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THE EFFECT OF FISCAL DECENTRALIZATION ON CORRUPTION: CROSS COUNTRY EVIDENCE

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Abstract

The impact of fiscal decentralization on the quality of governance of a country can have both positive and negative effects. In the search for appropriate governance structures for public decision-making, this paper focuses on a particular aspect of governance quality, namely corruption.

The degree of decentralization refers to the degree of freedom of local authorities to collect revenues (through taxes) and decide how to spend them. Since corruption is defined as the abuse of public office for private purposes, to be corrupt, a public official must be responsible for financial resources, which happens under fiscal decentralization.
This paper aims to analyze the relationship between fiscal decentralization and corruption at the regional level (NUTS 2), considering data from the Romania's eight development regions.
For this purpose, based on the models developed in previous studies, the paper estimates an empirical model to establish the link and its direction between the dependent variable - the corruption index calculated according to the ICRG Methodology and the independent variable - fiscal decentralization. The share of local expenditures/revenues in total expenditures/revenues was used as an indicator of the degree of decentralization. In this case, it is considered that the higher the share of expenditures/revenues managed by politicians and local authorities in total is, it increases the degree of decentralization.

Keywords: Fiscal decentralization, Governance Quality, Corruption, International Country Risk Guide (ICRG), Local Governance
JEL Classification: E62, H71

1. Introduction

Decentralization reform took place several decades ago, with the fever encompassing both industrialized and industrializing countries at the time. The reform agenda was pursued through various combinations of political, administrative, and fiscal decentralization initiatives, but these reforms proved controversial. The controversies were due to the fact that decentralization was and is perceived both as a solution to problems – such as a dysfunctional public sector, the lack of voice of local and exit communities – and as a source of new problems – such as capture by the local elite, worsening macroeconomic management due to the lack of fiscal discipline and the possibly corrupt fiscal behavior of regional administrative authorities.

Recent studies show that decentralization is recognized as essential for promoting good governance in many countries (Mseleku, 2025; Bekele & Ago, 2020; Makara, 2018).

Defined as the transfer of responsibilities and revenues from a national government to subnational authorities, i.e. the sharing of power between central and subnational administrations (Rondinelli, 1981), decentralization can be classified into four dimensions: political, administrative, spatial and fiscal (Firman, 2003), but fiscal decentralization enjoys special attention in the literature.

The main objectives of fiscal decentralization are related to increased investment, GDP growth, and the quality of healthcare, education, and social protection.

The motivations for decentralization were multiple in different countries, but most reasons can be classified into two groups – political and economic. Among the most common political reasons are the political transition in Eastern Europe, the end of colonialism, authoritarian regimes, and wars, reaching a compromise in countries with pronounced diversities, as well as the globalization of

economic activities (Ivanyna and Shah, 2014; Shah, 2002). Among the most common economic reasons for fiscal decentralization are reforms aimed at improving the efficiency and quality of public service delivery, stimulating economic growth in regional economies, and overcoming the consequences of the global economic crisis (Babin et al, 2021). However, there is another group of countries where, under the pretext of pursuing economic benefits, political officials, the most important actors in the fiscal decentralization process, pursue their own interests to secure their power.

There has been a lot of research on decentralization, but the scientific evidence on its impact on corruption remains ambiguous. The literature highlights a lack of theoretical consensus, as existing empirical studies yield divergent conclusions. In this sense, corruption is defined as the abuse of public authorities for private purposes or the exercise of official powers against the public interest. Therefore, on the one hand, there are empirical studies (e.g., Fisman & Gatti, 2002; Freille et al., 2007; Arikan, 2004; Fan et al., 2009) whose findings suggest that federalization has a positive correlation with low levels of corruption. The justification is that federalization forces competition between local governments in the provision of public goods, making them less able to engage in activities seeking personal gain. On the other hand, there are studies (e.g., Makara, 2018) that have found that regional autonomy and shared governance have opposite effects on corruption. In this sense, regional autonomy, characterized by the transfer of decision-making powers to civil servants, is considered to create incentives for bribery and often lead to the formation of corruption networks (Makara, 2018).

In this article, we address the lack of consensus in the literature by providing new evidence from a disaggregated analysis at the NUTS 2 territorial level, investigating the relationship between fiscal decentralization and corruption at eight development regions of Romania.

The objective of this paper is to assess the level of fiscal decentralization in Romania by development regions. This paper will show what the relationship is between the fiscal decentralization index and corruption in our country and will provide clear conclusions regarding the size of this relationship. The paper estimates a model, based on a linear regression function, to establish the relationship between the dependent variable - the corruption index calculated according to the ICRG Methodology and the independent variable - the fiscal decentralization index.

2. Theoretical Framework

The first research on fiscal decentralization took place in the 1950s, academics, known as first-generation fiscal federalists, argued that fiscal decentralization leads to increased economic welfare through increased economic growth and efficiency in the provision of public services. This argument

was first formulated by Tiebout (1956), who argued that incentives for politicians at the local level are guided by the preferences and public service needs of their constituents, meaning that they are benevolent social planners. Even though it is very valuable for the theory of fiscal decentralization, this theory was based on strict assumptions, which distanced it from reality, as the second generation showed. Oates (1972) brought another fundamental argument in favor of fiscal decentralization, based on the theory of public finance introduced by Musgrave (1959). It is argued that fiscal decentralization provides allocative efficiency in the local delivery of public services (under certain conditions). Oates (1993) discussed the relationship between fiscal decentralization and economic development.

There are several empirical studies on the relationship between fiscal decentralization and economic growth in different countries. Most of them use data from different provinces of a country or from several countries. For Romania, Scutariu & Scutariu (2015) conducted research on the relationship between fiscal autonomy and local development at regional level during the period 2008–2011. An increase in regional fiscal autonomy tends to increase the degree of development in the respective county/region. From these results, it can be deduced that the greater the degree of provincial fiscal autonomy, the greater the capacity of regional public authorities to meet the needs of local communities, thus stimulating local economic growth.

The results of a study of fiscal disparities at regional level in Romania, with fiscal and economic data over a period of 12 years, show that fiscal policy does very little to reduce inequality and poverty in general, noting a certain inequality in income distribution and an alarm signal regarding the "curative" nature of transfers from the state budget (Gavriluță et al., 2020).

Regarding the role of decentralization in combating corruption, there are divergent views and studies that have led to diametrically opposed conclusions in literature. There are various arguments and empirical evidence advanced to support the view that decentralization can worsen corruption. There are also studies that argue that decentralization is a tool for restricting bureaucrats.

There are empirical studies that attest that *decentralization generates corruption*, arguing that decentralization brings officials into contact with citizens, promoting personalism and a greater degree of discretion, leading to the protection of the needs of individual citizens to the detriment of the public interest. It also leads to a weakening of monitoring, controls, and audits by central authorities, thus creating opportunities for corruption (Prud'homme, 1994; Tanzi & Schuknech, 1996). Treisman (2000) argued that fiscal decentralization leads to an overburdening of police forces reporting to different levels of government and of regional politicians, as they exert a strong influence on central institutions of accountability in governance. Several authors have argued that political decentralization promotes a higher incidence of corruption by involving a larger number of officials

in relations with potential investors (Blanshard & Schleifer, 2000; Shleifer & Vishny, 1993) and by capturing interest groups, where feudal lords and oligarchs dominate the local political scene (Shah, 1998).

Among empirical studies, Treisman (2000), based on cross-national data analysis, concluded that decentralized countries have a higher perception of corruption and a poorer performance in the provision of public health services. A study by Fan et al. (2009), using cross-sectional data from eighty countries, found that in countries with many levels of government and a larger public apparatus (more civil servants), reported bribery was more common.

In the 2018 study, Makara concludes that regional autonomy, characterized by the transfer of decision-making powers to civil servants, often creates incentives for bribery and often leads to the formation of corruption networks.

However, there are studies that attest that *decentralization limits opportunities for corruption*, arguing that it offers the potential for increased accountability by bringing decision-making closer to the people. Arguments that have been advanced to support the positive impact of decentralization in reducing corruption include: increased accountability and reduced corruption, given the competition between local authorities (Arikan, 2004; Weingast, 1995); mechanisms for exit and expression of opinions at the local level; a higher level of information (Boadway and Shah, 2009; Seabright, 1996); lower expected gains from corruption, but a higher probability of detection and punishment at the local level (Carbonara, 1999; Wildasin, 1995); increased transparency (Ahlin, 2001); and lower transaction costs for citizens and improved compensation institutions (Boadway and Shah, 2009).

A number of empirical studies provide support for the positive influence of decentralization in controlling corruption. Crook and Manor (2000) examined the process of political decentralization in India (Karnataka state), Bangladesh, Côte d'Ivoire, and Ghana and found that decentralization led to increased transparency and a reduced incidence of corruption. They concluded that decentralization reduces grand theft but increases petty corruption in the short run, but in the long run both types of corruption may decrease.

De Mello and Barenstein (2001), based on cross-country data, concluded that fiscal decentralization was positively associated with improved governance quality. Fisman and Gatti (2002) found a negative relationship between fiscal decentralization and corruption. Gurgur and Shah (2002) identified the main factors of corruption to isolate the effect of decentralization. In a sample of industrialized and non-industrialized countries, lack of service orientation in the public sector, weak democratic institutions, economic isolation (closed economy), colonial past, internal bureaucratic controls, and centralized decision-making are identified as the main causes of corruption.

For a sample of non-industrialized countries, the determinants of corruption are a lack of service orientation in the public sector, weak democratic institutions, and a closed economy. Decentralization has a greater negative impact on corruption in unitary countries than in federal countries.

Regarding the response of government counter-cyclical policies to the societal disruptions created by Covid-19 and their effect on the distributed outcomes regarding fiscal autonomy within local governments, a 2024 study shows that the lower horizontal fiscal gap indicates that counter-cyclical measures were less effective in addressing the adverse effects of disruptions on local government revenues in larger local economies, compared to those in smaller ones (Pop, 2024).

In conclusion, the conceptual and empirical literature is inconclusive regarding the impact of decentralization on corruption. Furthermore, this literature treats decentralization as synonymous with subnational decision-making. This is clearly a flawed view in many situations, as decision-making at the state and provincial levels is far from the people. By restricting decentralization to defining the empowerment of local governments, we can gain a more useful perspective on the extent of decentralization in relation to the incidence of corruption.

3. Measurements of Fiscal Decentralization and Corruption

3.1. Fiscal Decentralization

Fiscal decentralization is understood as the process of transferring rights and responsibilities from the central government to the local government or the private sector, as part of public sector reforms, and thus creating a competitive environment for different levels of government in providing optimal public goods and services to society and stimulating economic growth (Martinez-Vazquez et al. 2016).

Regarding the methods of measuring fiscal decentralization found in empirical research, they are based on two main indicators, (i) the expenditure ratio and (ii) the revenue ratio.

Vo (2008, 2009) approached this aspect differently, developing the Fiscal Decentralization Index (FDI), calculated based on two other indicators: Fiscal Autonomy (FA) and Fiscal Importance (FI). First, Fiscal Autonomy represents the transfer of taxing powers and the assignment of responsibilities for the provision of public goods and services. It is affected by the regulations on fiscal transfers between central and local government, as well as local borrowing (Vo 2008, 2009). Fiscal autonomy is calculated as follows:

$$FA = \frac{\sum_{i=1}^{p} OSR_i}{\sum_{i=1}^{p} OSE_i} \qquad (1)$$

where: OSR_i is the own-sourced revenue and OSE_i is the own-sourced expenditure of the province i, and p is the number of provinces.

The indicator takes values in the range (0,1): a value equal to 1 and shows that the local government's revenues are sufficient to cover its own expenses, reflecting a high level of autonomy and independence from the central budget, allowing the province to be proactive and innovative in developing its economy. A low value of FA or close to 0 shows almost total dependence on the central budget since its own revenues cannot cover its own expenses.

The second indicator, Fiscal Importance, represents the relative significance of the fiscal activities undertaken by the local government compared to those of the state. Provincial fiscal autonomy implies that, through decentralization regulations, the local government can balance its revenue sources by managing its tax bases to finance the expenditures incurred for the provision of public goods and services. According to Vo (2008, 2009), public expenditures related to fiscal activity are calculated using the formula:

$$FI = \frac{\sum_{i=1}^{p} E_i}{TE} \quad (2)$$

In this formula, FI is the fiscal importance of province i, TE is the total public sector expenditure at all levels of government in the country, while Ei is the public expenditure incurred by province i. The value of this indicator also falls within the range (0.1). The closer the FI value is to 1, the higher the percentage of the country's total fiscal expenditure represented by local government public expenditure, reflecting the significant position of the province. Conversely, if the FI value is close to 0, the province's public expenditure is small compared to the national one, implying a minor role in the development of the national economy. Combining the two previously mentioned indicators, Vo (2008, 2009) proposed a methodology for calculating the Fiscal Decentralization Index (FDI), as follows:

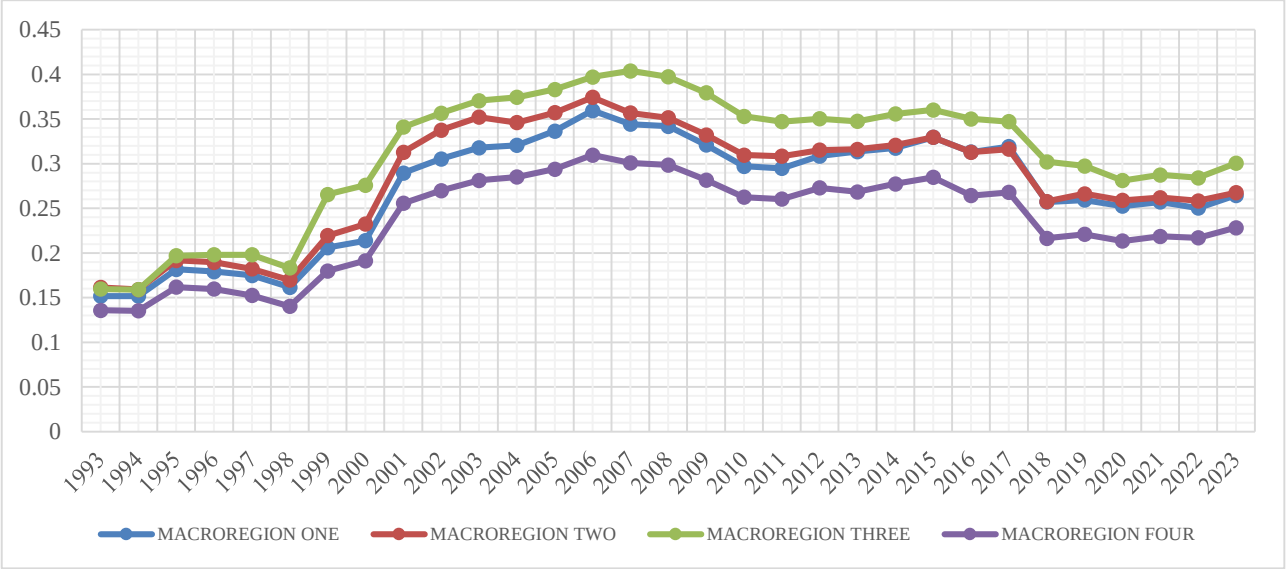
$$FDI = \sqrt{FA * FI} = \sqrt{\frac{\sum_{i=1}^{p} OSR_i}{\sum_{i=1}^{p} OSE_i} * \frac{\sum_{i=1}^{p} E_i}{TE}} \quad (3)$$

Local government FDI is capped at unity (1.0). Therefore, there are 4 degrees of measurement of FDI:

- Perfect fiscal decentralization: FDI = 1
- Relative fiscal decentralization: 0.5 < FDI < 1
- Relative fiscal centralization: 0 < FDI < 0.5
- Perfect fiscal centralization: FDI = 0

Following the model built by Vo (2008), this article determines the degree of fiscal decentralization based on FDI using aggregated data at NUTS 1 and NUTS 2 tiers.

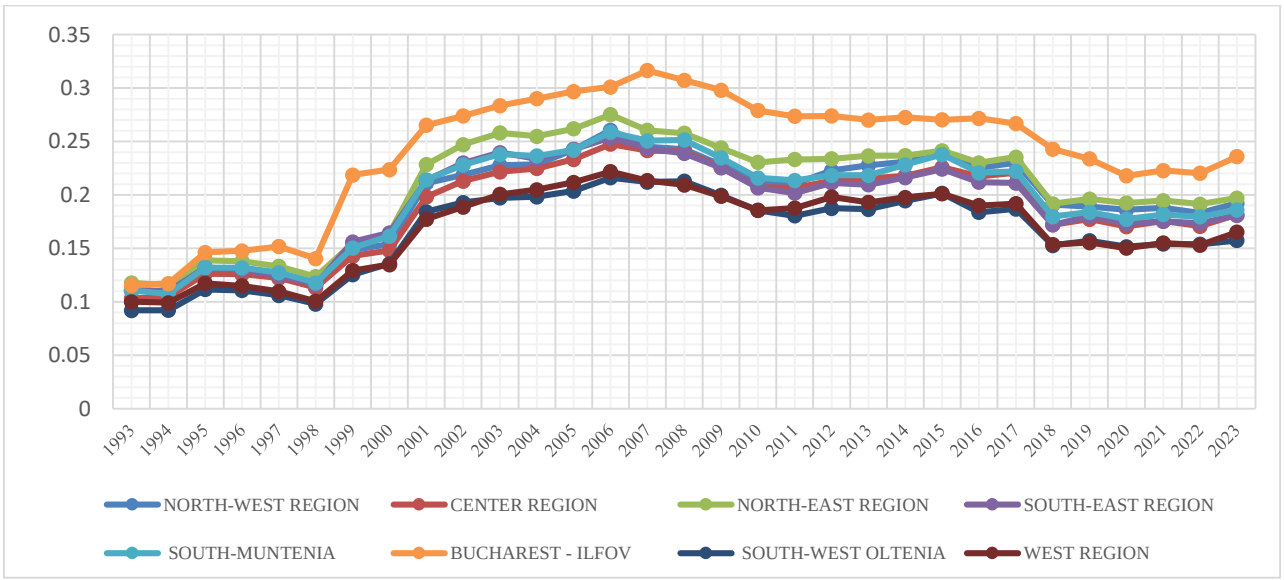
Figure 1. FDI by development macro-regions in Romania, 1993-2023



Source: own processing data

Using data provided by the National Institute of Statistics of Romania, FDI was calculated for the four development macro-regions of Romania for the 31 years (1993-2023) and the values recorded over the entire period and for all macro-regions show us a relative fiscal centralization in Romania, FDI taking values between 0.1353 (in 1994, in Macro-region (four) formed by South-West Oltenia and West Region) and 0.4038 (in 2007, in Macro-region three formed by South-Muntenia and Bucharest – Ilfov Region).

Figure 2. FDI by regions of developments in Romania, 1993-2023



Source: own processing data

In the eight development regions of Romania during the period 1993-2023, the values recorded by FDI also reveal a relative fiscal centralization, recording values between 0.0919 (in 1993,

in the South-East Oltenia Region) and 0.3164 (in 2007, in the Bucharest-Ilfov Region) as shown in the Figure 2.

These results confirm the conclusions of the study by Babin et al (2021) according to which a political reason caused a significant decrease in the level of decentralization in Romania, and after the 2008 global crisis, a process of fiscal recentralization took place in our country, but also in Slovenia. The fact that, after 2008, there is an increase in the degree of fiscal centralization in Romania, is also observed from the data presented in figures 1 and 2 above, with a maximum point, in this period (2008-2023), recorded in 2018, in some macro-regions and development regions the decrease in FDI being dramatic (for example, a decrease of 31% in 2018 compared to 2017, in the North-East Region).

3.2. Corruption and its measurements

The corruption index was calculated according to the ICRG Methodology, considering only the economic component of this composite index, based on the conclusions of several empirical studies (Hall & Jones, 1999; Treisman, 2000; Seldadyo & de Haan, 2006; Alfano et al, 2018) according to which lower levels of perceived corruption are closely correlated with higher economic development.

According to the ICRG Methodology (The PRS Group, 2022), the overall purpose of the Economic Risk Assessment is to provide a means of assessing the current economic strengths and weaknesses of a country/region. These strengths and weaknesses are assessed by assigning risk points to a pre-established group of factors, called economic risk components. The minimum number of points that can be assigned to each component is zero, while the maximum number of points depends on the fixed weight given to that component in the overall economic risk assessment. In each case, the lower the total risk points, the higher the risk, and the higher the total risk points, the lower the risk. The risk points in each table are assigned according to scales to produce the economic risk rating with a maximum total of 50 points.

Each risk component is given points on a scale from zero to a predetermined maximum, as shown in Table 1 based on information extracted from the ICRG Methodology. In general terms, if: the points awarded are less than 50% of the total, the respective component can be considered very high risk, the points fall within the range of 50-59.9%, this represents a high risk, in the range of 60%-69.9% a moderate risk, in the range of 70-79.9% a low risk, in the range of 80-100% a very low risk.

Overall, an economic risk rating from: 0.0% to 24.9% indicates very high risk; 25.0% to 29.9% high risk; 30.0% to 34.9% moderate risk; 35.0% to 39.9% low risk; 40.0% or more very low

risk. However, a poor economic risk rating can be offset by a better political and/or financial risk rating.

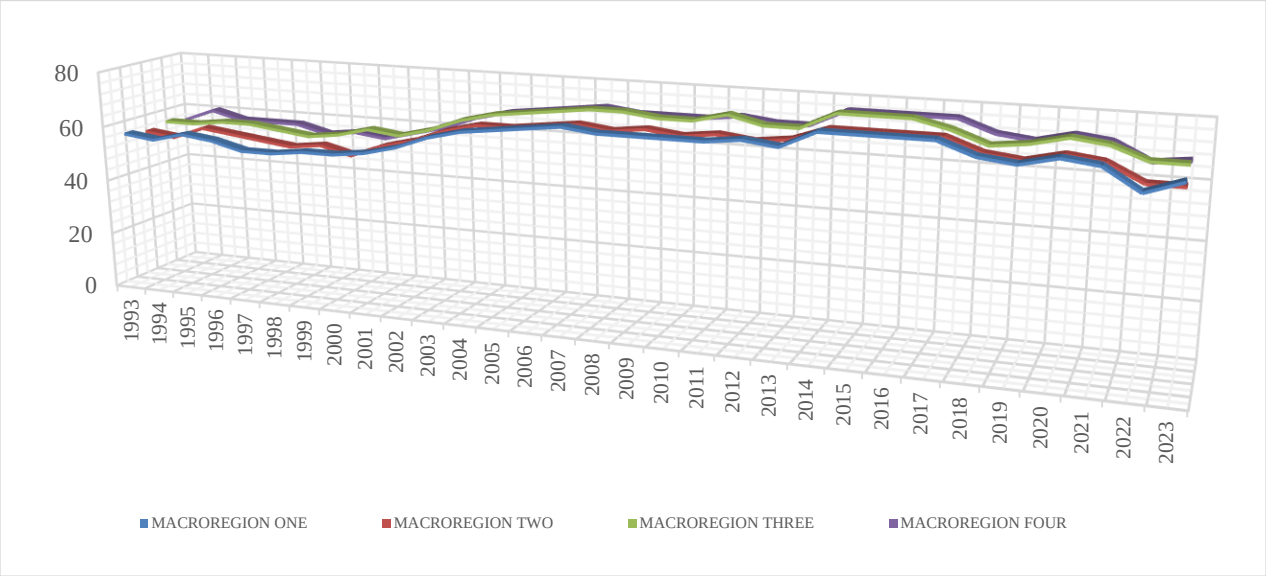
Table 1. Components of economic risk, according to the ICRG Methodology

ICRG Methodology	Conversion for present research	Value range	Source
Estimated GDP per capita for a given year, expressed as a percentage of the average of the estimated total GDP of all countries covered by the ICRG	Estimated GDP/capita in each territorial administrative level (county, development region, or macro-region) expressed as a percentage of the average total GDP of the territorial administrative authorities	This component takes values in the range (0,5), the higher the individual weight in the average value, the higher the assigned value.	The PRS Group, 2022, ICRG Methodology, Table 7, p.16, https://www.prsgroup.com/wp-content/uploads/2022/04/ICRG-Method.pdf
The annual change in the estimated GDP, at constant 1990 prices, of a given country is expressed as a percentage increase or decrease.	Annual percentage change in GDP for each administrative-territorial unit in Romania during the period 1993-2023	This component takes values in the range (0,10), the greater the percentage increase, the higher the assigned value will be.	The PRS Group, 2022, ICRG Methodology, Table 8, pp.16-17, https://www.prsgroup.com/wp-content/uploads/2022/04/ICRG-Method.pdf
The estimated annual inflation rate (unweighted average of the consumer price index) is calculated as a percentage change.	Annual inflation rate in Romania during the period 1993-2023.	This component takes values in the range (0,10), the lower the annual inflation rate, the higher the assigned value will be.	The PRS Group, 2022, ICRG Methodology, Table 9, pp.17-18, https://www.prsgroup.com/wp-content/uploads/2022/04/ICRG-Method.pdf
The estimated budget balance of the central government (including grants) for a given year in national currency is expressed as a percentage of the estimated GDP for that year in national currency.	The estimated budget balance of the administrative unit for a given year in national currency expressed as a percentage of the estimated GDP for that year in the national currency of the same administrative unit.	This component takes values in the range (0,10), the higher the share of the budget balance, the higher the assigned value will be.	The PRS Group, 2022, ICRG Methodology, Table 10, pp.18-19, https://www.prsgroup.com/wp-content/uploads/2022/04/ICRG-Method.pdf

Source: own processing data

For the considered period, Romania registered high risk until 2001 inclusively in all macro-regions and development regions, as shown in Figures 3 and 4 below, and for the rest of the analyzed period it registered low and moderate risk.

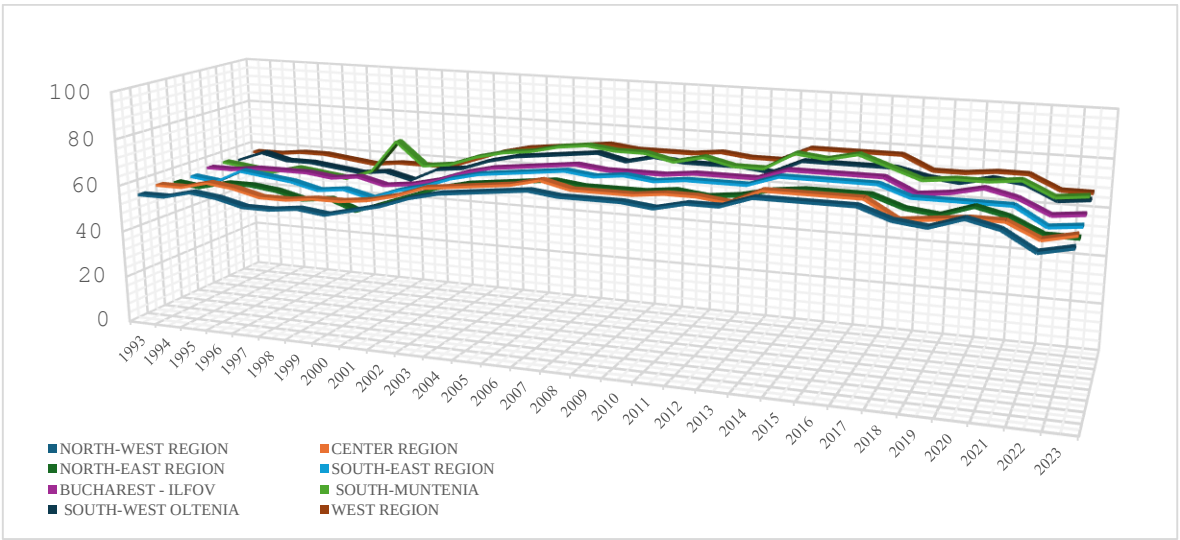
Figure 3. Corruption Risk Index by development macro-regions in Romania, 1993-2023



Source: own processing data

The values calculated for the corruption risk measured by its economic component at the level of development macro-regions in Romania during the period 1993-2023 show us an increased risk until 2001, as we mentioned previously, but also a sinuous evolution for the rest of the period, namely: a decreasing trend in the risk during the period 2002-2011, an increasing trend for 2012-2013, again a decreasing trend until 2017, a fairly large increase in the risk during the period 2018-2019, a decreasing trend during the period 2020-2021, followed by a fairly large increase in the risk for the year 2022-2023. This evolution characterizes all four macro-regions and is reflected, in this study, by economic risk, but it also synchronizes with developments in the political life of our country.

Figure 4. Corruption Risk Index by regions of developments in Romania, 1993-2023



Source: own processing data

As can be seen from Figure 4, above, the evolution of corruption risk in the eight development regions of our country is the same as in the case of the macro-regions, described above, only one aspect stands out - the South-Muntenia Region in 2001, which, although recording the best values at the level of that year, reveals a very large increase in risk compared to 2000.

4. Research Methodology and Data

4.1. Research Model and Data

The research applies a linear regression model to empirically study the impact of fiscal decentralization on corruption at the level of each county, region, and development macro-region in Romania. To evaluate the hypothesis regarding a link between decentralization and corruption, we choose a linear function for which we opted to express in terms of natural logarithms of the variables:

$$\text{Ln}\, corr_{i,t} = \beta_0 + \beta_1 Ln\, corr_{i,t-1} + \beta_2 Ln\, FDI_{i,t} + \varepsilon_{i,t} \quad (4)$$

where: i and t represent the data from county/region i ($i = \overline{1,..,41}$) in year t ($= \overline{1992,..,2023}$).

The empirical analysis was conducted on the four major development macro-regions and the eight regions comprising them, with a granular analysis on the 40 counties of Romania and the Municipality of Bucharest over a period of 32 years (from 1992 to 2023).

The exploration of the temporal dimension is justified by the variation over time that the corruption index shows. The temporal dimension also allows for the well-documented dynamics of corruption to be considered by introducing lags in the dependent variable on the right-hand side of the estimated equation.

The weighted model estimation includes only the decentralization index (ln)FDI and the lag of the dependent variable (Ln)corr as a control variable. To control for heteroskedasticity, each estimated equation has cluster-robust standard errors. To assess the homoscedasticity of the model, the Breusch-Pagan Test (Formal Test) was used, and the results showed a p-value for the newly created regression model less than 0.05, which rejects the hypothesis of homoscedasticity.

The constructed regression model is statistically significant, indicating that the independent variables ($FDI_{i,t}$ and $corr_{i,t-1}$) collectively predict a significant proportion of the variability of the dependent variable ($corr_{i,t}$), with no significant multicollinearity problem between the independent variables in this model.

4.2. Empirical Results and Discussion

Table 2 presents the estimation results for the basic model (Equation 4), where fiscal decentralization is measured by the fiscal decentralization index constructed based on two other

indices, fiscal autonomy and fiscal importance, presented in subchapter 3.1. The estimation of the basic model was done using the least squares method.

Table 2. Results

REGION		R	Adj R^2	Durbin-Watson	Sig.	Coefficients			
						Unstandardized Coefficients		Standardized Coefficients	
						β	Std. Error	β	t
MACROREGION 1	(Constant)	.964	.924	2.241	<.001	.971	.240		4.052
	$corr_{i,t-1}$					.742	.067	.758	11.014
	FDI					.117	.030	.272	3.958
NORTH-WEST	(Constant)	.965	.932	2.036	<.001	1.051	.246		4.267
	$corr_{i,t-1}$					.731	.067	.753	10.980
	FDI					.122	.030	.276	4.017
CENTER	(Constant)	.957	.909	2.172	<.001	1.094	.270		4.046
	$corr_{i,t-1}$					.714	.074	.735	9.622
	FDI					.111	.030	.286	3.748
MACROREGION 2	(Constant)	.962	.920	2.135	<.001	.929	.219		4.237
	$corr_{i,t-1}$					.751	.063	.774	11.953
	FDI					.115	.027	.271	4.182
NORTH-EAST	(Constant)	.963	.922	1.921	<.001	.916	.215		4.264
	$corr_{i,t-1}$	.				.769	.060	.787	12.800
	FDI					.120	.028	.268	4.365
SOUTH-EAST	(Constant)	.960	.916	2.267	<.001	.922	.223		4.132
	$corr_{i,t-1}$					.770	.061	.795	12.543
	FDI					.117	.029	.255	4.026
MACROREGION 3	(Constant)	.966	.928	1.894	<.001	.784	.224		3.494
	$corr_{i,t-1}$					.785	.064	.812	12.241
	FDI					.082	.026	.210	3.171
SOUTH-MUNTENIA	(Constant)	.909	.814	2.429	<.001	1.566	.477		3.281
	$corr_{i,t-1}$					.596	.123	.616	4.828
	FDI					.165	.062	.341	2.670
BUCHAREST ILFOV	(Constant)	.958	.913	1.799	<.001	.687	.226		3.033
	$corr_{i,t-1}$					.813	.065	.839	12.527
	FDI					.065	.024	.182	2.710
MACROREGION 4	(Constant)	.960	.916	2.226	<.001	.872	.235		3.712
	$corr_{i,t-1}$					.770	.066	.797	11.745
	FDI					.100	.029	.232	3.418
SOUTH-WEST OLTENIA	(Constant)	.949	.894	2.536	<.001	.976	.272		3.594
	$corr_{i,t-1}$					.749	.074	.775	10.133
	FDI					.102	.032	.246	3.223
WEST	(Constant)	.974	.944	1.903	<.001	.940	.208		4.515
	$corr_{i,t-1}$					.766	.056	.791	13.786
	FDI					.110	.025	.249	4.347

Source: own processing data with SPSS

The Durbin-Watson value ranges from 0 to 4. A value around 2.0 indicates the absence of autocorrelation. The value recorded in all 12 estimated equations in our model is very close to 2.0, suggesting that there is no significant problem of positive or negative autocorrelation in the model errors. According to this result, the model appears to be one with exceptionally high predictive power that respects the basic assumption of error independence (zero autocorrelation).

Analysis of Variance leads to the conclusion that the constructed regression model is valid and extremely efficient in explaining the variation of the dependent variable, having a very high predictive power (also confirmed by the high adjusted R^2 value in the previous table) for all 12 development regions tested.

Regarding the coefficients obtained, as can be seen from Table 2, their value, in all 12 situations, indicates a strong positive relationship between the lagged variable ($corr_{i,t-1}$) and the dependent variable ($corr_{i,t}$) and a moderate one between the fiscal decentralization index (FDI) and corruption. Both variables are statistically significant (both have Sig. <.001). The 95% confidence intervals for β provide a range of plausible values for the true unstandardized population coefficients, based on your sample data.

Regarding the unstandardized coefficients, which show us the expected average change in the dependent variable, for each one-percent increase in the FDI variable (keeping the corri,t-1 variable constant), the value of the dependent variable $corr_{i,t}$ increases, in all 12 situations, on average, with values ranging between 0.065% (Bucharest-Ilfov Region) and 0.165% (South-Muntenia Region).

The t-value (t-test) measures how significant each individual coefficient is in the constructed regression model. It indicates whether the independent variable really contributes to explaining the dependent variable or whether the observed relationship could be purely coincidental.

The larger the absolute value of *t*, the more confident it is that the variable has a real impact. In general, a value of t greater than 2 (or less than -2) is considered statistically significant at a 95% confidence level.

The t-values (see Table 2) in the model presented in this article show us that the lagged independent variable corri,t-1 is a very stable predictor and has an extremely clear influence on the dependent variables, and the FDI variable, although recording lower values, is significantly higher above the critical threshold of 2, confirming that the fiscal decentralization index (FDI) has a significant impact and cannot be ignored in the model. The high values recorded by t confirm that both predictors (corri,t-1 and FDI) are statistically significant and "solid" for the regression model presented in the previous subchapter.

The model explains over 90% of the variability in the economic risk of corruption through fiscal decentralization, as most of the adjusted R^2 values are above 0.90, with a slight decrease in South-Muntenia to 0.81.

The results of the collinearity statistics (Tolerance and VIF - Variance Inflation Factor) show that there is no multicollinearity problem between the independent variables, $corr_{i,t-1}$ and FDI, in this regression model. The estimates of the β coefficients and associated p-values are dependable, as their variance is not excessively increased by the relationship between the predictors.

5. Conclusion

In this paper, we examine the extent to which the Romanian state's efforts to fiscally decentralize counties, regions, and development macro-regions impact corruption at the regional level over a 31-year time horizon.

Although some of the existing literature considers that fiscal decentralization limits opportunities for corruption, as it offers the potential for increased accountability by bringing decision-making closer to people (Arikan, 2004; Weingast, 1995), the results of the present study show a moderate positive relationship between the dependent variable, corruption, and the independent variable, the fiscal decentralization index (FDI), both for the four development macro-regions and the eight development regions in Romania for the period 1993-2023.

The analysis of the results from the empirical study leads us to the following conclusions:

- the FDI values for the four development macro-regions of Romania for the 31 years (1993-2023), using the model proposed by Vo (2008), show us a relative fiscal centralization in Romania, FDI taking values between 0.1353 (in 1994, in Macro-region four formed by South-West Oltenia and West Region) and 0.4038 (in 2007, in Macro-region three formed by South-Muntenia and Bucharest – Ilfov Region); a political reason caused a significant decrease in the level of decentralization in Romania, and after the global crisis of 2008, a process of fiscal recentralization took place in our country, but also in Slovenia;
- the corruption index values, for the analyzed period, in Romania showed a high risk until 2001, including in all macro-regions and development regions, and for the rest of the analyzed period, a low and moderate risk.
- the regression model is statistically significant, indicating that the independent variables (corri,t-1 and FDI) collectively predict a significant proportion of the variability in the dependent variable ($corr_{i,t}$).
- the coefficient values, as can be seen from Table 2, in all 12 cases, indicate a strong positive relationship between the lagged variable (corri,t-1) and the dependent variable ($corr_{i,t}$) and a moderate one between the fiscal decentralization index (FDI) and corruption. Both variables are statistically significant (both have Sig. <.001).
- the expected average change in the dependent variable shows us that for each percent increase in the FDI variable (keeping the corri,t-1 variable constant), the value of the dependent variable $corr_{i,t}$ increases, in all 12 situations, on average, with values ranging between 0.065% (Bucharest-Ilfov Region) and 0.165 % (South-Muntenia Region).

These empirical findings suggest that future public administration reforms in Romania must pivot away from unconditional fiscal decentralization. Instead, policy designs should embrace a ***conditional and asymmetric decentralization framework***. Under this approach, the devolution of financial autonomy to subnational authorities (counties and regions) must be strictly contingent upon *local government consolidation*, *enhanced institutional capacity*, *strict central auditing*, and *digital transparency metrics* as *a sine qua non condition* to mitigate the risks of local capture.

To better highlight some informal practices in local administration (e.g. nepotism), future studies should explore specific transmission mechanisms, including procurement irregularities and political patronage in public employment. Methodologically, this could be achieved by utilizing operational proxies for localized corruption, such as the per capita number of final corruption convictions instrumented by the National Anti-Corruption Directorate.

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