресурсима за реаговање у условима кризе остаје стални изазов. Због тога, организационе политике управљања људским ресурсима заслужују снажно испитивање у смислу њиховог утицаја на пословање предузећа, посебно у временима кризе, које настају као резултат геополитичких промена. Рад приказује истраживање о ставовима запослених у вези са задовољством послом, а исто је вршено на територији Републике Србије, путем анкетног упитника. Упитник је дистрибуиран путем линка, где су питања била са понуђеним одговорима, а такође и представљена кроз петостепену Ликертову скалу. Резултати су обрађени у програму SPSS. Истраживање може послужити предузећима као окосница за унапређење управљања људским ресурсима, поготово у условима кризе. У складу са добијеним одговорима, предузећа ће добити увид у значај ставова запослених, и смернице за даљи раст и развој.

Кључне ријечи: Људски ресурси, геополитичке промене, ставови запослених

JEL classification: D91, O15

1. INTRODUCTION

The past years represent one of the deep and interconnected crises that are of increasing scale and severity. The coronavirus pandemic (COVID-19) continues and, with fewer than 20% of people vaccinated in low-income countries, the recovery is uneven. The war in Ukraine has caused trouble for millions of people at home and abroad and has heightened the effects of the climate crisis and lingering inequality around the world. All these challenges transcend borders and can only be solved through strong collective action (United Nations, 2022). Furthermore, the world's population is experiencing rapid growth in some areas but declining in others. Amid these demographic shifts, we are also grappling with challenges such as environmental change, diminishing global resources, national security concerns in multiple nations, increasing disparities, various forms of discrimination, both overt and covert, as well as social inequities and violations of individual rights.

In recent times, trade conflicts, the surge of populism, and issues related to racism and violence driven by racial factors present immediate and evident challenges that hold significance for organizations involved in human resources management, both locally and internationally. In this landscape, organizations are confronted with the task of addressing the requirements of a rapidly changing environment shaped by the geopolitical crisis.

In the business scope, geopolitics is considered and managed on both local and regional scales. Economic crises have a substantial impact on aspects like human resource management, achievement assessment, and worker incentives (Maley & Kramer, 2014). The persistent challenge lies in the necessity of employing a variety of human resource management strategies to effectively deal with critical situations as they emerge at different times (Holck, 2016). This is primarily because crises can significantly disrupt the functioning and results of human resources, particularly when geopolitical factors reduce the strategic role of HR during these demanding periods.

During the ongoing world crisis, various organizations across both the global north and south have had to adopt forward-thinking approaches to their work. However, it's important to note that many of these strategies have their origins in Western, well-educated, highly-developed, and democratic nations. They are mainly affected by perspectives derived from these settings and by economic, social, and managerial notions regarding heterogeneity and equity (Pepple

Davies, 2019; Le et al., 2020). There's a clear need for more tailored human resource management practices that align better with specific contexts, particularly during times of global crisis. What raises concern is the absence of a practical human resource management model that could be created by using suitable theory and practices, and then adjusted to suit different national economies. This adaptation is essential for enhancing the efficacy of human resource management practices in times of global insecurity. Adapting national systemic conditions to local human resource management is focal in recognizing and working on shifts in institutional landscapes that may impact human resources policies and procedures (Pedrini, 2016). Therefore, the role of a human resources manager goes beyond the mere implementation of policy frameworks and management functions. It also encompasses actively assessing and interpreting employee attitudes, particularly in the face of evolving circumstances. Organizational human resource management policies deserve a strong examination in terms of their impact on the operations of organizations, especially in times of crisis, which arise as a result of geopolitical changes.

2. HUMAN RESOURCES MANAGEMENT IN SERBIA

Human resource management is a challenge, especially in times of strong geopolitical influences, because not all employees or companies are unique. Therefore, it is not possible to create a standard in which to define how to manage employees, especially when it is borne in mind that their responsibilities are not static. Human Resources Managers are expected to continuously improve, lead, and attend various workshops, and trainings. Highly educated staff, creative people, and employees who have a variety of skills and abilities are something without which there can be no company that wants to successfully operate on the market. These employees represent the intellectual capital of the company, and like any capital, this must be successfully managed for the company to achieve the planned growth and development. At the same time, when intellectual capital is mentioned, it is a term that does not mean just any knowledge in the company, but only those that can be turned into value or enable the achievement of competitive advantages. From the above, it can be concluded that human resources and management are the key factors in the development and survival of the enterprise.

The starting point of any human resource management activity is the analysis of employee attitudes. A quality analysis of attitudes allows the company to harmonize the competencies of people

for job requirements. If the analysis is absent or inadequate, there is a discrepancy, which is reflected in a lower level of productivity, absence, and dissatisfaction with work.

When it comes to conducting research related to the attitudes of employees in Serbia, the practice has shown that the management of companies is primarily observed, and their consideration of key competencies of people. It has been proven that today's employers mostly want their employees to have such packages of knowledge, skills, and attitudes towards work that will allow them to quickly adapt to new work roles, a greater degree of flexibility of work, greater efficiency, the ability to cooperate in a team and proactivity in proposing new ideas. When it comes to key competencies, employers assess communication skills, leadership skills, client skills, and analytical skills as paramount (MNG Center, 2018).

In a 2019 survey carried out in Serbia (Berber, Slavić, & Leković), it was revealed that 60% of studied companies in Serbia have a documented and well-structured human resources strategy in place. Nevertheless, when it comes to the utilization of specialized programs for employment, training, and career development, there is a noticeable lack of extensive implementation, especially concerning particular demographic groups such as minorities, older workers, individuals with special needs, women, unskilled laborers, and younger employees. Additionally, the survey results indicate that Serbian companies do not frequently provide benefits. More precisely, only 19% of companies offer such benefits to their workforce.

Research conducted in Belgrade (Stanic, 2020) showed that the interest of companies in managing human resources, their development, and potential is a relatively new belief among the management of the company, which is gaining more and more importance every day.

To explore the attitudes of employees themselves, within the framework of today's geopolitical influences, and to create adequate strategies for human resource management, this paper is a research on employee satisfaction. This will provide the starting point for human resource management activities.

3. OBJECTIVE AND METHODS OF RESEARCH

The research aims to assess the attitudes of employees when it comes to their job satisfaction and the conditions of geopolitical changes. This paper is founded on data collected during a three-month survey conducted from May 2022 through the end of July 2022 within the territory of Serbia.

The survey used questionnaires that were distributed to participants through the Google Forms platform via a provided link. In the survey form, all questions were designated as mandatory, ensuring that respondents completed the entire questionnaire. The number of questionnaires that were fully completed amounted to 113. The questionnaire encompassed questions related to participants' demographic characteristics (including gender, age, educational background, and occupation). It was followed by 22 statements aimed at assessing job satisfaction, with survey participants rating these statements on a five-point Likert scale. On this scale, a rating of 1 signified "I strongly disagree," while a rating of 5 indicated "I strongly agree."

When it comes to the demographic characteristics of surveyed respondents, the female sex dominates (54%). The majority of respondents are aged 36 to 45 (38.1%), 28.3% are aged 46 to 55 years, while respondents up to 25 years, from 26 to 35 years, and over 55 years of age were represented with 0.9%, 14.2%, and 18.6%, respectively. The educational orientation towards the social sciences dominated (48.7%), while the technical orientation was in second place with 38%. The surveyed employees are in positions that are primarily managerial (39.8%) and then administrative (30.1%). Evaluation of statements by surveyed respondents is shown through descriptive statistics, in Table 1.

Table 1. Descriptive statistics of employee satisfaction

Statement	Arithmetic mean	Standard deviation
In general, I find my job satisfying.	4.23	.886
I'm not particularly fond of my current job.	1.49	.857
I enjoy performing my job tasks.	4.38	.919
I get along well with my coworkers.	4.19	.882
I believe I need to increase my efforts due to the incompetence of my coworkers.	2.70	1.329
I enjoy the tasks I'm assigned at work.	4.02	.876
I carry a heavy load of responsibilities.	3.83	1.149
I have the opportunity to engage in training sessions, webinars, meetings, and field activities.	3.84	1.293
I have access to the necessary information, tools, and resources to	4.00	1.026

efficiently complete my tasks.		
I am clear about the expectations of my role at work.	4.48	.803
I am encouraged to make decisions to resolve issues for my clients.	4.20	.937
Leaving my job isn't something I would consider.	4.04	1.220
I would think about leaving my job if I found a position with a higher salary.	2.66	1.480
I would think about leaving my job if I found one with more prospects for advancement.	2.92	1.471
I believe that my work makes a meaningful contribution to the community.	4.19	.915
There are other job-related skills I would like to gain.	4.37	.847
My supervisor is proficient in performing their job.	4.12	1.127
My supervisor demonstrates an interest in my emotions and well-being.	3.78	1.273
I can place trust in my immediate superior.	4.00	1.195
I believe my compensation is fair for	3.72	1.243

the work I perform.		
I am dissatisfied with the benefits I currently receive.	2.44	1.274
I don't feel that my efforts are adequately acknowledged or valued at work.	2.27	1.262

Source: Authors

Descriptive statistics analysis of employee job satisfaction in Serbia shows that employees like their jobs, have no need to change them, get along well with their colleagues, and think their superiors are good at their jobs. Also, most employees in the survey don't feel that their work goes unappreciated, and they're generally happy with the benefits they acquire.

4 . RESEARCH RESULTS

To further analyze the attitudes of respondents, i.e. employees, a combination of factor analysis and subsequent linear regression was employed. The initial stage involved factor analysis conducted through the principal component analysis method. A minimum factor load criterion of 0.5 was set. The process started with an assessment of the Kaiser-Meyer-Olkin (KMO) sampling adequacy measure, as well as Bartlett's test of sphericity. In this study, the KMO value is beyond 0.7, confirming the appropriateness of the factor analysis. Moreover, Bartlett's test proves significant (Sig. = 0.000), showing that the 22 job satisfaction statements made by respondents are correlated with each other.

Table 2. Rotated Matrix Components

Statement	Components						
	1	2	3	4	5	6	7
I enjoy performing my job tasks.	.842						
I'm not particularly fond of my current job.	-.761						
In general, I find my job satisfying.	.737						
I enjoy the tasks I'm assigned at work.	.685						
Leaving my job isn't something I would consider.	.528						
My supervisor is proficient in performing their job.		.893					
I can place trust in my immediate superior.		.886					
My supervisor demonstrates an interest in my emotions and well-being.		.882					
I have access to the necessary information, tools, and resources to efficiently complete my tasks.			.729				
I have the opportunity to engage in training sessions, webinars, meetings, and field activities.			.728				
I am clear about the expectations of my role at work.			.647				
I believe that my work makes a meaningful contribution to the community.			.568				
I am encouraged to make decisions to			.533				

resolve issues for my clients.									
I am dissatisfied with the benefits I currently receive.					.878				
I believe my compensation is fair for the work I perform.					-.671				
I don't feel that my efforts are adequately acknowledged or valued at work.					.665				
I would think about leaving my job if I found one with more prospects for advancement.							.812		
I would think about leaving my job if I found a position with a higher salary.							.704		
There are other job-related skills I would like to gain.							.655		
I believe I need to increase my efforts due to the incompetence of my coworkers.								-.797	
I get along well with my coworkers.								.755	
I carry a heavy load of responsibilities.									.857

Source: Authors

The rotated component matrix reveals that statements 1 to 5 are loaded with the job-related factor, while statements 6 to 8 are loaded with the factor concerning superiors.

Statements 9 to 13 are loaded to the labor resource component, 14 to 16 are loaded to the benefits factor, and statements 17 to 19 correspond to the departure from work factor.

Additionally, statements 20 and 21 are loaded to the colleague-related factor, while the last statement is linked to the obligation factor.

However, it's important to note that the colleague and obligation factors do not include a sufficient number of statements, as they require at least three.

Consequently, these factors will not be considered in additional analysis, interpretation, or findings due to the lack of supporting items. In conclusion, the factor analysis conducted on the 22-item satisfaction scale indicates the presence of five distinct factors, namely job, superiors, resources, benefits, and dismissal, each contributing to the overall measurement of satisfaction.

Table 3. Total Variance

Statement	Eigenvalues			Extraction of sums			Rotation of the sum		
	To.	% Var.	Cum. %	To.	% Var.	Cum. %	To.	% Var.	Cum. %
1	7.919	35.996	35.996	7.919	35.996	35.996	3.594	16.337	16.337
2	2.032	9.234	45.230	2.032	9.234	45.230	3.106	14.120	30.457
3	1.800	8.183	53.413	1.800	8.183	53.413	2.641	12.006	42.463
4	1.502	6.825	60.239	1.502	6.825	60.239	2.350	10.682	53.145
5	1.263	5.739	65.978	1.263	5.739	65.978	2.053	9.333	62.477
6	1.126	5.119	71.097	1.126	5.119	71.097	1.744	7.930	70.407
7	1.020	4.635	75.732	1.020	4.635	75.732	1.172	5.326	75.732
8	.806	3.665	79.397						
9	.635	2.888	82.285						
10	.631	2.867	85.152						
11	.561	2.551	87.703						
12	.445	2.021	89.724						
13	.375	1.702	91.427						
14	.358	1.627	93.054						
15	.287	1.307	94.361						
16	.261	1.185	95.545						
17	.226	1.028	96.573						
18	.211	.958	97.531						
19	.191	.867	98.398						
20	.133	.604	99.002						
21	.131	.594	99.596						
22	.089	.404	100.000						

Source: Authors

In terms of employee job satisfaction, it's noteworthy that the initial 7 statements show values above 1, with a cumulative percentage of 75.7%. This suggests that these 7 statements should be retained within the model. These statements hold significant importance and can serve as valuable tools for businesses in shaping effective human resource management strategies.

To assess whether the resulting factors have an impact on employee satisfaction, a regression analysis was carried out. Regression showed $F(5, 113) = 2,690, p < .001$, indicating that factors affect employee job satisfaction. Furthermore, the R-squared value of 0.829 demonstrates that the model accounts for a substantial 82.9% of the variance in job satisfaction. Table 4 shows the overview of the regression results.

Table 4. Linear regression

Model	Sum of squares	df	F	R2	Itself.
Regression	72.187	73	2.690	0.829	< .001
Residual	14.910	40			
Total	87.097	113			

Source: Authors

CONCLUSION

Conducted empirical research has shown that the work itself, the relationship with superiors, enabled resources for performing work, existing and possible benefits, as well as the possibility of quitting, are significant factors, given that they affect employee satisfaction with work, and consequently, given factors can affect the entire business and income of the company. Employee satisfaction can turn into loyalty to the company, and lead to a high level of retention of higher education and quality staff, which is why companies must develop human resource management strategies.

This research suggests that of the 22 statements examined, 7 are the most important when looking at employees and evaluating their experience and opinions towards the work they do, especially in times of strong geopolitical change. The statements made are: in general, I find my job satisfying; I'm not particularly fond of my current job; I enjoy performing my job tasks; I get along well with my coworkers; I believe I need to increase my efforts due to the incompetence of my coworkers; I enjoy the tasks I'm assigned at work; I carry a heavy load of responsibilities.

The results of the research show that employee job satisfaction is an important link in organizing obligations and work in the company. At a time when there are too many variables that cannot be influenced, such as climate change, the migrant crisis, the economic crisis, and wars, job satisfaction becomes one of the elements that need to be paid special attention to, to enable the effective functioning of businesses.

Companies should regularly conduct research among their employees, especially in the sphere of job satisfaction, based on the results which would

create adequate human resource management strategies. Also, given strategies would enable better formation of teams, determination of leaders, regulation of the system of reward and evaluation of employee performance, and overall create an environment where employees feel valued and appreciated.

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SUMMARY

In a world where companies are struggling to cope with the geopolitical conditions surrounding them daily, communicating with their employees and asking about their opinions concerning their work, especially how satisfied they are, can positively impact human resource management and business development. To see to what extent employees are satisfied with their jobs, and in particular what elements of the job, an employee job satisfaction survey was conducted. The research included the demographic aspect, as well as the job satisfaction of employees. Job satisfaction was assessed through 22 statements that respondents rated on a five-point Likert scale. Research has shown, that despite the current state of things, which is observed through the light of geopolitical conditions, employees are satisfied with their jobs, they do not have the need to change their jobs, they are happy with their coworkers, and see their superiors as competent enough to get their work done. In addition, employees do not think their work is undervalued, and they're content with the job benefits they receive.. The research also showed that based on demographic characteristics, it is possible to profile employees in Serbia, based on gender, age, education, and the work they do. All this information is important when companies create their strategies for human resource management. Given the developmental and economic similarities of the Western Balkan countries, this research can serve as a basis for further research in these countries and use this information for employee profiling regarding job satisfaction. Human resource management strategies are key for company growth in today's world, and all companies should create such strategies and empower their employees as soon as possible. This way of communicating and acknowledging human resources while creating a growth mindset environment provides countless opportunities for personal and business development.



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DEVELOPMENT OF THE GLOBAL CRYPTOCURRENCY MARKET

RAZVOJ GLOBALNOG TRŽIŠTA KRIPTOVALUTA

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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: Cryptocurrencies represent a new form of property that exists only on the Internet. The first cryptocurrency to appear on the global market was Bitcoin, and its appearance is linked to the first financial crisis in 2008. The market capitalization of Bitcoin grew very quickly and in 2017 reached the highest capitalization in history (334 billion US dollars). Later, there was an expansion of new cryptocurrencies, of which there are currently over 1500 (e.g. Ethereum, Tether, BNB, USD Coin, etc.). The emergence of cryptocurrencies as a new concept affects the change in the perception of payments and money as a means of payment in general. The development of the global cryptocurrency market is indeed rapid and dynamic, and it is becoming an increasingly popular method of payment. Since the emergence of cryptocurrencies is not related to central banks, the need to change the classical systems and economic policies of countries is also expressed. The dynamic development of the mentioned market takes place in parallel with the development of information technologies, so there is a trend of capital outflow from classic capital markets to emerging global cryptocurrency markets. The question arises of the survival of traditional banks in the future, as more users trust

cryptocurrencies. Global cryptocurrency markets are expected to expand more and more in the future. The paper will analyze the development of the global cryptocurrency market based on a sample of five of the most significant cryptocurrencies today.

Key words: cryptocurrencies, Bitcoin, global market, market capitalization.

Анотација: Криптовалуте представљају нови облик имовине који постоји само на интернету. Прва криптовалута која се појавила на глобалном тржишту је Bitcoin, а њена појава се везује за прву финансијску кризу из 2008. године. Тржишна капитализација Bitcoin је расла веома брзо и 2017. године достигла историјски највишу капитализацију (334 милијарди америчких долара). Касније долази до експанзије нових криптовалута, којих у данашњем времену постоји преко 1500 (нпр. Ethereum, Tether, BNB, USD Coin итд.). Појава криптовалута као новог концепта утиче на промену перцепције плаћања и уопште новца као средстава плаћања. Развој глобалног тржишта криптовалута је заиста брз и динамичан, те је све више популаран начин плаћања. Будући да појава криптовалута није везана за централне банке, исказује се и потреба

promene klasičnih sistema i ekonomske politike zemalja. Dinamičan razvoj pomenutog tržišta odvija se uporedo sa razvojem informacionih tehnologija, pa je prisutan trend odliva kapitala sa klasičnih tržišta kapitala na novonastala globalna tržišta kriptovaluta. Postavlja se pitanje opstanka tradicionalnih banaka u budućnosti, budući da se više korisnika ima poverenja u kriptovalute. U budućnosti se očekuje sve veća ekspanzija globalnih tržišta kriptovaluta. U radu će biti izvršena analiza razvoja globalnog tržišta kriptovaluta na uzorku od pet najznačajnijih kriptovaluta u današnjem vremenu.

Кључне рјечии: kriptovalute, Bitcoin, globalno tržište, tržišna kapitalizacija.

JEL classification: F65

1. INTRODUCTION

The growing popularity of cryptocurrencies and their increasing market capitalization creates a need for a more detailed understanding of the dynamics of the cryptocurrency market. One of the potential threats to cryptocurrencies stems from their inherently speculative nature. A large number of participants in these markets trade cryptocurrencies in the hope that their value will increase (Krafft, Della Penna, & Pentland, April 2018).

In the past years, especially since 2017 when Bitcoin, as an example of the most popular cryptocurrency, for the first time exceeded the historical limit of 20,000 USD, a significant increase in interest in this type of asset has been observed. This phenomenon indicates an increased awareness and acceptance of cryptocurrencies as an important financial instrument (Kozarević & Ibrić, 2021, p. 42).

The paper will perform a descriptive analysis of the global cryptocurrency market, its market capitalization, and price movements. In the first segment of the work, the relevant research papers that laid the foundations for the development of cryptocurrencies will be presented in detail. The second segment includes a description of the historical development of cryptocurrencies, providing insight into their evolution over time. The third segment will focus on the emergence of other cryptocurrencies after Bitcoin, providing an overview of the diversity of this digital financial asset. The fourth segment will analyze the market capitalization and price movements of the most prominent cryptocurrencies, such as Bitcoin and Ethereum. This analysis will provide insight into the market trends and value changes of these

digital currencies over some time. The last, and sixth segments of the work will deal with global trends in the development of the cryptocurrency market and the regulations established in different countries.

Legal guidelines and regulations affecting the use and trading of cryptocurrencies will be described here, providing insight into the different approaches and strategies adopted around the world. Through this analysis, the paper will contribute to a broader understanding of cryptocurrencies, their economic importance, and their impact on the global financial market.

2. THE MOST SIGNIFICANT PAPERS AS THE BASIS OF CRYPTOCURRENCY DEVELOPMENT

Several papers stand out as the basis of the development of the cryptocurrency market. Some of the papers were created by the scientific and professional public, and some by the cryptocurrency founders themselves.

We will highlight some:

- "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2008). This paper was written by the founder i.e. group of Bitcoin founders, Satoshi Nakamoto, in 2008. It explains in detail the concept of cryptocurrencies and how Bitcoin papers.
- "The Economics of Bitcoin Mining, or Bitcoin in the Presence of Adversaries" (Kroll, Davey, & Felten, 2013). The paper was written by Joshua Kroll, Ian Davey, and Edward Felten in 2013. The paper analyzes the Bitcoin mining process and discusses issues of network security and stability.
- "Ethereum: A Next-Generation Smart Contract and Decentralized Application Platform" (Buterin, 2014). The paper was written by Vitalik Buterin in 2014. The paper details the Ethereum platform for smart contracts and decentralized applications.
- "A Fistful of Bitcoins: Characterizing Payments among Men with No Names" (Meiklejohn, i drugi, 2016). The paper was written by Sarah Meiklejohn and others in 2016. The paper examines anonymity in Bitcoin transactions and identifies several possibilities for linking transactions to real persons.
- "A Survey on Security and Privacy Issues of Bitcoin" (Conti, Kumar, & Lal, 2018). This paper was written by a group of IEE authors,

Conti, Kumar, and Lal et al in 2018. The paper analyzes security and privacy issues in the context of cryptocurrencies, especially Bitcoin.

3. HISTORICAL DEVELOPMENT OF CRYPTOCURRENCIES

The development of the cryptocurrency market has a relatively short but interesting history. The concept of digital currencies existed before the invention of Bitcoin, but it wasn't until 2008 that the first decentralized digital money, Bitcoin, was created. Bitcoin was invented by an individual (or group) named Satoshi Nakamoto (Pinkerton, 2023). The true identity of this person or group remains unknown to this day. Bitcoin is a decentralized digital currency, meaning it is not controlled by any central authority, such as a government or bank. It uses a technology called blockchain, which is essentially a decentralized ledger that records all transactions made using Bitcoin.

The creation of Bitcoin spurred the development of other cryptocurrencies, such as Ethereum, Litecoin, Ripple, and many others. Each of these currencies has its unique characteristics, but they all share the basic idea of decentralization and the use of blockchain technology. The growth of the cryptocurrency market has been relatively volatile, with large price fluctuations over the years. In the early days of Bitcoin, it was mostly used by tech enthusiasts and people who wanted to make anonymous transactions on the Internet. However, as the market developed, more and more investors and businesses became interested in cryptocurrencies.

One of the significant milestones in the development of the cryptocurrency market was the launch of Bitcoin futures trading on the Chicago Board Options Exchange (CBOE) in December 2017 (BBC, 2017).

The move brought the cryptocurrency market more into the mainstream and opened up opportunities for institutional investors to trade Bitcoin. Since then, the cryptocurrency market has continued to grow and evolve, with new cryptocurrencies being created and more businesses accepting them as a form of payment. Although the market remains relatively volatile, it has become a legitimate asset class, and many investors are beginning to take it seriously as an investment opportunity.

4. EMERGENCE OF OTHER CRYPTOCURRENCIES AFTER BITCOIN

After the emergence of Bitcoin in 2008, the way was opened for the development of other

cryptocurrencies. Each of these currencies has its unique features and functionalities.

One of the first currencies to emerge after Bitcoin was Litecoin. Litecoin was created by Charlie Lee in 2011 and was envisioned as a faster and cheaper way to transact compared to Bitcoin (Reiff, n.d.).

Ethereum is also a popular cryptocurrency that appeared in 2015. Ethereum is designed as a platform for building decentralized applications, that use smart contracts (Eng. smart contracts) (Yuxin Huang, 2020). This functionality allows the Ethereum network to be used for various purposes, such as storing digital assets, running decentralized applications, and issuing new cryptocurrencies.

Ripple is a cryptocurrency that appeared in 2012, and its goal is to enable faster, cheaper, and safer payments across borders. This currency, which many do not even consider a cryptocurrency (Ahmadova & Erek, 2022), uses its payment protocol rather than blockchain technology, which allows it to process transactions faster compared to other cryptocurrencies.

Many other cryptocurrencies emerged after Bitcoin such as Monero, Dash, Zcash, and many others. All of these currencies have their unique features and functionalities, although most of them share the basic idea of decentralization and the use of blockchain technology. The development of cryptocurrencies continues, and new innovative solutions and functionalities are created regularly.

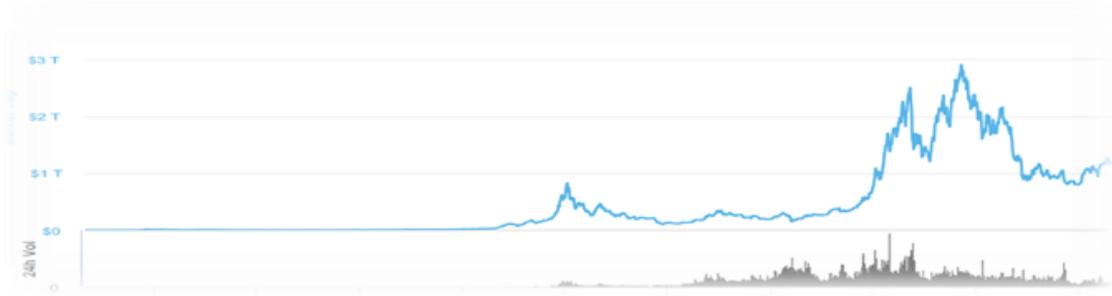
5. MARKET CAPITALIZATION AND PRICE MOVEMENTS OF CRYPTOCURRENCIES

Cryptocurrencies are digital assets designed as a means of exchange. The first cryptocurrency, Bitcoin, was introduced in 2009, and since then around 1500 other cryptocurrencies have been created, of which around 600 are actively operating today.

Cryptocurrencies use the underlying blockchain technology and reward mechanism, but each typically operates on its isolated transaction network. Apart from being used as a means of everyday payments, cryptocurrencies are also popular as objects of speculation.

The market capitalization of active cryptocurrencies exceeded \$91 billion in May 2017, and the total market capitalization of cryptocurrencies has been increasing since late 2015 after a period of relative stability (ElBahrawy, Alessandretti, Kandler, Pastor-Satorras, & Baronchelli, 2017, p. 1-2, 7).

Figure 1. The total market capitalization of the cryptocurrency, token, and stablecoin market from 04/30/2013 to 06/11/2023



Source: (<https://coinmarketcap.com/>)

In June 2023, the global market capitalization of cryptocurrencies reached a value of 1.053 trillion dollars (USD). Based on the presented image (Figure 1), the stagnation of the cryptocurrency market is observed in the period from 2013 to 2018, when the total market capitalization exceeded 828 billion dollars (USD). However, following the COVID-19 pandemic, the market experienced an expansion, with the market capitalization peaking at \$2.828 trillion (USD) in November 2022.

After that period, the market capitalization showed a downward trend, and in June 2023 it was 1.023 trillion dollars (USD). This decline may be the result of a variety of factors, including regulatory changes, market corrections, and changes in investor sentiment. It is important to emphasize

that the cryptocurrency market is still subject to high volatility and risks and that investors must be carefully informed and analyzed before making investment decisions.

Thus, the growth of the global cryptocurrency market has seen tremendous growth, with around 1,500 cryptocurrencies in existence as of February 2018, and their total market capitalization reached a record \$830 billion on January 7, 2018. However, in the following month, the market saw a sensational drop to \$280 billion.

The growth potential and developments in the market attracted enormous attention among retail and institutional investors, who "rushed" to enter the new "crypto-world" (Wu, Whetl Wu, Wheatly, & Sornette, 2018, p. 2).

Figure 2. Share of certain cryptocurrencies in market capitalization from 04/30/2013 to 06/12/2023



Source: (<https://coinmarketcap.com/>)

Bitcoin was the largest contributor to the total market capitalization during the observed period from 2014 to 2023. During that period, Bitcoin's share in the total market capitalization fluctuated

around 90%, while other cryptocurrencies had a share of around 4.45%. However, there was a significant drop in Bitcoin's share from February to June 2017, when it was around 36.89%. At the

same time, the participation of other cryptocurrencies such as Ethereum, Tether, Dogecoin, and others increased to 27.47%, 0.14%, 0.31%, and 22.01% in the total market capitalization. The renewed growth of the share of Bitcoin among other cryptocurrencies was recorded from April 2019 to March 2021, when in March 2021 the share of individual cryptocurrencies in the total market capitalization was as follows: Bitcoin 60.43%, Ethereum 11.53%, Tether 2.20%, BNB 2.26%, USD Coin 0.55%, Dogecoin 0.42%, Solana 0.21% and others 18.69%. In the later period, from May 2021, there was a further decline in the share of Bitcoin in the

total market capitalization, which in June 2023 was 45.9%. At the same time, the participation of Ethereum and other mentioned cryptocurrencies continued to grow. Ethereum's share rose to 19.90%, while other cryptocurrencies also saw growth.

These changes in the share of different cryptocurrencies in the total market capitalization reflect the dynamics and competition in the crypto world. It is important to monitor such changes to gain a deeper understanding of market trends and the factors that affect the distribution of market capitalization among cryptocurrencies.

Figure 3. Bitcoin Price Movement (2011-2023)



Source: (<https://coinmarketcap.com/>)

Bitcoin started its journey in June 2011 with an initial price of 17.17 USD.

Since then, a significant upward trend has been observed, which culminated in December 2017 when the price reached the amount of USD 16,919.8. After that, the price of Bitcoin experienced some fluctuations, but a significant jump in the price has been observed since October 2020, when it reached a value of 11,426.6 USD. The maximum price of Bitcoin was recorded in

November 2021, when it reached the amount of 66,953.34 USD.

However, since the end of 2021, Bitcoin experienced a price decline, leading to its value of \$25,732.11 in June 2023.

These fluctuations in the price of Bitcoin indicate the dynamism and volatility of the crypto market, where factors such as market sentiment, regulatory changes, and economic events are crucial to the price and value of cryptocurrencies.

Figure 4. Ethereum price movement (2016-2023)



Source: (<https://coinmarketcap.com/>)

In February 2016, Ethereum started its journey in the market with a price of 6.19 USD. During the analysis period, the price of Ethereum gradually increased, reaching a value of 1,457.62 USD in April 2021.

Since April 2021, Ethereum has experienced significant price growth, culminating in November 2021 when the price reached a maximum of \$4,570.48. However, after that period, Ethereum saw its price drop. In the later period, the price of the mentioned cryptocurrency fell, so in June 2023 it amounted to USD 1,749.3.

6. DEVELOPMENT OF THE GLOBAL CRYPTOCURRENCY MARKET AND ITS LEGAL REGULATION IN THE WORLD

Cryptocurrency adoption shows a global upward trend. According to the estimate for the year 2023, the average global adoption rate of cryptocurrencies is 4.2%, and the number of cryptocurrency users worldwide exceeds 420 million (<https://triple-a.io/>). Analysis of data from May 2023 indicates that the largest number of cryptocurrency users was recorded in the United States of America with 46 million users, followed by India with 27 million, Pakistan with 26 million, Nigeria with 22 million, and Vietnam with 20 million users (<https://triple-a.io/>).

The European Union (EU) has introduced pioneering measures requiring cryptocurrency service providers to effectively detect and prevent the illegal use of cryptocurrencies. These measures are part of a comprehensive legislative framework aimed at regulating digital currencies and ensuring transparency and user protection. In addition, the EU also introduces the "travel rule" concept that is already applied in the traditional financial sector, and will now include the transfer of funds in crypto form. These rules require that information about the source of the funds and the beneficiary travel with the transaction and be stored on both sides of the transfer. This EU step aims to create a single cryptocurrency market with clear rules and protection against financial crime (<https://www.europarl.europa.eu/>).

In 2022, the United States introduced a new regulatory framework aimed at enhancing the regulation of the cryptocurrency market. This new regulatory framework transfers regulatory authority to existing market regulators such as the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC). As part of these regulatory efforts, the SEC has demonstrated its presence by taking significant legal actions, including a lawsuit against Ripple. This lawsuit is based on the claim that Ripple raised over \$1.3 billion by selling its

XRP token in transactions that were not registered as securities. The lawsuit against Ripple illustrates the SEC's efforts to apply existing securities laws to cryptocurrencies. China classifies cryptocurrencies as property for inheritance purposes (<https://coingeek.com/>). The People's Bank of China (PBOC) has imposed a ban on cryptocurrency exchanges in the country, asserting that these platforms facilitate unauthorized public financing. Furthermore, China implemented a prohibition on Bitcoin mining in May 2021, leading to the closure or relocation of many mining operations to regions with more favorable regulatory conditions. In September 2021, a comprehensive ban on cryptocurrencies was enforced. Nevertheless, China is actively engaged in the development of a Central Bank Digital Currency (CBDC) known as the Digital Yuan (e-CNY). In August 2022, the subsequent phase of pilot testing for this CBDC was initiated. While cryptocurrencies do not hold the status of legal tender within Canada, the nation has exhibited a proactive stance in regulating digital currencies compared to other jurisdictions. Canada notably marked a pioneering milestone by approving a publicly traded Bitcoin exchange-traded fund (ETF), a development that has since seen several such funds listed on the Toronto Stock Exchange (<https://evolveetfs.com/>). In the realm of cryptocurrency trading platforms, the Canadian Securities Regulators (CSA) and the Investment Industry Regulatory Organization of Canada (IIROC) have established the requirement for these platforms and traders operating within the country to register with provincial regulatory authorities. Canada classifies all enterprises engaged in cryptocurrency investment as Money Services Businesses (MSBs) and mandates their registration with the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) (<https://fintrac-canafe.canada.ca/>).

The United Kingdom lacks specific legislation governing cryptocurrencies, but it designates them as assets rather than legal tender. Cryptocurrency exchanges are obligated to register with the United Kingdom's Financial Conduct Authority (FCA). The trading of cryptocurrency derivatives is prohibited, and stringent reporting requirements related to Know Your Customer (KYC), Anti-Money Laundering (AML), and Counter-Terrorist Financing (CFT) standards are enforced (<https://web.archive.org/>). Capital gains tax remains applicable to profits derived from cryptocurrency trading, with the specific taxation criteria contingent upon the nature of the activity and the parties involved in the transaction (<https://www.gov.uk/>). As of August 2022, cryptocurrency exchanges and custodial wallet

providers must adhere to reporting obligations introduced by the Office for Financial Sanctions Enforcement (OFSI). Entities engaged in cryptocurrency-related activities are mandated to promptly notify OFSI if they possess knowledge or reasonable suspicion of individuals subject to sanctions or those involved in financially sanctioned offenses. From a taxation perspective, the United Kingdom applies a regulatory approach to cryptocurrencies similar to other commodities (<https://www.bclplaw.com/>).

Japan has adopted a progressive approach to cryptocurrency regulation, recognizing them as legal property under the Payment Services Act (PSA). Cryptocurrency exchanges in Japan must register with the Financial Services Agency (FSA) and adhere to anti-money laundering and counter-terrorism financing (AML/CFT) requirements.

To enhance market transparency and security, Japan has established the Japan Virtual Currency Association (JVCEA), with all cryptocurrency exchange operators as members (<https://cointelegraph.com/>). Regarding taxation, gains from cryptocurrency trading in Japan are classified as income from other sources, and investors are subject to corresponding taxes (<https://news.bitcoin.com/>). The Japanese government is actively working to enhance regulatory measures, including in the area of taxation.

Recently, they announced new rules aimed at preventing money laundering when sending money through cryptocurrency exchanges. To achieve this, amendments will be made to the Anti-Transfer of Criminal Proceeds Act to enable the collection of customer information (<https://asia.nikkei.com/>).

India maintains an ambivalent stance on cryptocurrency regulation, with no definitive laws either legalizing or penalizing their use. Although a bill to ban private cryptocurrencies exists, it has not yet undergone voting (<https://www.mondaq.com/>). India currently imposes a 30% tax on all cryptocurrency investments and enforces a 1% tax deduction at source (TDS) on cryptocurrency trading (<https://indianexpress.com/>). In summary, India has been hesitant to make a conclusive decision regarding the outright ban or regulation of cryptocurrencies. The current regulatory landscape remains unclear and offers limited guidance to investors. India is actively engaged in developing a digital version of the Indian rupee, likely to be launched during the 2022-2023 fiscal year (<https://www.paymentsjournal.com/>).

Conversely, on June 9, 2021, El Salvador passed a groundbreaking law designating Bitcoin as legal tender, which took effect on September 7, 2021, making El Salvador the world's first nation to formally accept

Bitcoin as legal tender. The primary goal of this initiative is to enhance financial inclusion and streamline faster and more cost-effective transactions within the country (<https://www.pwc.com/>). El Salvador's acceptance of Bitcoin is underpinned by three principal reasons (<https://www.pwc.com/>):

1. Enhancing the efficiency of international remittances: Over 20% of El Salvador's GDP originates from remittances, a substantial part of which relies on cross-border money transfers. Traditional remittance systems often entail high costs and complexities, with fees from the United States to El Salvador ranging from 30-50% of the transfer's value, in addition to the challenges related to physical cash handling.
2. Expanding financial inclusion: Approximately 70% of El Salvador's population lacks access to traditional banking services. Bitcoin technology can offer a broader demographic easier entry to financial services.
3. Reducing dependence on the US dollar: A key objective of El Salvador's legislation is to establish Bitcoin as a neutral store of value for savings, mitigating reliance on the US dollar.

In April 2022, the Parliament of the Central African Republic (CAR) ratified Law No. 22.004, which introduced regulations for the utilization of cryptocurrencies within the country.

This historic move positions CAR as the world's second nation and the first in Africa to designate cryptocurrencies as legal tender. The decision has engendered diverse reactions, with some quarters offering commendation while political opposition, the governors of the Bank of Central African States (BEAC), the World Bank, and the International Monetary Fund (IMF) have expressed criticism. It's essential to underscore that this decision places CAR in a state of disagreement with the Bank of Central African States (BEAC), which serves as a regional central bank for the Central African Economic and Monetary Community (CEMAC).

The Central African Republic is a CEMAC member, and this decision stands in violation of the CEMAC Agreement. The Central African Banking Commission, an oversight entity within BEAC, has formally prohibited the utilization of cryptocurrencies for financial transactions throughout the CEMAC region.

Furthermore, Algeria has enacted a ban on cryptocurrencies, and Egypt has previously deemed Bitcoin transactions as "haram."

However, Egypt has recently passed legislation that establishes specific rules governing the use of financial technology.

Nigeria, in contrast, has prohibited cryptocurrency trading and introduced its digital currency, while South Africa is presently in the process of formulating regulations for the cryptocurrency sector (<https://africlaw.com/>).

CONCLUSION

Cryptocurrencies represent innovative financial instruments that have developed as a result of technological advances. The development of their market is characterized by exceptional unpredictability and speed of change. Globalization, accelerated technological development and the recent global crisis caused by the COVID-19 pandemic have created a favorable framework for the flourishing of the cryptocurrency market.

After the global financial crisis in 2008, Bitcoin was created as the first cryptocurrency, and later other cryptocurrencies such as Ethereum appeared. Bitcoin dominated the market and had the largest share in the total market capitalization, but during the analyzed period, a decrease in its share was observed in favor of other cryptocurrencies such as Ethereum, Tether, BNB, USD Coin, and others. This diversity of cryptocurrencies indicates the dynamism of the market and the wider range of investment opportunities. All cryptocurrencies have seen an upward trend in prices over time, which has sparked great investor interest and wider acceptance of cryptocurrencies as an alternative form of investment. However, this rapid valuation also carries the risk of creating bubbles and future market declines.

Many countries around the world are implementing regulations for the use of cryptocurrencies, while some countries such as El Salvador and the Central African Republic have even legally recognized cryptocurrencies as a means of payment.

This legal regulation aims to ensure the stability and protection of users, while at the same time supporting innovation and development of the digital economy. Through the analysis of the development of the global cryptocurrency market, the work contributes to a better understanding of the complexity and possibilities of this financial sector.

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overall market capitalization during the observed period from 2014 to 2023 In the later period, from May 2021, there was a further decline in Bitcoin's share of the total market capitalization, which stood at 45.9% in June 2023. At the same time, the share of Ethereum and other mentioned cryptocurrencies continued to rise. Ethereum's share increased to 19.90%, while other cryptocurrencies also recorded growth. Bitcoin began its journey in June 2011 with an initial price of USD 17.17. The maximum price of Bitcoin was recorded in November 2021 when it reached USD 66,953.34. In February 2016, Ethereum entered the market with a price of USD 6.19. During the analysis period, the price of Ethereum gradually increased, reaching a value of USD 1,457.62 in April 2021. The adoption of cryptocurrencies reflects a global growth trend. According to estimates for the year 2023, the average global cryptocurrency adoption rate is 4.2%, with the number of cryptocurrency users worldwide surpassing 420 million (<https://triple-a.io/>). Data analysis from May 2023 indicates that the highest number of cryptocurrency users was recorded in the United States with 46 million users, followed by India with 27 million, Pakistan with 26 million, Nigeria with 22 million, and Vietnam with 20 million users (<https://triple-a.io/>).



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SUMMARY

Cryptocurrencies represent a new form of digital assets that exist solely on the internet. The first cryptocurrency to appear on the global market was Bitcoin, and its emergence is linked to the first financial crisis of 2008. Bitcoin's market capitalization grew rapidly and reached its all-time high in 2017, at USD 334 trillion. Later, there was an expansion of new cryptocurrencies, with over 1500 existing in today's time, such as Ethereum, Tether, BNB, USD Coin, and others. Bitcoin was invented by an individual (or group) known as Satoshi Nakamoto (Pinkerton, 2023). In June 2023, the global market capitalization of cryptocurrencies reached a value of USD 1,053 trillion. However, after the COVID-19 pandemic, the market experienced an expansion, with the market capitalization reaching its maximum value of USD 2,828 trillion in November 2022. Bitcoin made the most significant contribution to the

ECONOMIC CHALLENGES THAT SMALL OPEN ECONOMIES“ ARE (NOT) ALLOWED TO AND CAN (NOT) SOLVE

-Why Bosnia and Herzegovina can (not) answer-

ЕКОНОМСКИ ИЗАЗОВИ КОЈЕ МАЛЕ ОТВОРЕНЕ ЕКОНОМИЈЕ

“ (НЕ)СМИЈУ“ И (НЕ)МОГУ РЈЕШАВАТИ

-Зашто Босна и Херцеговина (не)може одговорити-

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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: *The modern world is a complicated paradigm of influence and struggle for interests, with the fact that the possibilities of winning positions have diversified and increased in a sophisticated way!?. Military, economic and political scenarios and penetration projects are integrated with the aim of gaining dominance in the market, especially in the market of having modern technologies, strategic raw materials and resources. "Exporting ideology" has become the doctrinal and governing credo of the supremacy of the capitalist mode of production and the methodological framework for the operationalization of globalization as the "perfect model" of international economic relations!?. Globalization, based on the philosophy of liberalism, cannot consistently function and solve problems because theoretically, the issue of competition, equal rights for all, as well as the issue of subsidies and risk insurance, and the problems of the "natural lottery" have not been satisfactorily resolved!?. Contemporary philosophical, political and economic thinking is faced with intriguing conundrums in the domain of formulating answers to the following areas and generated questions: 1. Current position and perspectives of globalization; 2. National economies and international economic order; 3. Sovereignty - security – economy; 4. Classical*

dichotomy commodity-monetary sector; 5. Economic crises. In all of this, the position of Bosnia and Herzegovina, which is "struggling frantically" to be "its own", "European" and "sovereign", is a special challenge in the current circumstances of institutional and management deformations and incompleteness, in which everyone is continuously against the positions for which a certain political segment advocates, and vice versa!?. On the other hand, history teaches us that the vices and whims of the big have always been paid for by the small!?!?!?

Key words: *globalization, national economy, institutional setting, sovereignty, international economic relations*

Апстракт: *Савремени свијет је компликована парадигма утицаја и борбе за интересе с тим да су се могућности освајања позиција софистицирано диверзификовале и увећале!?. Војни, економски и политички сценарији и пројекти пенетрације су интегрисани с циљем освајања доминације на тржишту, посебно на тржишту располагања савременим технологијама, стратешким сировинама и ресурсима. „Извоз идеологије“ је постао доктринарни и управљачки кредо супремације капиталистичког начина производње и*

методолошки оквир за операционализацију глобализације као „савршеног модела“ међународних економских односа!?! Глобализација, заснована на филозофији либерализма не може конзистентно да функционише и рјешава проблеме јер теоријски није на задовољавајући начин ријешено питање конкуренције, једнаких права за све, као и питања субвенција и осигурања од ризика, те проблеми „природне лутрије“!?! Савремено филозофско, политичко и економско промишљање се суочава са интригантним недоумицама у домену формулисања одговора на следећа питања и генерисана питања: 1. Актуелна позиција и перспективе глобализације; 2. Националне економије и међународни економски поредак; 3. Суверенитет – безбједност – економија; 4. Класична дихотомија робни-монетарни сектор; 5. Економске кризе. У свему овој позицији Босне и Херцеговине, која се „грчевито бори“ да буде „своја“, „европска“ и „суверена“, је посебан изазов у актуелним околностима институционалних и управљачких деформација и недовршености, у којима су сви континуелно против ставова за које се одређени политички сегмент залаже, и обрнуто!?! С друге стране, историја нас учи да су обијест и хирове великих увијек плаћали мали!?!?!

Кључне ријечи: глобализација, национална економија, институционални сетинг, суверенитет, међународни економски односи

JEL classification: A11, A12, D81, D82, E41, E42, F33, F43

1. INTRODUCTION

In modern conditions, some of the richest countries in the world have organized political, economic and military alliances with the aim of affirming the advantages of an open market, freedom of movement of labor, goods, capital, innovation and technology, and with the ambition to continuously strengthen the concept institutionally through formal and informal alliances in to the interest of key actors who prefer competent and cheap labor, the most propulsive technologies and innovations, abundant capital and the removal of barriers to access to targeted markets!?!?

If you want progress, success and the realization of your dream, the key question is how to create, formulate and implement ideas, concepts and policies when everything is known, given, set and difficult to change without restrictions and sanctions.

By the way, one of the most important questions of the theory and philosophy of liberalism for which we do not have an effective answer and risk protection mechanisms that arise due to unequal starting conditions in the competition process, is precisely the fact that it is actually impossible to reach equal (or approximately equal) conditions due to the natural lottery and the fact that some actors were born in a rich country and some in a poor country!?

Due to the absence of systemic solutions established on stable and sustainable theoretical propositions about freedom (competition) and equal rights for all, the world is being formatted into a wanton majority of the richest and strongest, which results in unscrupulous exploitation and an increase in the gap between the rich and the poor!?

Effective answers are not easy to find because of the prevailing prejudice that in the existing circumstances any effort to change something for the better is in vain!

In the belief that not everything is "lost" in advance, we indicate some of the thinking and operational steps that could lead to positive changes!?

2. WHAT TO DO WHEN FACING GLOBALIZATION

Globalization was created in an attempt to make the economy a universal state of thought and organization everywhere in the world in order to increase economic performance and goals continuously and undisturbed!?

This context makes globalization one of the most modern and propulsive approaches to economics as a theoretical concept and operational implementation.

As a question of special importance and importance, economics has been a special challenge since time immemorial, both for ancient thinkers, philosophers and poets, and for contemporary thinkers of the philosophy of liberalism and different directions about existentialism, motives, human action, optimization and organization of society!?

Discussions on economic issues are primarily found in Aristotle, and they have to a greater extent an ethical than an economic, "economist" dimension, which is natural for the state of mind and thoughts of that time; ETHICS, as is known, dominated in every domain and meaning!

Such a point of view is logically imposed by a superficial inventory view of the repertoire and heritage of ancient thinkers, philosophers and poets, which most probably encouraged Alexander

Gray, a prominent researcher of the history of economic doctrines, to take a critical look at the relationship between Economics and Ethics and establish: "Economy (in ancient Greece) was not only the handmaiden and assistant of Ethics (as perhaps it always had to be); she was suppressed and marginalized by that more successful and pampered sister, so researchers, in search of the origin of economic theory, can only find disconnected fragments and unfinished ideas". (Gray, 1984. p. 14.)

But, it is interesting that, even if fragmentarily, ancient thinkers identified economic phenomena in a given context and established certain standards of propositions about which we still debate today and/or on the basis of which we establish adapted or new propositions.

"Accordingly, it is clear that some people are free by nature, and others are slaves, and that it is both useful and just for slaves to be slaves" (Aristotle, 1984, p. 9) is an ethical code adapted to a given social relationship, which is the pretext the absence of consideration of price theory because wages were not paid, as well as interest for productive purposes, because there were no such arrangements.

Even more, interest was ethically prescribed in the most rigid way with the formulation of the function of money as a medium of exchange, which is one of the functions of money retained to this day.

"The most hated kind of money-making, and for a reason, is usury... Because the purpose of money was to be used for exchange, not to be increased by interest" or "some people turn every value-virtue or art into a means of making money; they believe that this is the goal and that all things must contribute to the achievement of that goal" (Aristotle, 1984. p. 6/7., 8.)

A significant contribution to the development of economic ideas in that period was also made by Xenophon, emphasizing the importance of the division of labor and the importance of peace in the development of the economy, but also Plato by problematizing the ideal of power that should be exercised by chosen honorable individuals-"tutors" with the principle of ascetic renunciation of the right to property and income above the necessary needs: "If they ever acquire houses or lands or their own money, they will become householders and husbands instead of tutors, enemies and tyrants instead of allies of other citizens" (Plato, according to Gray, p.19), which is ideological profiling and anticipation centuries later

formulated (in a certain form and measure and operationalized) communist dogma.

But Plato's most gifted student, Aristotle, who undoubtedly advocated the importance and effectiveness of ownership, made an effort to prevent things from going "in the wrong direction". because love for oneself is a natural feeling...No one, when people have all things in common, will no longer set an example of liberality or do good deeds; because liberality consists in how property is used" (Aristotle, 1984). On those grounds, the Romans, with the codification of Roman law, ordained the institution of private property on the pedestal of the universal heritage of civilization.

The breakdown of collectivist socio-economic systems additionally positioned and strengthened the institution of private property in the focus of the doctrinal and operational paradigm of contemporary civilization. All doctrinal concepts of economic and social development were established on those foundations, with the fact that even dogmatic approaches that prefer the importance and role of the common good and public interest do not in any case call into question the inviolability of private property.

A brief review of the initial ideas about the economy and the dilemmas about its organization, effectiveness and ethics aims to ask how it is possible that the same or almost the same questions and doubts are still on the scene today in the same content or a variety of modified variations that complicate the questioning, with fascinating and troubling analogies that confuse, apologetic indoctrinations that use crude propaganda to distract attention from the essence of established propositions and relationships.

As if the gods, masters and slaves, "assigned by nature" mission - before Christ, do not know and/or do not want to improve and/or change it in thousands of years of duration!?¹

Globalization is a repertoire of ideas and organizations that cannot be ignored and/or avoided!?

The claim is supported by the fact that all countries are willingly and/or unwillingly involved in globalization processes, organization and rules of functioning with the aim of valorizing their own

¹ See in detail: Тушевљак, С.(2014). Маргиналије о економији и кризи – Питања која о(без)храбрују актере, *Зборник радова Научни скуп ЕКОНОМИЈА ДАНАС – ЕКОНОМИЈА И КРИЗА – Треба ли нам нови одговор*, Универзитет у Источном Сарајеву, Андрићград 2014., ISBN 978-99976-610-1-2, COBISS.SR-ID 4645912

potentials as best as possible, that is, to minimize potential losses and damages!?

Globalization is theoretically based on the determinants of the philosophy of liberalism and the general intention to operationalize propositions about maximizing performance.

In the process of searching for answers, it is most important to look in detail at:

1. Thought, theoretical and ideological context of the phenomenon of globalization;
2. The position of the entity and the set of circumstances and conditions that we want to improve;
3. Resources we can use for improvement;
4. Necessary redesign of the organization and
5. Timing - deadlines for implementation.

1. Thought, theoretical and ideological context of the phenomenon

Prompt adjustment of the "thought software" is extremely important because without understanding that "we fell asleep in socialism and woke up in capitalism" one cannot understand how quickly extremely radical changes happened!?

For effective management of such radical changes, it is necessary to know the theoretical and ideological framework of functioning in new circumstances, which completely changes the focus and importance of the individual and individual entities in the business and social environment!?

2. The position of the entity and the set of circumstances and conditions that we want to improve

The individual, as well as the individual business entity, are exposed to the effect of the market, market factors and conditions without protection and limitations exactly as regulated by the propositions of globalization. The free flow of people, goods and capital is consistently realized in the goods sector, with almost negligible status restrictions, while in the workforce and capital sector the effects on related areas and risks are calculated, which limits and slows down the dynamic flow processes!?

3. Resources we can use for improvement

The processes of adaptation to new circumstances are determined by market criteria as imposed by the concept of globalization. For these reasons, as well as for all others, it is important to understand that the individual and individual entity in the economy is the focus of "interest" and that no one will care about their interests until themselves,

while everyone else is under the "attention" of the state, social and other policies, where this "attention" in poor countries is more and more limited every day if there are no effective answers to the possible negative consequences of globalization!?

Good answers should be sought in consistent reliance on one's own strengths and creative valorization of one's own human and material resources, because the state, even if it wanted to do that, does not have sufficient resources!

4. Redesigning the organization is necessary

In order to realize the transition as efficiently as possible, in addition to organizational redesign, appropriate thought settings and educational reforms are also necessary. It is useful to understand that capitalism has become the dominant political and economic system and all ideas about a different organization of society, the state and the economy are neither rational nor operationally useful in the short term!?. It would be intelligent to understand that it is most useful for small, open economies to lead their own policies that are focused on the most efficient valorization of their own material and human resources, based on models of modern rational organization. Each individual entity, citizen or company legitimately and autonomously takes care of its own interests, functional and existential needs and priorities and creates a rational organization for their realization!?

5. Timing - deadlines for implementation

An effective and efficient approach to adjusting institutions, individuals, business and social entities to the conditions of transition and globalization implies that the processes take place in synchronization and in the shortest possible time in order to minimize the harmful consequences of changes in the political, social and economic system!?

The most important thing in this process is to get rid of all ideological prejudices and apologetic approaches of glorifying preferences imposed by propaganda in order to rationally manage business opportunities and risks in "real" time and circumstances!?

3. WHAT TO DO WHEN DEALING WITH BOSNIA AND HERZEGOVINA

In general, the world has not changed, nor has the position, opportunities and influence of small and underdeveloped countries in international relations.

Only the mechanisms and effectiveness of influence have changed and everything has

accelerated in a sophisticated manner; pressures, realization of interests and power, mechanisms of control of target performance in the monetary and financial sphere, use of strategic resources, weapons and military force.

In this context, the position of small states and open economies such as Bosnia and Herzegovina (and Republika Srpska) should be considered with the aim of reaching a consensus on vital interests and the strategy of their realization by relying primarily on their own material and human resources.

The basic premise for formulating this approach is political stability, which cannot be achieved in Bosnia and Herzegovina without the consent of key political actors and respect for the legitimate interests of entities and constituent peoples in accordance with the Constitution of Bosnia and Herzegovina.

On the other hand, the mechanisms of international political presence, defined by the Dayton Peace Agreement and the Bonn mandate, function as unproductive partnership and/or guardianship without effective responsibility, which causes more harm than good to the political stability and social development of Bosnia and Herzegovina!?

The current model of international presence significantly limits the functionality of the democratic mechanism and the effectiveness of the institutions of Bosnia and Herzegovina.

In such a context, political factors in Bosnia and Herzegovina are to a significant extent limited in formulating functioning mechanisms in an authentic and authentic manner and taking responsibility for their implementation.

In the conditions of limited state and monetary sovereignty in Bosnia and Herzegovina, it is not possible to reach a consensus on the most important issues of the survival and functioning of the state due to the fact that the current mechanism of international presence voluntarily imposes political and institutional solutions with selective favoring of political "favorites", violation of the Constitution and neglect of legitimate interests of key political factors and constitutive entities.

Few believe in declarative proclamations about partnership in the function of the progress of Bosnia and Herzegovina, not even decades-long political "favorites" (with and without quotation marks), because the political and essential current mechanism of international presence is increasingly manifested as guardianship without transparent responsibility, which is become an end in itself.

Such circumstances have negative implications for the political stability and sustainability of Bosnia and Herzegovina, but also have a detrimental effect on the business environment and economic development.

The imposition of solutions that, without the consent of all relevant political factors in Bosnia and Herzegovina, derogate from the position of the entity and the interests of the constituent peoples have unfathomable negative consequences for political stability, economic position and development prospects.

On the other hand, key international factors did not make an effort to reform the mechanism of international presence (OHR and CURRENCY BOARD) in a way that would enable the peoples and key political factors in Bosnia and Herzegovina to take responsibility for their own development.

With all that, in the absence of fundamental research, there is no systemic cooperation between political factors and the academic community, and no use of knowledge in solving complex social and economic problems!?

What are the recommendations for Bosnia and Herzegovina in the current circumstances and in the future?

Fortunately, it's not difficult at all!!!

Recommendations for progress should be created and formulated by the subjective strengths of Bosnia and Herzegovina.

The "good services" of the most influential international actors generated many successes, functional benefits and excellent results for Bosnia and Herzegovina, excellent, but not timely and sufficient, for which the key domestic political factors in Bosnia and Herzegovina who were not capable (or they didn't want) to autochthonously resolve disagreements and misunderstandings, instead they brought the country into war, irresponsible arbitrariness and the supervision of foreign powers!?

And none of that had to happen!?

Thirty years later, almost identical problems, misunderstandings, controversies and arguments are on the scene, in which "reckless bureaucrats and experts" trace the Euro(Atlantic) path through propositions and conditions that will certainly not be fulfilled in their lifetime, while almost all important issues are ignored. of real life and young and old!?

What are, in the current circumstances, the most important issues for Bosnia and Herzegovina should be defined by the key domicile factors, and

if they fail to agree, it is necessary to open a dialogue with the European Union on:

1. essential reform of the model of the presence of the international factor in Bosnia and Herzegovina,
2. terms and conditions of admission of Bosnia and Herzegovina to the European Union i
3. program and transition deadlines.

Regarding the previously addressed questions (1-3), subjective forces should be expressed freely in democratic procedures based on analyzes and arguments prepared by independent and competent expert structures, with the fact that the processes under 1. and 3. should be limited to a maximum of 5 years, and processes under 2 to 10 years.

CONCLUSION

Unexpected and very complex changes took place in Bosnia and Herzegovina:

- democratization,
- war,
- political independence with monitoring by the international community,
- transition i
- globalization

The previously addressed processes caused the inevitability of adjusting the entire social, social, economic and institutional infrastructure in the functional, legal and operational domain with the aim of risk management and with the aim of maintaining functional potential and identity recognition!?

In some things it succeeded, and in many things it did not because of inexperience, poorly structured and underdeveloped education and a deficit of functional, useful and usable knowledge!?

The context is much more complex than the level of generalizations expressed, which is sufficiently illustrated by the (impossible) answers to only part of the relevant challenges facing Bosnia and Herzegovina (and Republika Srpska):

- To what extent certain decisions made under the influence and sponsorship of the international factor (including certain decisions of the Constitutional Court of Bosnia and Herzegovina) influence the generation of political instability, which is directly reflected in the growth of "country risk", the growth of interest rates, the decline of competitiveness and investment!?

- Do the interest rates in the candidate countries for joining the EU, which are 40% to 4000% higher than the corresponding interest rates in the European Union countries, also reflect the

differences in risk, or is the global engineering of financial imperialism on the scene!?

- To what extent does the interaction of the high cost of capital and debts encourage growth and/or the maintenance of high interest rates and the path to "debt slavery"!?

An extremely good and useful circumstance is that Bosnia and Herzegovina is one of the least indebted countries in Europe, which with the implementation of three key recommendations:

1. essential reform of the model of the presence of the international factor in Bosnia and Herzegovina,
2. precise deadlines and conditions for the admission of Bosnia and Herzegovina to the European Union (maximum 10 years), and
3. defined programs and transition deadlines (up to 5 years maximum), creates solid preconditions for economic recovery and development!?

Otherwise, the problems generated by the recession are difficult to solve in the existing institutional setting (OHR, currency board), which evidently does not have the capacity to creatively manage changes, but, apparently, there is no interest (!?) of the key political factors in changing the existing mechanism. anything, so that the mismatch of authority and responsibility continuously generates not only political misunderstandings, but also negative implications for the economic position and interests of Bosnia and Herzegovina (and Republika Srpska)!? In order to change such circumstances, political will and consensus are needed that one's own problems must be primarily solved by one's own forces, for which the political factors do not show the necessary agreement!?. Otherwise, conflicts and misunderstandings threaten to destroy not only the economic potential and opportunities of the country, but also peace!?

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SUMMARY

Globalization, international political, trade and financial relations and their effect on national economy is an exceptional challenge for serious research that would undoubtedly should generate creative reflections on strategy and policies!/? In the case of Bosnia and Herzegovina, the challenge is more complex and intriguing because it is a small, open economy in transition, a country under international supervision (OFICCE OF HIGH REPRESENTATIVE-OHR) without monetary sovereignty (CURRENCY BOARD) and a country without institutional opportunities to create autonomous and autochthonous ones economic policies!/? Globalization arose in an attempt to make economics a universal state of thought and organizations all over the world in order to increase economic performance and goals continuous and uninterrupted!/? This context makes globalization one of the most modern and propulsive approaches economics as a theoretical concept and operational implementation. Bosnia and Herzegovina was created the way I was created, in the end in DAYTON as everyone's need to stop the war!/? Unfortunately, even today irresponsible but influential factors produce meaningless, unsustainable, illogical, often unconstitutional and illegal provocations in order to produce tensions and continuously maintained "status quo"!/? In order to systematically approach the solution of the addressed problems, it is necessary to: 1. carry out an essential reform of the model of the presence of the international factor in Bosnia and Herzegovina, 2. to specify the deadlines and conditions for the admission of Bosnia and Herzegovina to Europe union (maximum up to 10 years), and 3. define programs and transition deadlines (up to 5 years).



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ECONOMIC CHALLENGES IN A GLOBALLY TRANSITIONAL ERA: CONTEMPORARY PERSPECTIVES

ЕКОНОМСКИ ИЗАЗОВИ У ДОБА ГЛОБАЛНЕ ТРАНЗИЦИЈЕ: САВРЕМЕНЕ ПЕРСПЕКТИВЕ

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Paper presented at the 11th International Scientific Symposium „EkonBiz: Impact of geopolitical changes on the national economy“, Bijeljina, 22 – 23th June 2023.

Abstract: This article derives its foundation from my conference keynote address. Specifically, the perspectives I have chosen align with images and realities drawn from the contemporary global economy, which I have synthesized into a comprehensive collection of the most significant contemporary economic challenges we encounter worldwide. The purpose of each of these movements is to serve as a vivid point of reference for those of us who are conscientiously striving to enhance academic clarity and reasoning. This endeavor becomes particularly vital in a world characterized by an excess of information, often riddled with contradictions, misinformation, and inaccuracies. Such circumstances frequently lead to substantial gaps in knowledge and, even more significantly, deficits in wisdom.

Key words: Energy crisis, Green transition, Global production, Macroeconomic policies, Geopolitics

Апстракт: Овај чланак се заснива на мом уводном предавању на конференцији. Конкретно, перспективе које сам одабрао усклађене су са реалним сликама савремене свјетске привреде, коју сам објединио у разумљиву збирку најзначајнијих савремених економских изазова са којима се сусрећемо широм свијета. Сврха сваког од ових приказа је да послужи као живописна референтна тачка за оне од нас који савесно настојимо да побољшамо академску јасноћу и разумјевање. Овај подухват постаје посебно важан у свету који карактерише вишак информација, често

прожет контрадикторностима, дезинформацијама и нетачностима. Такве околности често доводе до значајних празнина у знању и, што је још важније, недостатка мудрости.

Кључне ријечи: Енергетска криза, Зелена транзиција, Глобална производња, Макроекономске политике, Геополитика

JEL classification: F20, E30

1. INTRODUCTION

From a historical retrospective, the collapse of the Roman Empire might be widely attributed to a multitude of factors. These include the loss of political cohesion and military control across its Mediterranean dominions, the declining health and decreasing numbers of its Latin populace, the antiquated nature of its economic and colonial systems, a failing economy coupled with diminishing agricultural output, inept leadership among its emperors, stark social disparities and unequal wealth distribution, widespread poverty and extreme enslavement, internal power struggles, and the adverse effects of climate change that began affecting many Mediterranean regions after 150 CE.

Furthermore, a devastating earthquake and tsunami in the eastern Mediterranean in 365 CE, which is considered one of the most substantial Mediterranean earthquakes of the first millennium, hastened the demise of the Roman Empire. It marked the end of the "Imperium Romanum," a symbol of the earliest form of globalization that

had persisted for 450 years (Matthews and MacGillivray, 2022).

Indeed, the causes of the collapse were mainly political, economic and ideological, and could be argued that several direct parallelisms can be made with the world that we all experience today.

The research question which informs this paper is:

What are the paramount economic challenges currently confronting the global community, exerting a profound influence on the evolving landscape of our world?

In both my presentation and the subsequent article, I have drawn inspiration from Modest Petrovich Mussorgsky's renowned piano suite, "Pictures at an Exhibition" (1874). Mussorgsky crafted his ten movements based on drawings and watercolors by Hartmann, created during the artist's travels to various places, including Italy, France, Poland, Russia, and Ukraine. Similarly, my selection of movements corresponds to images and realities borrowed from our modern global economy, forming my own suite of pictures of a world in transition.

2. CONCEPTUAL SCHEMAS AND EMPIRICAL PERSPECTIVES

2.1. Europe's economic engine is breaking down

Germany's presidential palace in Berlin is no longer lit at night, the city of Hanover is turning off warm water in the showers of its pools and gyms, and municipalities across the country are

preparing heating havens to keep people safe from the cold Germany currently faces the prospect of a protracted and gradual decline, which could have repercussions that resonate throughout the entirety of the European Union. (Figure 1). And that's just the beginning of a crisis that will ripple across Europe (Bloomberg, 2022a).

In the European Union, we are the largest global importer of energy - we import 58% of the energy we consume, with Russia, until recently, being the leading supplier for almost half of our energy imported commodities (Eurostat, 2022).

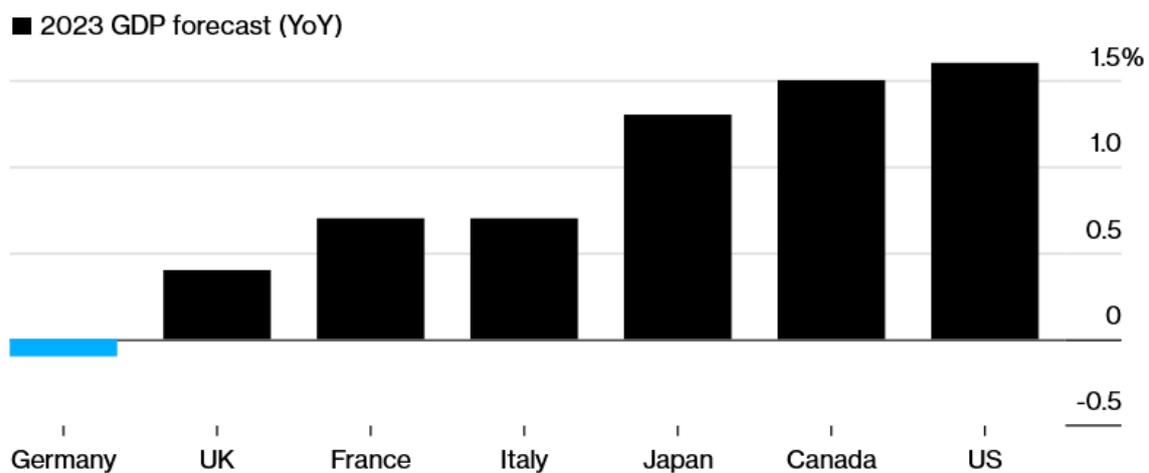
Much of Europe is feeling the strain from Russia's squeeze on natural gas deliveries, yet, no other country is as exposed, as the region's biggest economy: gas is the single largest source of energy on which Germany's mighty industrial base relies and nearly half the homes.

As Robert Habeck, Germany's vice chancellor and economy minister, said "The challenges we're facing are enormous and they affect significant areas of the economy and society." (Bloomberg, 2022a).

Fears of energy rationing and a looming recession in Germany have been mounting in the last six months, and authorities have voiced concern about social unrest if the energy shortage spins out of control.

"Germany developed a business model that was largely based on dependence on cheap Russian gas," Habeck had told reporters in Berlin, slamming the business model as meaning dependence on an "enemy" of international law, "liberal democracy and its values."

Figure 1: Germany has the worst outlook in the G-7



Source: IMF DataMapper (2023)

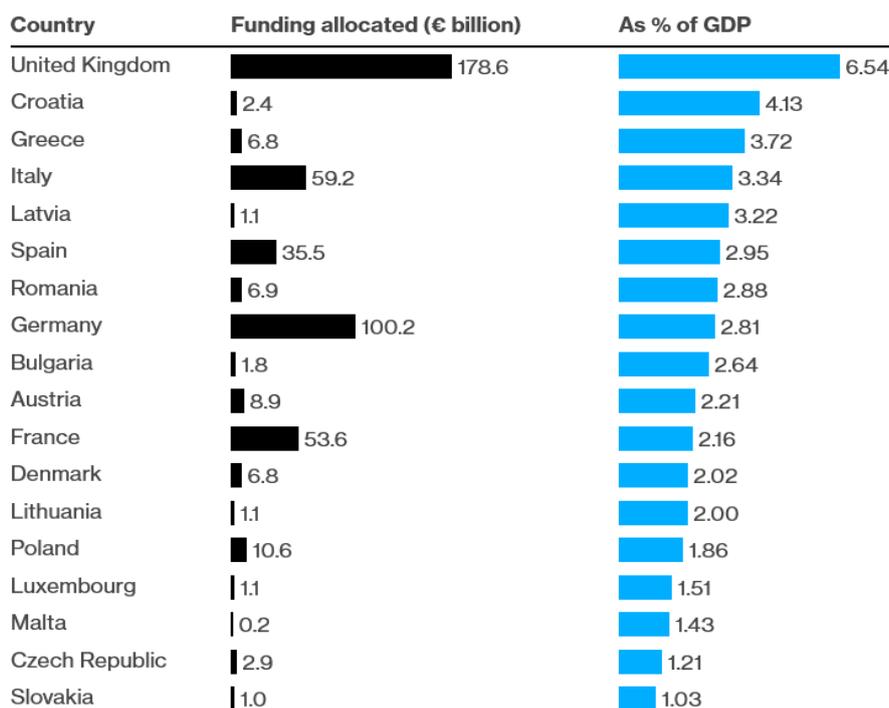
“This model has failed and it is not coming back,” he said (Al Mayadeen, 2022).

The age of industrialization for Europe’s largest economy and industry started in 1871. Today, the world’s fourth-biggest economy and its third-biggest exporter of goods, faces a looming threat of de-industrialization. It is a crunch time for a business model built on Russian gas and Chinese demand (The Economist, 2022).

2.2. THE BILL OF “FAILED” GREEN TRANSITION

The bill for Europe’s energy crisis is nearing 500 billion euros (Figure 2) as governments have rushed to cushion the impact of the energy crunch on consumers and businesses, e.g., via subsidies for heating and measures to keep some energy companies afloat, according to the Bruegel think-tank (Bloomberg, 2022b).

Figure 2: European governments have allocated about EUR 500 billion to cushion households and firms.



Source: Bloomberg (2022b), Bruegel

Initially designed as a temporary response to what was supposed to be a temporary problem, these measures have ballooned and become structural. These numbers increased as energy prices remain elevated. Indicatively, Germany recently announced it will borrow an extra 200 billion euros to cover the cost of capping natural-gas prices.

The magnitude of the burden enters into perspective when compared with the European Green Deal Investment Plan, i.e. the investment pillar of the Green Deal and the planned €1 trillion in sustainable investments over 2020-30 (European Commission, 2022).

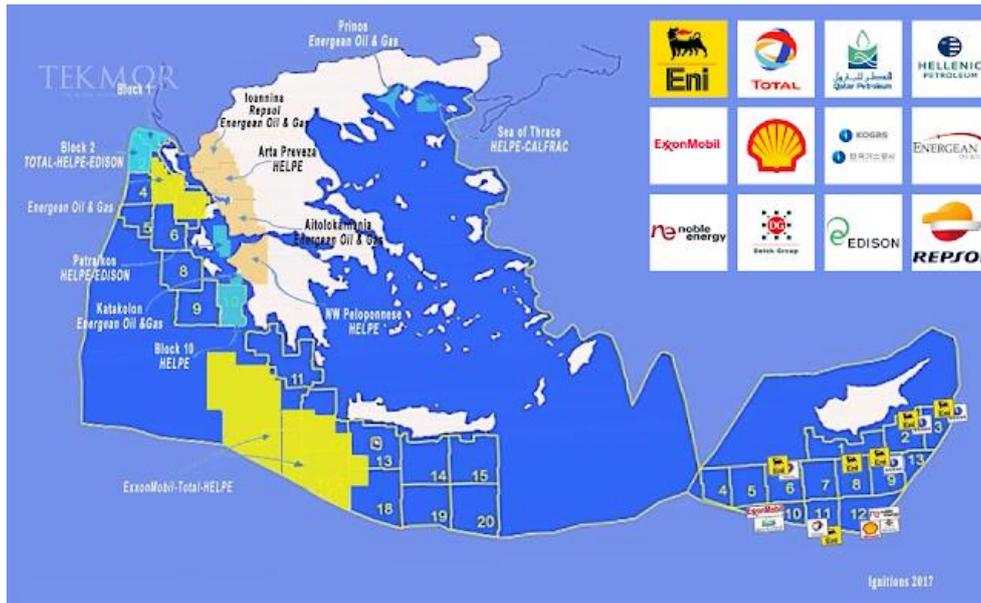
In other words, we have already consumed in subsidies within half the year 2022 colossal monetary resources that were aimed to cover the 10-year plan of the largest ever European’s economy transformation. Undoubtedly, this is

clearly not only unsustainable from a public finance perspective, but also endangers to derail and set as obsolete the overall European Green Deal at its infant stages.

2.3. CYPRUS AND GREECE: THE EUROPE’S LOST OPPORTUNITY

In a scientific conference that I participated in Al Ain, UAE, I had mentioned that the countries of the Eastern Mediterranean had the potential to become the seven UAE Emirates of the region (Kontakos, 2015). Since 2011, significant offshore reserves of natural gas have been officially discovered in Cyprus’ Exclusive Economic Zone (EEZ) and even higher quantities in Greece’s EEZ. Various licensing rounds have been performed since then, with the participation of large International Oil Companies, or Super Majors, and other specialized IOCs and National oil & gas companies, as depicted in Figure 3.

Figure 3: Offshore Exploration Licenses in Cyprus and Greece.



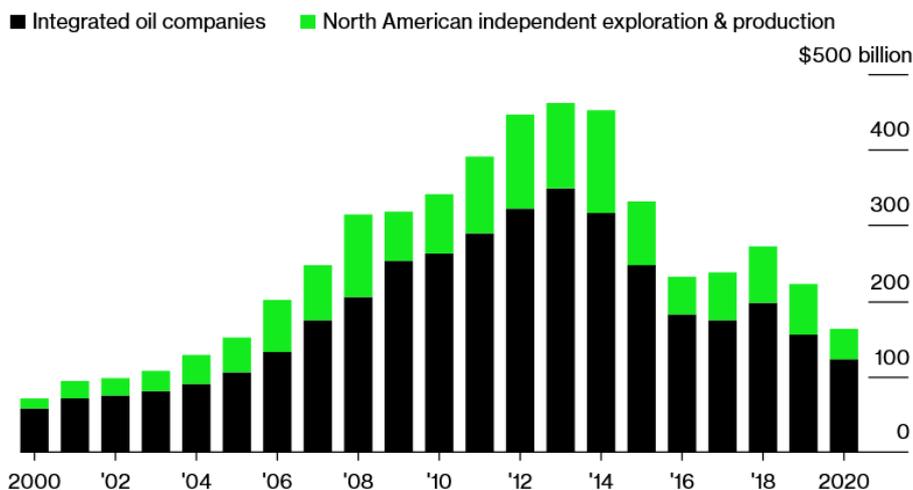
Source: Ignitions (2017)

Based on evidence from available seismic data and test exploration drillings, Greece, Cyprus and partly Israel, have the capacity to cover 50 percent of the European needs in natural gas for the next 30 years (Kontakos, 2015). The Cypriot and Greek governments had been expected to complete since 2018 various required infrastructures, as part of the European Energy Strategy 2020 Infrastructure package. Instead, prolonged delays have occurred in the implementation of all relevant projects (Kontakos and Zhelyazkova, 2015). Two are the main causes for this inertia:

First, the collapse in capital spending by O&G companies, due to the investment uncertainty

caused by the political priorities for the Green transition (Figure 4). The energy crisis in Europe did not begin with the start of Russia’s conflict with Ukraine, in Donbass, but much earlier, a year ago, if not even earlier. It began, while it may sound strange, with the ‘green’ agenda. While introducing green, renewable energy is important for tackling climate change, multiple European countries opted to abandon fossil-fuel energy at once to reach short-term political goals. The Green transition, in my view, has now failed, as mentioned earlier. Second, the geopolitical uncertainty, between Turkey, Greece and Cyprus, within the exclusive economic zones of the two sovereign countries.

Figure 4: Global Oil & Gas capital expenditures. From Very High to Extremely Low.



Source: Bloomberg Intelligence (2020)

2.4. KING DOLLAR IS CRUSHING ITS LEGS

The Euro currency, the “left” leg of dollar, has recently sunk to edge of dollar parity at a 20-year low (Figure 5). Europe suffers most from the Ukrainian-Russia military confrontation, which has sparked an energy crisis and could lead to potentially a long and deep recession. (Bloomberg, 2022c).

It’s the first time the euro has sunk to that psychological level since 2002, in the early years of the currency’s existence – but the negative trend has started much earlier, since 2008. Deutsche Bank strategists have calculated that a slide further below to \$0.95-\$0.97 per Euro would match the all-time extremes seen in exchange rates since the 1971 end of the so-called Bretton Woods system, which linked the value of many currencies to the US dollar (Bloomberg, 2022c). European Union’s cohesion, solidarity and unity is at risk for the first time.

On the other side, British pound, the “right” leg of American dollar, with the recent death of the Queen Elizabeth II and its fall in the foreign exchange markets do seem jointly to signify decisively the end of an era (Figure 6). These two events could be considered markers in a long historical procession in the British economy and the pound sterling, becoming far less important than they once were.

The pound’s demise to its lowest level is sort of indicative of this broader decline in multiple dimensions. It echoes declines in “British Power, Past and Present”. The most recent pound’s journey, indicates a decline in economic and political influence that accelerated when Britain voted to leave the European Union in 2016. In many respects, Britain already has the worst performing economy, among the 38-member OECD countries. It is just a question of time before it falls out of the top 10 economies in the world (Cohen, 2022).

Figure 5: Euro Plunge. The euro broke below key levels to hit a 20-yr low.



Source: Bloomberg Markets, Bloomberg (2022c)

Figure 6: A Century of Decline for the British Pound.

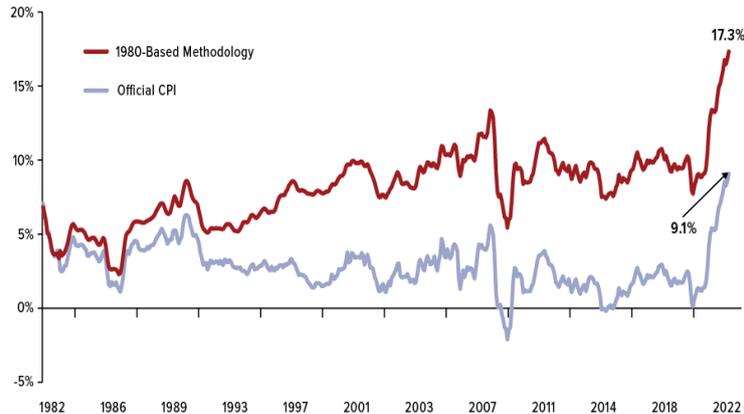


Source: Bank of England, Bloomberg Markets, Bloomberg (2022d)

Within all these negative developments in the Western hemisphere, the American dollar (i.e. “the King”) appears to act as a safe haven and currency of last resort, attracting the foreign exchange

liquidity of global investors who run to diversify away their holdings from Europe and the UK (Figure 7).

Figure 7: US Inflation Quickens to 40-Year High.



Source: Bureau of Labor Statistics, U.S. Global Investors, Bloomberg (2022e)

In reality, the Dollar-Pound and Dollar-Euro parities are compounded by a steady decrease of dollar’s purchasing power, and US inflation reaching 40-year records. In other words, we are in a race to the bottom.

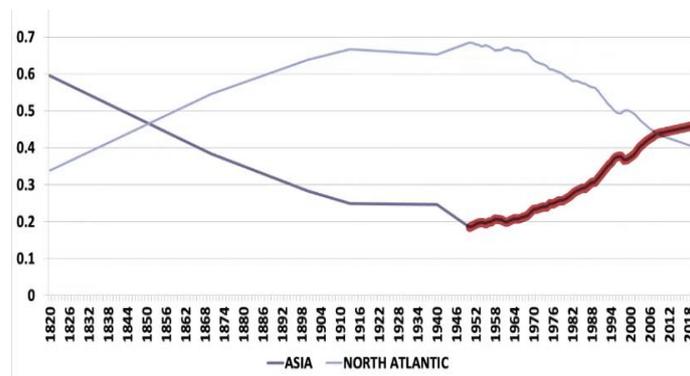
2.5. A TIMELINE OF GLOBAL PRODUCTION

The global production and supply chains have seen enormous changes over the last 100 years. Focusing just on the last 30 years, abandoned infrastructures cannot only be seen spreading around in many Former Soviet Republics, such as the Former German Democratic Republic, in Hungary or Armenia, but also in Detroit, the Renaissance City, the city which prospered as the automobile industry and the Ford-branded cars became a symbol of the American dream; until in the late 1950s, when smaller and more fuel-efficient cars from Japanese and European

manufacturers appeared. On 13 July 2013, the city of Detroit filed for bankruptcy, due to a rapidly declining population, unable even to pay its municipality taxes. The city is now heading to become a ghost town. It was like a dream that failed (The Guardian, 2013). Global production and wealth creation have now moved to the city of the future, Singapore; to Dubai, the city that became from desert the most luxurious city in the world and to Foxconn Factory City - Shenzhen China.

It’s the best imaginable interpretation of Kafka’s “city in the south”: “People live there who don’t sleep! (Kafka, 1958). China accounts today for 29% of global manufacturing output (UN, 2021). That puts the country more than 12% ahead of the United States, which used to have the world’s largest manufacturing sector until China overtook it in 2010 (Figure 8).

Figure 8: The End of the North Atlantic-Led World Hegemony (Shares in world output).



Source: Thinkers Forum

In a parallel path, the ongoing development of BRICS has been a compelling narrative of the current year. The trade composition within BRICS nations open new prospects for diversifying future trade. Further, gold, with its historical role as a store of value spanning centuries, has garnered attention as a potential basis for a currency that would support trade with BRICS lock of countries. Such a currency, anchored to gold, could also theoretically serve as a safeguard against inflation, currency devaluation, and economic volatility. Advocates for a gold-backed BRICS currency contend that it could offer a more stable platform for facilitating trade and investment.

2.6. THUCYDIDES TRAP AND ITS SCO SPRUNG

In the 5th c. BC, "it was the rise of Athens and the fear that this inspired in Sparta that made war inevitable." (Thucydides). At the end of 30 years of war, both city-states had been devastated.

Can China and the US escape Thucydides' trap in the 21st c. CE? If we were betting on the basis of history, the answer to the question about Thucydides' trap appears obvious. In 12 of 16 cases since 1500 where a rising power emerged to challenge a ruling power, war occurred (Allison, 2012).

To recognise powerful structural factors is not to argue that leaders are prisoners of the iron laws of history. It is rather to help us appreciate the magnitude of the challenge. The end of the Peloponnesian war coincided with the end of the ancient Greek world and opened the way for the sweeping advent of Philip of Macedon.

If leaders in China and the US perform no better than their predecessors in classical Greece, or Europe at the beginning of the 20th c., historians of the 21st c. will cite Thucydides to add another scientific proof that history does indeed repeat itself (Figure 9).

Figure 9: SCO Summit 2022, 15-16 September, Samarkand, Uzbekistan. The Heads of States representing 3,7 bn people, or 47% of global population, gathered around a single table.



Source: AP Photo (2022)

CONCLUSION

The aim of each one of the movements is to contribute as a reference for many of us that responsibly attempt in achieving more academic clarity and rationale, in a world characterized by information overabundance - which, however, is frequently contradictory, misleading or inaccurate, resulting in most cases in largely deficient knowledge and, even larger deficits of wisdom.

Based on graphical evidence that was provided, it could supported that, indeed, the outlook for our global economy and international political affairs is extremely uncertain, deteriorating and critical in the coming months, as our entire world has, possibly, "crossed the Rubicon" and gradually entered to an époque never experienced in

analogous extents, at least in the preceding seventy years.

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SUMMARY

We all can admit that we experience today, in one way or another, a world in transit with the causes being mainly political, economic and ideological. Within this document, which serves as a condensed version of a more extensive work, I have paraphrased MODESTE MOUSSORGSKY's famous piano suite of "Pictures at an Exhibition" in 1874, who has based the musical material for his ten movements on drawings and watercolors by Hartmann, that were produced mostly during the artist's travels abroad, with locales including Italy, France, Poland, Russia, and Ukraine. It is not a coincidence that my selected movements correspond to pictures and realities that I have borrowed from our contemporary world economy to synthesize my own view of a world in transit. These perspectives can contribute as a colorful reference for many of us that responsibly attempt in achieving more academic clarity and rationale, in a world characterized by information overabundance - which, however, is frequently contradictory, misleading or inaccurate, resulting in most cases in largely deficient knowledge and, even larger deficits of wisdom.



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