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THE IMPACT OF CORRUPTION ON ECONOMIC AND SUSTAINABLE DEVELOPMENT IN CENTRAL AND SOUTH-EASTERN EUROPE

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ABSTRACT

Corruption is a destructive phenomenon that is present in all countries of the world. Numerous studies and analyses show that higher levels of corruption are found in countries with a low level of social and economic development, characterized by low incomes, poverty, uneven growth and development, population migration, and various diseases. Therefore, a particularly strong correlation between corruption and economic and sustainable development is characteristic of low-income countries, i.e., underdeveloped and developing countries (higher levels of the grey economy and corruption correspond to lower levels of economic and sustainable development). For developed countries, the opposite is true – higher levels of economic and sustainable development are correlated with lower levels of the grey economy and corruption. The main goal of this paper is to analyse the impact of the shadow economy and corruption on the economic and sustainable development of European countries.

Keywords*: corruption, economic development, sustainable development, countries in transition.*

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INTRODUCTION

In many countries, corruption exists as part of everyday life, in a grey zone, on a thin line between what is apparently legal and illegal. Many people accept petty corruption as a fact of life with complete indifference, without the intention of drawing a line between acceptable and unacceptable behaviour [1]. This inertia may be the result of ignorance, but also of a lack of interest among modern individuals, who often act to their own detriment through action or inaction [2]. Therefore, it is necessary to undertake activities aimed at raising the collective level of awareness about corruption and its negative implications for society.

Corruption not only prevents and restricts foreign investment, but also largely blocks political and economic reforms in transition countries. Analyses of the experiences of transition countries have crystallized a relatively new phenomenon, the so-called "state capture" [3]. Namely, so-called "tycoons" (the newly rich) have directly influenced politicians (executive and legislative), judicial authorities, and other institutions in order to facilitate the adoption of regulations that support the realization of their interests. For this reason, cases of rigging the sale of companies during the privatization process were not uncommon in transition countries. At a lower, but no less harmful level, so-called "administrative corruption" occurred. This form of corruption involved bribing lower-level officials to avoid or delay the fulfilment of obligations or to exercise certain rights out of turn, which also implies abuses in favour of particular individual or group interests [4]. It has been proven that in an unreformed economic environment, weak financial and economic performance is more frequently associated with illegal activities, nepotism, protectionism, corruption, and similar practices. Over time, corruption has become an integral part of mandatory business practices in some Eastern European countries. Analysts have established a distinction between "democracy in transition" and so-called "mature democracy." A mature democracy does not exhibit mass corruption, because citizens develop strong resistance to phenomena such as organized crime and corruption [5]. The European Commission has studied corruption in all 28 EU member states. The study included two major surveys, which showed that three quarters of EU residents believe that corruption is widespread in their countries. The scale of corruption in Europe is enormous, causing the EU economy to lose close to 120 billion euros annually. In some countries, public procurement systems are prone to fraud, while in others, party financing represents a major problem. According to the European Commission Report (2014), in certain countries patients must pay bribes to receive adequate medical care. Even prior to this 2014 analysis, the European Commission recognized the challenges faced by countries in the region and recommended the adoption of stricter legal penalties, as well as applicable anti-corruption laws regulating procedures for appointing, promoting, and dismissing civil servants, the introduction of institutions and mechanisms for filing complaints, the adoption of conflict-of-interest legislation, and the implementation of ethical codes.

The European Union and the governments of most leading European countries undertake extensive measures to sanction active and passive forms of corruption committed by public officials. Criminal legislation sanctions both direct and indirect forms of corruption, including attempts. In Germany, for example, a package of anti-corruption measures stipulates that if a civil servant abuses their position, the next generation of their descendants may be prohibited from employment in public administration. Conversely, if a civil servant demonstrates integrity, their descendants may have an advantage over other candidates. In the United States, which strictly combats corruption, it is difficult to find, for example, a congressman who would dare to sit at the same table in a restaurant with an unknown person and accept a free lunch [6]. Why corruption is harmful can be seen most clearly in the Report of the Committee for Civil Liberties and International Affairs of the European Union, cited by Bjelajac [7]:

1. Corruption reduces trust in government and its institutions;
2. Corruption gradually undermines democracy and the stability provided by the political system;
3. The credibility of politicians and the efficiency of civil servants exposed to corruption decline, while the apparent stability of a corrupt state is further weakened by judicial bribery and massive tax evasion;
4. Corruption undermines the economic development of a country;
5. Corruption lowers environmental and construction standards, as well as the quality of public infrastructure;
6. Corruption serves as a springboard for white-collar crime;
7. Corruption, in conjunction with international crime, enables large-scale fraud by government officials and politicians.

Corruption poses a significant threat to countries worldwide, undermining democratic institutions, generating instability, and eroding public trust. It endangers the economy by undermining fair market competition and discouraging investment and trade [8]. It disproportionately affects disadvantaged groups by preventing social inclusion, promoting inequality, and hindering prosperity. Corruption affects everyone and can lead to [9]:

- Weak institutions and injustice: Corruption undermines democratic institutions by distorting electoral processes, weakening the rule of law, and creating ineffective governance;
- Insecurity: Corruption threatens security by eroding trust in state institutions, which can result in dissatisfaction, social unrest, and the strengthening of organized crime;
- Reduced prosperity: Corruption suppresses economic growth, innovation, and sustainable development. Where corruption is widespread, foreign direct investment is discouraged due to high operational costs and legal and reputational risks;
- Reduced respect for rights: Corruption undermines democracy and human rights by weakening institutions that ensure equal access to justice;
- Lower employment levels: Corruption reduces employment opportunities when hiring decisions are not based on competence, merit, and fairness;
- Environmental degradation: Corruption threatens the environment by enabling the misuse of limited natural resources and contributing to environmental disasters.

The relationship between corruption and the grey economy has been examined by numerous authors. Buehn and Schneider (2009), using a structural model, identify a strong connection between the grey economy and corruption, as well as the key determinants of corruption. They conclude that the grey economy and corruption go “hand in hand” [10]. The main factors influencing corruption and the grey economy include: government effectiveness and state institutions; fiscal freedom; administrative and bureaucratic costs; the rule of law; judicial independence; standards of living and purchasing power; and bribery [11].

The Centre for the Study of Democracy [12], in its analysis of the shadow economy in Bulgaria, emphasizes that government corruption cannot be understood without its economic counterpart. Similar to bribery, the grey economy emerges when tension exists between formal laws and regulations and the everyday decisions of individuals and businesses. A persistent and large-scale grey economy also indicates weak institutional performance. Corruption arises where the formal and informal economies intersect, allowing businesses and individuals to pay informal rents or capture institutions in order to remain hidden, non-compliant with the law, and to secure cheaper and easier legalization of goods and services [13]. The connection between corruption and the grey economy is illustrated in Figure 1.

The vicious circle between the grey economy and corruption, shown in Figure 1, negatively affects economic growth and slows development by encouraging unfair competition, providing cheap labour for companies operating in the grey and black economy, and maintaining significant financial and other resources outside formal channels [14].

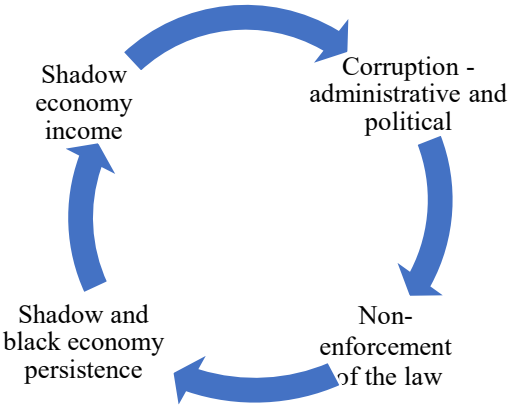

Figure 1. The vicious circle of corruption and the shadow economy

In Serbia, a country in transition, corruption is widespread and may be considered a systemic phenomenon embedded in everyday life. Persisting through different historical periods and political systems, corruption has

become deeply rooted in the social and institutional framework. It permeates all aspects of business and society, with bribery often perceived as a prerequisite even for minor business activities. Weak and fragile institutions, combined with insufficient oversight of executive and judicial authorities, represent major obstacles in the fight against corruption, which affects nearly all segments of society.

The Corruption Perceptions Index (CPI), published in 2018 by the international organization Transparency International, presents the results of surveys on the perceived level of corruption among relevant respondents from 180 countries and territories. This research has been conducted annually since 1995 and defines corruption as the "abuse of public authority for private gain." The CPI uses a scale from 0 (highly corrupt) to 100 (very clean). In 2018, Serbia scored 39 points and ranked 87th, sharing the position with China. According to the report, the least corrupt countries were Denmark (88 points), New Zealand (87), and Finland, Singapore, Sweden, and Switzerland (85). The most corrupt country in 2018 was Somalia, with a score of 10. Table 1 shows that Slovenia achieved the best result among Balkan countries (36th place, 60 points), while Albania was rated as highly corrupt with 36 points in 2018 [15]. The table also presents CPI data for 2019 and 2020 [16].

Table 1. Corruption Perceptions Index for selected countries, 2018–2020 (out of 180 countries)

Country	Score 2018	Rank	Score 2019	Rank	Score 2020	Rank
Slovenia	60	36	60	35	60	35
Croatia	48	60	47	63	47	63
Romania	47	61	44	70	44	69
Montenegro	45	67	45	66	45	67
Bulgaria	42	77	43	74	44	69
Serbia	39	87	39	91	38	94
Bosnia and Hercegovina	38	89	36	101	35	111
North Macedonia	37	93	35	106	35	111
Albania	36	99	35	106	36	104
Greece	45	67	48	60	50	59
Cyprus	59	38	58	41	57	42

Source: Transparency International (2019; 2021).

METHODOLOGY

We measure the corruption level (CPI) as an independent variable (X) using annual Corruption Perceptions Index (CPI) reports available on the Transparency International website for the period 2000–2019. This index measures perceived levels of corruption in the public sector of countries worldwide. The scores range from 0 (highly corrupt) to 100 (highly clean).

The dependent variables (Y) in the research are: 1) economic development and 2) sustainable development. Economic development is generally defined as a permanent increase in the economic standard of living of a country's population, which is usually achieved by increasing its stock of physical and human capital and improving technology. The most frequently used indicators of economic development in empirical studies are: 1) GDP per capita (GDPpc) and 2) the unemployment rate (UNE).

RESEARCH HYPOTHESES

Based on the previously formulated research questions, the basic research hypothesis of the paper is defined as follows:

There is a statistically significant relationship between corruption and the economic and sustainable development of the countries of Central and South-Eastern Europe.

In order to test the basic research hypothesis, two auxiliary hypotheses were formulated:

H1. A higher level of corruption is associated with a lower level of economic development.

H2. A higher level of corruption is associated with a lower level of sustainable development.

In order to obtain answers to the research questions regarding the acceptance of two opposing theories ("sand in the wheels" and "grease the wheels") in the selected countries of Central and South-Eastern Europe, two specific hypotheses were proposed:

SH1 ("sand in the wheels", "pistons in wheels"): Higher levels of corruption lead to lower levels of economic and sustainable development of countries (economic and sustainable development slows down).

SH2 ("grease the wheels"): Higher levels of corruption lead to higher levels of economic and sustainable development of countries (economic and sustainable development accelerates).

PRESENTATION, ANALYSIS AND DISCUSSION OF RESEARCH RESULTS

DESCRIPTIVE STATISTICS RESULTS

Table 2. Descriptive statistics for the developed countries

	SE_rz	CPI_rz	GDPpc_rz	UNE_rz	SDI_rz	HDI_rz	EFI_rz
Mean	20.70157	58.23	26206.19	8.9039	0.480005	0.866145	66.2785
Standard Error	0.535477	1.196387	1404.563	0.36214	0.012533	0.003297	0.505979
Median	21.10518	52	18675.82	7.495	0.4415	0.8655	66.6
Mode	16	48	#N/A	4.12	0.251	0.831	65
Standard Deviation	7.572787	16.91947	19863.53	5.121428	0.177246	0.046633	7.155627
Sample Variance	57.3471	286.2684	3.95E+08	26.22902	0.031416	0.002175	51.203
Kurtosis	-1.22122	-1.12736	2.053801	1.458173	-1.26983	-0.64071	-0.33378
Skewness	-0.23687	0.481587	1.5659	1.31768	0.288967	-0.05491	0.171101
Range	26.13461	57	86752.58	25.46	0.569	0.203	31.2
Minimum	8.065394	34	4501.454	2.01	0.226	0.759	50.7
Maximum	34.2	91	91254.03	27.47	0.795	0.962	81.9
Sum	4140.314	11646	5241237	1780.78	96.001	173.229	13255.7
Count	200	200	200	200	200	200	200
Confidence Level(95,0%)	1.055937	2.359223	2769.738	0.714124	0,024715	0.006502	0.997769

Source: The author

The basic assumption for the estimation of regression models is the existence of normally distributed residuals. Testing with the Jarque–Bera test showed that none of the variables followed a normal distribution. After applying logarithmic transformation (log), the results changed significantly, and the test indicated a normal distribution of residuals. The Pearson correlation test indicated a very high correlation between the independent variables SE_rz and CPI_rz (–0.794). Therefore, it can be concluded that multicollinearity is not present, as the correlation coefficient does not exceed the critical threshold values of 0.8 or 0.9.

Table 3. Descriptive statistics for developing countries

	SE_ zr	CPI_zr	GDPpc_zr	UNE_zr	SDI_zr	HDI _zr	EFI_zr
Mean	34.46334	32.55714	5163.593	18.30829	0.655557	0.760943	58.58857
Standard Error	0.18659	1.04691	212.6003	0.766322	0.018064	0.003697	0.663929
Median	33.84949	36	4919.091	16.975	0.7305	0.767	60.25
Mode	33	0	#N/A	31.11	0	0.776	50
Standard Deviation	2.207767	12.3872	2515,521	9.067249	0.213733	0.043744	7.855714
Sample Variance	4.874235	153.4428	6327846	82.215	0.045682	0.001914	61.71224
Kurtosis	-0.10934	2.176527	-0.07574	-0.99147	4.417452	-0.90909	-0.29547
Skewness	0.209686	-1.65973	0.490939	0.323864	-2.3255	-0.3248	-0.71083
Range	12.57753	48	11975.02	33.34	0.826	0.17	34.7
Minimum	27.7	0	914.7857	3.91	0	0.667	36.6
Maximum	40.27753	48	12889.81	37.25	0.826	0.837	71.3
Sum	4824.868	4558	722903	2563.16	91.778	106.532	8202.4
Count	140	140	140	140	140	140	140
Confidence Level(95,0%)	0.368922	2.069926	420.3486	1.515156	0.035715	0.00731	1.312706

Source: The author

Table 4. Proof of the set hypotheses

H3	**A higher level of corruption is associated with a lower level of economic development.**	**Accepted**
H4	A higher level of corruption is associated with a lower level of sustainable development.	Accepted
SH1	("sand in the wheels", "pistons in the wheels"): Higher levels of corruption (lower values of the Corruption Perceptions Index) lead to lower levels of economic and sustainable development of countries (economic and sustainable development slows down).	Accepted
SH2	("grease the wheels"): Higher levels of corruption (lower values of the Corruption Perceptions Index) lead to higher levels of economic and sustainable development of countries (economic and sustainable development accelerates).	Not accepted

Source: The author

PROOF OF THE GENERAL HYPOTHESIS AND ANSWERS TO THE RESEARCH QUESTIONS

The estimated panel regression models clearly indicate a significant relationship between the grey economy and corruption and the selected indicators of economic and sustainable development in the countries of Central and South-Eastern Europe. The obtained regression coefficients in the models for the full sample of countries are consistent with expectations and explain approximately 80–90% of the variance in the dependent variables at a statistically significant level (0.05). An exception is observed in the effect of corruption on unemployment in the models for developing countries and for the full sample, where a positive regression coefficient is recorded (an increase in the corruption perception index is associated with a higher unemployment rate), but without statistical significance. Based on the obtained results, it can be stated with 95% confidence that there is a statistically significant relationship between corruption and the economic and sustainable development of the countries of Central and South-Eastern Europe.

In order to provide more specific answers to the research questions, comparative data presented in Table 5 are used.

Table 5. Coefficients of corruption in developed and developing countries

	GDPpc		UNE		EFI		HDI		SDI	
	rz*	zr**	rz	zr	rz	zr	rz	zr	rz	zr
CPI	0.719	1.417	-0.08	0.022	0.185	0.098	0.118	0.035	-0.475	0.179

Source: The author

CONCLUSION

Corruption is one of the major challenges facing modern economies. Corruption and the grey economy are present, to a greater or lesser extent, in both developing and developed countries worldwide. In many countries with low or medium levels of development (developing countries and transition economies), the grey economy and corruption represent significant obstacles to the development of a functional market economy and the improvement of the business environment.

The conclusions of this study point to the need for further research into the impact of corruption on economic and sustainable development, as well as into the scope and causes of the grey economy and corruption in the countries of South-Eastern Europe and the Western Balkans, with particular emphasis on the Republic of Serbia. A multidisciplinary approach and the identification of quantitative relationships among various macroeconomic, microeconomic, and social factors would provide a clearer understanding of the origins and causes, as well as the significance and intensity of the effects of the grey economy and corruption on the future growth of developing and transition countries, including Serbia.

Therefore, given the complexity of this scientific problem, it is necessary to examine the phenomena of the grey economy and corruption and their impact on the national economy and society from a broader perspective, taking into account the economic, social, and political specificities of countries with different income levels, the fundamental causes of the emergence of these negative phenomena, and their effects on economic growth and development.

REFERENCES

[1] Letunić, P. (2011) Korupcija i društveno-ekonomski razvoj. *Politička misao,* 48 (2), 186-204. UDK 328.185343.352 330.341:32 Preuzeto sa https://hrcak.srce.hr/72018

[2] Aidt, T. (2010) *Corruption and Sustainable Deveopment,* No. CWPE 1061. Cambridge, UK, http://doi.org/10.17863/CAM.5249

[3] Bjelajac, Ž. (2015). Korupcija kao izazov savremenog demokratskog društva. *Kultura polisa, god.* XII, br. 26, str. 43-57. UDK 316.624:321.7

[4] Bjelac, Ž. (2008). Korupcija kao vid organizovanog kriminala. *Pravo, teorija i praksa,* God. XXV, Broj 3-4, Univerzitet Privredna akademija, Pravni fakultet za privredu i pravosudje, Novi Sad, mart-april 2008, str. 47-55.

[5] d'Agostino, G., Dunne, P., Pieroni, L. (2016). Government spending, corruption and economic growth. *World Development,* 84, 190-205. https://doi.org/10.1016/j.worlddev.2016.03.011

[6] Bjelac, Ž. (2013). *Organizovani kriminalitet – Imperija zla.* Pravni fakultetza privredu i pravosudje u Novom Sadu, Novi Sad

[7] Petrović, S., Stojanović, M. (2021). *Kriminal bele kragne 1. deo.* Akademska misao, Beograd

[8] Hodge, E., Savage, D., Torgler, B. (2021) "Grease" or "sand" the wheels of economic development: A meta-analysis of corruption, CREMA Working Paper, No 2021-19, Center for Research in Economics, Management and the Arts (CREMA), Zürich

[9] Rock, M.T., Bonnett, H (2004). The Comparative Politics of Corruption: Accounting for the East Asian Paradox in Empirical Studies of Corruption, Growth and Investment, *World Development,* 32(6):999-1017.

[10] Garica – Boliver, O.E. (2006). Informal Economy: Is it a problem, a solution or both? The perspective of the informal business, *Law & Economics Papers,* Northwestern University School of Law

[11] Schneider, F., Krstić, G., Arsić, M., Ranđelović, S.(2015). What Is the Extent of the Shadow Economy in Serbia? in Formalizing the Shadow Economy in Serbia: Policy Measures and Growth Effects (eds. G. Krstić, and F.Schneider), Chapter 5, pp.47–75, Contributions to Economics, Springer International Publishing

[12] CSD (2011). *Skrivena ekonomija u Bugarskoj i gobalna ekonomska kriza.* Centar za proučavanje demokratije, Sofija.

[13] CSD (2016). *Hidden Economy Index in Bulgaria 2002-2015,* Results and Methodological Notes, Sofia

[14] CSD (2015). *Finansiranje organizovanog kriminala.* Centar za proučavanje demokratije, Sofia

[15] Transparency International (2019). Globalni index percepcije korupcije – CPI 2018 Internet: https://transparentnost.org.rs/images/dokumentiuzvesti/CPI2018prezentcija.pdf

[16] Transparency International (2021). Globalni indeks percepcije korupcije – CPI 2020, Internet: https://www.transparency.org/en/cpi/2020/idex/nzl

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