Publisher: Sapienza Grupo Editorial
R. Santa Cruz, 2187, Vila Mariana
São Paulo, Brazil
editor@sapienzaeditorial.com

Sapienza
International Journal of Interdisciplinary Studies
ISSN: 2675-9780

Corruption and emigration from the Western Balkans: evidence from a dynamic system GMM model (2012-2022)

Corrupção e emigração com origem nos Bálcãs Ocidentais: evidências de um modelo GMM dinâmico (2012-2022)

Corrupción y emigración desde los Balcanes Occidentales: evidencia de un modelo GMM dinámico (2012-2022)

Visar Malaj
https://orcid.org/0000-0002-3439-2642
Associate professor at the University of Tirana, Albania
visarmalaj@feut.edu.al (correspondence)

Emi Malaj
https://orcid.org/0009-0007-6425-4180
Lecturer at the University of Vlora, Albania

ARTICLE HISTORY

Received: 01-05-2023
Revised Version: 04-09-2024
Accepted: 05-10-2024
Published: 18-10-2024

Manuscript type: Article

ARTICLE INFORMATION

Science-Metrix Classification (Domain):
Economic & Social Sciences
Main topic:
Economic and social challenges in the Balkans
Main practical implications:
This article is focused on the impact of corruption and other variables on emigration from the Western Balkans. Authorities should continue to strengthen the rule of law, fight corruption, and improve governance to minimize emigration flows.
Originality/value:
The main contribution of the study lies in the estimation of a System GMM equation, in the context of a dynamic panel analysis. The results confirm the statistical significance of lagged migration stocks and perceived corruption.

ABSTRACT

According to neoclassical models, migration takes place when there is a strong probability that individuals will recoup their human capital investments. As a result, workers typically move from low-income to high-income areas and the larger the expected income gap between areas, the higher the number of migrants. In countries where corruption is endemic, jobs are often secured through political connections and bribes. This will lead to a higher unemployment level as well as to a lower return to human capital. Consequently, a significant proportion of the population considers emigration as the only path to succeed. The present study is focused on the impact of corruption on emigration from six Western Balkan countries. A System Generalized Method of Moments is estimated to analyze migrant stocks in 28 receiving countries during the period from 2012 to 2022. We suggest that corruption can directly influence migration stocks in receiving countries.

Keywords: Corruption, Emigration, Western Balkans, Human Capital, System GMM.

RESUMO

De acordo com os modelos neoclássicos, a migração ocorre quando há uma alta probabilidade de que os indivíduos recuperem seus investimentos em capital humano. Como resultado, os trabalhadores costumam se mover de áreas de baixa renda para áreas de alta renda, e quanto maior a expectativa de diferença de renda entre as áreas, maior será o número de migrantes. Em países onde a corrupção é endêmica, os empregos frequentemente são garantidos por meio de conexões políticas e subornos. Isso leva a um nível mais alto de desemprego e a um retorno menor do capital humano. Consequentemente, uma proporção significativa da população considera a emigração como o único caminho para ter sucesso. Este estudo foca no impacto da corrupção na emigração de seis países dos Bálcãs Ocidentais. Um modelo de Método Generalizado de Momentos em Sistema é estimado para analisar os estoques de migrantes em 28 países receptores durante o período de 2012 a 2022. Sugerimos que a corrupção pode influenciar diretamente os fluxos migratórios nos países receptores.

Palavras-chave: Corrupção, Emigração, Bálcãs Ocidentais, Capital Humano, Modelo GMM.

RESUMEN

Según los modelos neoclásicos, la migración se produce cuando hay una alta probabilidad de que los individuos recuperen sus inversiones en capital humano. Como resultado, los trabajadores suelen trasladarse de áreas de bajos ingresos a áreas de altos ingresos, y cuanto mayor sea la brecha de ingresos esperada entre las áreas, mayor será el número de migrantes. En países donde la corrupción es endémica, los empleos a menudo se aseguran a través de conexiones políticas y sobornos. Esto lleva a un mayor nivel de desempleo y a un menor retorno del capital humano. En consecuencia, una proporción significativa de la población considera la emigración como la única vía para tener éxito. Este estudio se centra en el impacto de la corrupción en la emigración de seis países de los Balcanes Occidentales. Se estima un modelo de Método Generalizado de Momentos en Sistema para analizar los stocks de migrantes en 28 países receptores durante el periodo de 2012 a 2022. Sugerimos que la corrupción puede influir directamente en los flujos migratorios en los países receptores.

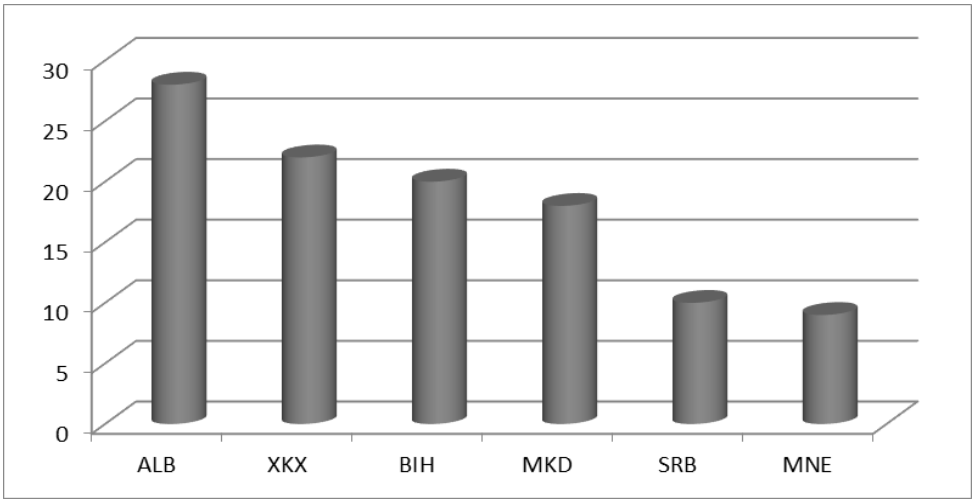
Palabras clave: Corrupción, Emigración, Balcanes Occidentales, Capital Humano, Modelo GMM.

INTRODUCTION

This study focuses on the issues of corruption and emigration in the six Western Balkan (WB) countries, namely Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, and Serbia. The European Union (EU) has formulated a policy to promote the gradual integration of WB countries with the Euro area. Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, and Serbia have received the candidate country status, whereas Kosovo submitted its application for membership in December 2022. The future European integration of Serbia and Kosovo is closely related to the EU-facilitated dialogue between the two countries, which is expected to culminate in a legally binding agreement on the normalisation of their relations.[1] In addition, the EU membership of WB countries depends on different key issues which need to be addressed. The integration process is strongly associated with the implementation of reforms in the areas of rule of law, justice, and the fight against corruption.

According to the Balkan Barometer (2023), WB citizens consider the economic situation, unemployment and corruption as the most serious issues facing their countries. Furthermore, brain-drain was seen as the second most important problem for respondents from Albania and North Macedonia (41% and 27%). Brain-drain was also a major problem for respondents from the other WB countries. The departure of high-educated outnumbered that of low-educated migrants, with the emigration of highly educated people particularly notable among women. In summary, the number of high-educated migrants from the WBs is six times higher compared to the rest of the world (World Bank, 2018). Emigration from the WBs is significant also when considering the proportion of emigrants in relation to total population born in the respective country (Figure 1). Albania exhibits the highest emigration rate at 28%, followed by Kosovo (22%), Bosnia and Herzegovina (20%), North Macedonia (18%), Serbia (10%), and Montenegro (9%). The primary destinations for emigrants from WB countries are the developed economies in Western Europe, particularly Germany, Switzerland, Austria, and Italy. Beyond Europe, the United States and the United Kingdom stand out as the main destinations for migrants originating from the WBs (OECD, 2022).

Figure 1. Emigration rates in the six Western Balkan countries



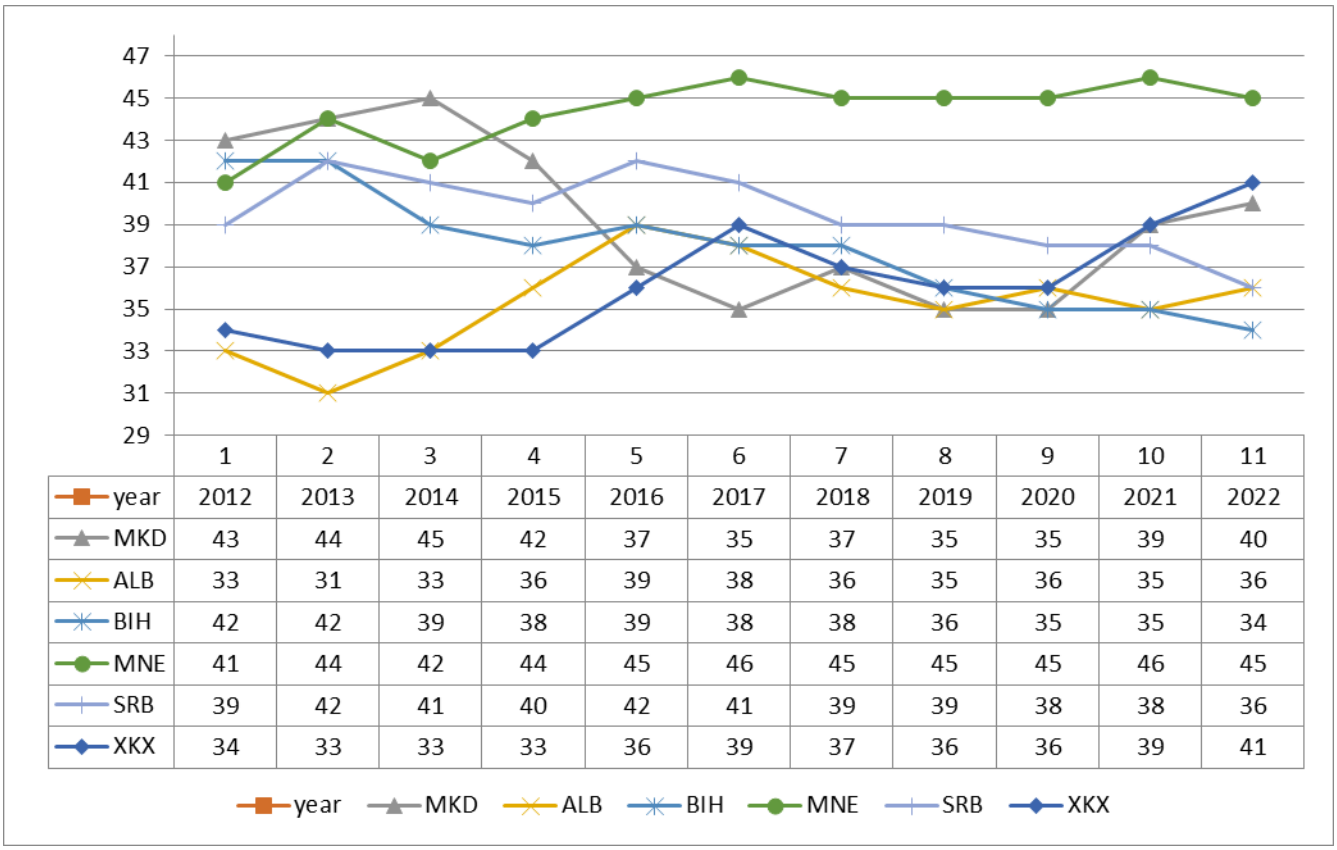
Source: Author's representation using data from OECD (2022)

Lavrič (2019) suggests that the main factors motivating WB people to emigrate are related to poverty, as well as to a negative perception of the home countries' situation and positive perceptions of the EU. Moreover, youth from EU Member States exhibit significantly lower motivation for long-term emigration compared to youth from the six WB countries. More specifically, about one half of youth from WB countries intend to remain abroad for more than 20 years, whereas this share is about 25 percent for Southeast European EU Member States (Lavrič, 2019). In essence, residing in an EU Member State appears to significantly reduce young individuals' motivation for long-term emigration. The report on "Labour Migration in the Western Balkans" indicates that emigration from the WBs is stimulated by low wages, high unemployment, weak education systems, low social security, and corruption (OECD, 2022). Private sector growth is hampered by a difficult business climate, pervasive corruption, and limited connections between the local economy and foreign direct investment (FDI) sectors. Additionally, more than 20% of firms in the WBs identify corruption as a significant barrier to doing business (OECD, 2022).

[1] https://www.europarl.europa.eu/factsheets/en/sheet/168/the-western-balkans.

Figure 2 illustrates the annual Corruption Perceptions Index (CPI) in the six WB countries during the period 2012-2022. According to the Transparency International (TI) definition, greater CPI values coincide with decreased perceptions of corruption. As a result of the methodology update, only CPI values from 2012 onwards can be compared.[2] Montenegro achieved the highest score among WB countries in 2022 (CPI of 45), whereas Bosnia and Herzegovina recorded the worst performance (CPI of 34). The CPI scores of WB countries can be described as 'worryingly low', considering also that the respective average score for EU countries in 2022 was nearly 66 out of 100.[3]

Figure 2. *Corruption Perceptions Index (CPI) in the six Western Balkan countries.*



	1	2	3	4	5	6	7	8	9	10	11
year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MKD	43	44	45	42	37	35	37	35	35	39	40
ALB	33	31	33	36	39	38	36	35	36	35	36
BIH	42	42	39	38	39	38	38	36	35	35	34
MNE	41	44	42	44	45	46	45	45	45	46	45
SRB	39	42	41	40	42	41	39	39	38	38	36
XKX	34	33	33	33	36	39	37	36	36	39	41

Source: Author's representation using data from Transparency International.

The effect of corruption on migration

In the extended neoclassical models, migration takes place when there is a high likelihood that the workers will regain their human capital investments. Consequently, migrants typically move from low-income to high-income areas and the larger the expected income gap between areas, the higher the number of migrants (Bauer and Zimmermann, 1999; Grogger and Hanson, 2011). In countries where corruption is widespread, jobs are secured due to political connections and bribes. This will lead to higher unemployment rates, lower returns to human capital and a decrease in economic growth. As a result, a significant portion of the population, especially those with higher education and more skills, consider emigration as the only path to succeed (Schneider, 2015). During 2021-2022, the OECD conducted a survey among individuals from the six WB countries who had experience with current and past migration. Participants were asked about their primary motivations for moving to another country. Out of a selection of 13 potential reasons, 66,7% of respondents deemed corruption and political instability in their home country as very important, while 19.2% regarded it as important. This sentiment was even more pronounced among recent emigrants: 90% of those who had moved within the 5 years preceding the survey considered corruption and instability to be a very important or important reason influencing their decision to emigrate. Furthermore, "corruption or political instability" emerged as the foremost reason for emigrating among the answer options (OECD, 2022).

The nexus between corruption and emigration has been investigated by a limited number of researchers. Poprawe (2015) investigates the relationship among corruption and migration on a cross-sectional sample with bilateral migration flows including 230 countries. The author argues that the presence of corruption leads to deteriorating economic conditions,

[2] https://www.transparency.org/en/news/how-cpi-scores-are-calculated.
[3] https://www.transparency.org/en/news/cpi-2022-western-europe-eu-corruption-undue-influence-hurt-progress.

increased insecurity, and a diminished quality of life. Estimates from a gravity model demonstrate that economies with high corruption levels stimulate emigration and discourage immigration. This result remains robust across various specifications and for alternative corruption measures. Similarly, Dimant, Krieger, and Meierrieks (2013) study the impact of corruption on migration on a panel dataset of 111 countries over the period from 1985 to 2000. The authors apply two well-known estimation methods, pooled OLS and fixed-effects, respectively. The empirical results reveal that corruption is one of the main push factors of migration. Furthermore, the marginal effect of corruption on the number of skilled migrants is nearly three to four times higher than the respective effect on average migration.

Moreover, Auer, Römer, and Tjaden (2020) analyze the link between corruption and migration using a global survey of more than 280,000 respondents in 67 countries over the period 2010-2014. The authors employ two approximations of migration intentions, as well as different country-level measures of corruption. The 2SLS results confirm earlier findings: corruption stimulates emigration intentions across countries; however, the impact is likely to be underestimated in conventional equations that do not consider endogeneity. The findings are similar to Bernini, Bossavie, Sanchez, and Makovec (2023), who use a dataset of migration flows across EU28 and EFTA (European Free Trade Association) countries over the period 2008-2018. The authors consider four different measures of corruption and estimate a gravity model for bilateral migration. Empirical findings show that corruption serves as both a push and a pull factor in shaping migration patterns.

The other studies have been focused on a smaller group of countries or in a single country. Matallah (2020) studies the effect of education, good governance, and other variables in reducing migration flows from North African nations during the period from 1996 to 2015. The author employs three different estimation methods, namely pooled OLS, fixed-effects and random effects. The empirical results reveal that government effectiveness and better basic services negatively impact migration decisions. The education index has also a strongly negative effect on migration, illustrating the notion that enhanced access to education improves social outcomes, thereby offering individuals more opportunities within their homes. Furthermore, control of corruption and political stability tend to discourage North African migration to developed economies. López García and Maydom (2023) investigate the impact of frontline corruption on individuals' choices to emigrate from the WBs. The authors use a dataset from the Balkan Barometer over the period from 2018 and 2021, and estimate different probit models on the likelihood of emigration preparations. The empirical results reveal that bribe-paying experiences and perceived nepotism in the public sector are key factors influencing emigration. The findings also show that the higher the education level an individual possesses, the greater the impact of perceived nepotism on the emigration choice. Overall, the decision to emigrate from WB countries is significantly influenced by perceptions and experiences of frontline corruption. The study of Crisan, Crisan-Mitra, and Dragos (2019) is based on a survey of 911 Romanian workers. The authors formulate a model to describe employees' intention to migrate, incorporating their perception of country-level corruption and different organizational variables, including observed organizational misconduct, career satisfaction, turnover intention, and perceived organizational corruption. The estimated OLS models indicate that employees who perceive a high level of corruption in the country are more inclined towards migration rather than seeking another job within Romania. Kurecic, Kokotovic, and Haluga (2023) focus on corruption and other important determinants of emigration from Croatia. The authors examine data from a survey comprising a random sampling approach of 223 respondents from Varaždin County. The estimation results from different logit regression equations show that monetary conditions are a stronger motivator for emigration decisions than corruption.

A smaller number of authors concentrate on the relation between corruption and migrants' educational attainment. Cooray and Schneider (2016) examine the impact of corruption on the emigration rate of individuals with low, medium and high levels of educational attainment in 20 OECD destination countries. The authors use fixed-effects, system GMM, and instrumental variables techniques in order to establish a causal relationship among corruption and emigration. The estimation results show that as corruption increases, the emigration rate of high-skilled individuals also increases. The emigration rate of individuals with low and medium educational attainment follows an inverted U-shaped pattern, initially increasing at lower levels of corruption, then declining beyond a certain threshold. Similarly, Arif (2022) investigates the relationship between corruption levels in home and host countries and migrants' educational attainment. The author considers a panel sample over the period 1990-2000, and estimates a modified gravity model for global migration decisions. The respective results confirm that countries with lower corruption levels typically attract a higher number of migrants. In addition, highly educated migrants are nearly 6–19 percent more sensitive to corruption at the destination than those with high levels of educational attainment. Findings are in line with Ariu and Squicciarini (2013), who carry out an empirical analysis of the link between corruption and migration decisions of highly skilled professionals across 123 countries. They consider a dataset of workers aged 25 years and older with post-secondary education. The authors argue that corruption may impact net migration through two main channels: firstly, by encouraging skilled individuals to seek opportunities in less corrupt countries; and secondly, by discouraging talented foreign workers from settling in corrupted countries. The OLS estimations reveal a negative and statistically significant correlation among corruption and migration inflows; conversely, there is a positive and statistically significant correlation between corruption and migration outflows.

The study of Okey (2016) focuses on the nexus between corruption levels and physician emigration from Africa. The author estimates a System GMM and a count data model on a panel dataset of 50 African countries during the period from 1995 to 2004. The estimation results show that corruption stimulates physician emigration from Africa. On average, countries characterized by elevated levels of corruption typically observe higher rates of physicians' emigration.

METHODOLOGY

Empirical analysis

This section outlines the methodological framework employed in this research and discusses the corresponding results. Initially, we consider the following standard panel data equation:

$$y_{it} = \beta_0 + x_{it}'\beta + \varepsilon_{it} \quad (1)$$

where i = 1, . . . , N; t = 1, . . . , T; x_{it} is a K-dimensional vector of independent variables, β_0 is the model intercept, β is a (K x 1) vector of slopes, and ε_{it} is an error term. The decomposition of ε_{it} allows to control for individual unobserved heterogeneity:

$$\varepsilon_{it} = \alpha_i + u_{it} \quad (2)$$

Therefore, equation (1) can be expressed as:

$$y_{it} = \beta_0 + x_{it}'\beta + \alpha_i + u_{it} \quad (3)$$

where u_{it} is independent and identically distributed (iid) with a mean of zero and a constant variance; and α_i accounts for the unobserved individual factors. In a fixed effects model, x_{it} and u_{it} are assumed to be uncorrelated. Conversely, in a random effects model, α_i is assumed to follow a normal distribution with zero mean and constant variance. In a random effects scenario, we can include time invariant variables in the equation. Incorporating a lagged explanatory variable is highly effective in capturing the dynamic nature of the dependent variable. Hence, we consider the following dynamic panel data model:

$$y_{it} = \beta_0 + \rho y_{i,t-1} + x_{it}'\beta + \alpha_i + u_{it} \quad (4)$$

where $|\rho|<1$. Nickell (1981) argue that conventional estimation methods may result in biased coefficients in dynamic models. The author considers the following equation, where the fixed effect is removed and time effects are omitted:

$$y_{it} - y_i = \rho(y_{i,t-1} - y_{i,-1}) + (x_{it} - x_i)'\beta + (u_{it} - u_i) \quad (5)$$

According to Arellano and Bond (1991), the lag of the dependent variable is frequently correlated with the individual effects of random errors, leading to endogeneity. Given the inconsistency of estimator, various GMM estimators have been formulated. Arellano and Bond (1991) propose a GMM estimation technique for deriving the respective moment conditions using instrumental variables. However, as demonstrated by Blundell and Bond (1998), this estimator can suffer from a weak instrument problem when ρ is relatively high. Blundell and Bond (1998) formulate the System GMM, where lagged levels in the differenced equation and lagged first-differences in the levels equation are utilized as instrumental variables. Only a small number of authors have used the System GMM technique to investigate the relationship among emigration and the corresponding determinants (Mitze, Alecke, and Untiedt, 2008; Naudé, 2010; Ruyssen, Everaert, and Rayp, 2014; Okey, 2016; Cooray and Schneider, 2016). This method enables the control of joint endogeneity of explanatory variables. The relationship between migration and a set of explanatory variables can be expressed by the following dynamic equation:

$$\ln M_{ijt} = \beta_0 + \rho \ln M_{ij,t-1} + \beta_1 \ln CORR_{it} + \beta_2 \ln INC_{it} + \beta_3 \ln INC_{jt} + \beta_4 \ln GEO_{ij} + \beta_5 Y2020 + \beta_6 Y2021 + \beta_7 EDU_{it} + \beta_8 UNE_{it} + \alpha_{ij} + u_{ijt} \quad (6)$$

Where Mijt denotes the number of immigrants from WB country i living in the destination j at year t; CORRit is the CPI value in country i at year t; INCit is the GDP per capita in country i at year t; INCjt is the GDP per capita in country j at year t; GEOij is the bilateral distance; Y2020 and Y2021 are dummy variables, related to the years 2020 and 2021 when Covid-19 restrictions were in place; EDUit is the country's i government expenditure devoted to education as a percentage of GDP at year t; UNEit is the unemployment rate in country i at year t.

The dataset consists of a balanced panel of 16 important destination countries with 1.055 annual observations for the period from 2012 through 2022. Table 1 reports a list of the considered origin and destination countries. The unemployment rates and the government expenditures on education were collected from the World Bank, the Statistical Office of the EU (Eurostat), and the national statistics offices of each country. The GDPs per capita were extracted from the World Bank database. Bilateral distances were sourced from CEPII GeoDist database (Mayer and Zignago, 2011). The United Nations (UN) and Eurostat were the primary sources of WB emigration stocks. A considerable number of missing observations were sourced from the respective national statistics offices. Constraints in data availability have led researchers to use migration stocks instead of bilateral flows. Different authors who have employed stocks have interpreted their findings as a representation of long-term equilibrium. Furthermore, they argue that since stock data are often derived from national censuses, they are likely to be of higher quality than sources reporting annual immigrant flows (Ramos, 2016; Grogger and Hanson, 2011).

Table 1. List of origin and destination countries included in the dataset

Western Balkan countries (origins)	Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia.
Destination countries	Belgium, Bulgaria, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.

Source: Author's representation

RESULTS AND DISCUSSION

Table 2 reports the regression results of the one-step and two-step System GMM model. This method maximizes both the consistency and efficiency of the proposed estimator. The GMM estimates follow the expected signs and are statistically significant at 1%, 5%, or 10% level. The results suggest a negative relationship between perceived corruption in the WBs and migration stocks of receiving countries. The lagged parameter is statistically significant and positive in both equations. This implies that network effects play a crucial role on WB emigration stocks. Past migration may impact current migration stocks through different channels, i.e., migrants act as communication bridges for relatives and friends left behind (Mitze, Alecke, and Untiedt 2008).

Table 2. Model estimation results

Dependent variable: **lnMijt**					
Explanatory variable	**One-step SGMM**	**Pr(>|t|)**	**Two-step SGMM**	**Pr(>|t|)**	**Expected sign**
lnMij,t-1	1.489	1.11e-09***	0.919	1.23e-10***	*Positive*
lnCORRit	-0.169	0.0002***	-0.161	0.00011***	*negative*
lnINCit	-1.527	1.12e-54***	-1.454	1.15e-08***	*negative*
lnINCjt	1.310	0.0028***	1.263	0.0039***	*positive*
lnGEOij	-2.997	1.16e-15***	-2.902	1.6e-06***	*negative*
Y2020	-1,883	0.0001***	-1,728	0.0003***	*negative*
Y2021	-0.326	0.0031***	-0.289	0.0487**	*negative*
lnEDUit	-0.258	0.0055***	-0.261	0.0673*	*negative*
lnUNEit	0.153	0.0877*	0.147	0,0901*	*positive*
AR(1)	0.0040		0.0001		
AR(2)	0.5937		0.6618		
Hansen test	0.7036		0.7188		

Source: Author's representation using the research data

As expected, the geographical distance has a strong negative effect on migration. Higher per capita GDPs in WB countries also reduce emigration, whereas per capita GDPs in the considered destinations have a positive effect on the response variable. The dummy variables related to the years 2020 and 2021 are both negative and statistically significant at 5% level in both equations. Due to COVID-19 related lockdown measures, the number of migration journeys dropped significantly. Migrants and potential migrants faced major obstacles in seeking asylum, obtaining or maintaining employment, reuniting with family etc. (IOM, 2022).

The coefficients on WBs unemployment rate are negative and statistically significant at 10%. Findings also reveal that higher government expenditures on education would lead to a fall in WB emigration stocks. The table reports two diagnostic tests, the Arellano–Bond test for second-order serial correlation, and the Hansen test for over-identifying restrictions, respectively. According to the Arellano–Bond test p-values, the error terms are first-order correlated and second-order uncorrelated, and thus GMM is an appropriate estimation technique. The Hansen test p-value is insignificant, indicating that the null hypothesis is true, hence the instruments are valid. Findings are consistent with previous studies that have employed similar system GMM equations (Mitze, Alecke, and Untiedt, 2008; Ruyssen, Everaert, and Rayp, 2014; Cooray and Schneider, 2016).

FINAL REMARKS

The decision to migrate is influenced by a range of different push and pulls factors associated with both the origin and the destination area or country. The present study was focused on the impact of corruption on emigration from six WB countries. In countries where corruption is prevalent, jobs are often secured through bribes or patronage of influential individuals. This leads to an increased unemployment rate, a worsening of living conditions, and a lower return to human capital. As a result, a substantial portion of the population, especially those with higher education and more skills, consider emigration as the only path to succeed.

The main contribution of this study lies in the formulation and estimation of System GMM model, in the context of a dynamic panel analysis. According to the empirical results, perceived corruption in WB countries can directly influence migration stocks in receiving countries. Furthermore, our findings strongly confirmed the role of network effects on WB emigration stocks. Lagged migration stocks exhibit a strong positive and significant effect on current emigration. The number of migrants from the WBs is also driven from per capita GDPs in home and host countries, bilateral distances, large-scale crisis (such as COVID-19 pandemic), unemployment rates, and government expenditures on education.

It is essential to acknowledge that this study faces several empirical and methodological limitations which should be addressed in future research. First, the potential for omitted variable bias remains, as certain important explanators may not have been captured by the considered dataset. This could lead to biased estimates of the relationship between emigration stocks and the respective independent variables, and negatively affect the model's explanatory power. To address these limitations, a larger number of emigration factors can be proposed and different proxies for corruption can be considered in the regression. Lastly, the generalizability of our findings may be limited by the selected sample, which includes only six origin countries. Future model estimations may be based on a relatively higher number of origin and destination countries, and also on a longer time frame.

REFERENCES

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies, 58(2),* 277-297. https://doi.org/10.2307/2297968

Arif, I. (2022). Educational attainment, corruption, and migration: An empirical analysis from a gravity model. *Economic Modelling*, *110*, 105802. https://doi.org/10.1016/j.econmod.2022.105802

Ariu, A., & Squicciarini, M. P. (2013). The balance of brains—corruption and migration: Corruption could be an important factor for emigration and immigration decisions by highly skilled professionals. *EMBO reports*, *14*(6), 502-504. https://doi.org/10.1038/embor.2013.59

Auer, D., Römer, F., & Tjaden, J. (2020). Corruption and the desire to leave quasi-experimental evidence on corruption as a driver of emigration intentions. *IZA Journal of Development and Migration*, *11*(1). https://doi.org/10.2478/izajodm-2020-0007

Balkan Barometer (2023) Public Opinion Survey. Sarajevo: Regional Cooperation Council and the ACIT Centre.

Bauer, T., & Zimmermann, K. F. (1999). *Assessment of possible migration pressure and its labour market impact following EU enlargement to Central and Eastern Europe* (Vol. 3). Bonn: IZA.

Bernini, A., Bossavie, L., Sanchez, D. G., & Makovec, M. (2023). Corruption as a Push and Pull Factor of Migration Flows. World Bank Policy Research Working Paper 10566.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics, 87(1)*, 115-143. https://doi.org/10.1016/S0304-4076(98)00009-8

Cooray, A., & Schneider, F. (2016). Does corruption promote emigration? An empirical examination. *Journal of Population Economics*, *29*, 293-310. https://doi.org/10.1007/s00148-015-0563-y

Crisan, E. L., Crisan-Mitra, C., & Dragos, C. (2019). The impact on migration intentions of perceived corruption at the organizational and country level in Romania. *Eastern European Economics*, *57*(5), 430-455. https://doi.org/10.1080/00128775.2018.1533410

Dimant, E., Krieger, T., & Meierrieks, D. (2013). The effect of corruption on migration, 1985–2000. *Applied Economics Letters*, *20*(13), 1270-1274. https://doi.org/10.1080/13504851.2013.806776

Grogger, J., & Hanson, G. H. (2011). Income maximization and the selection and sorting of international migrants. *Journal of Development Economics*, *95*(1), 42-57. https://doi.org/10.1016/j.jdeveco.2010.06.003

International Organization for Migration (IOM), 2022. The Impacts of COVID-19 on Migration and Migrants from a Gender Perspective. IOM, Geneva.

Kurecic, P., Kokotovic, F., & Haluga, V. (2023). Is corruption the driving force of migration from Croatia: Evidence from a survey. *South East European Journal of Economics and Business*, *18*(1), 1-14. https://doi.org/10.2478/jeb-2023-0001

Labour Migration in the Western Balkans: Mapping Patterns, Addressing Challenges and Reaping Benefits, OECD (2022). https://doi.org/10.1787/af3db4f9-en

Lavrič, M. (2019). *Closer to the EU, farther from leaving*. Friedrich-Ebert-Stiftung, Dialogue Southeast Europe.

López García, A. I., & Maydom, B. (2023). Frontline corruption and emigration in the Western Balkans. *Migration Studies*, *11*(4), 694-720. https://doi.org/10.1093/migration/mnad028

Matallah, S. (2020). Public service delivery, corruption and inequality: key factors driving migration from North Africa to the developed world. *Journal of Social and Economic Development*, *22*(2), 328-354. https://doi.org/10.1007/s40847-020-00101-5

Mayer, T., & Zignago, S. (2011). Notes on CEPII's distances measures: The GeoDist database.

Mitze, T., Alecke, B., & Untiedt, G. (2008). *Determinants of Interregional Migration Among German States and its Implications for Reducing East-West Disparities: Results from a Panel VAR Using Efficient GMM Estimation* (No. 23800089). EcoMod.

Naudé, W. (2010). The determinants of migration from Sub-Saharan African countries. *Journal of African Economies*, *19*(3), 330-356. https://doi.org/10.1093/jae/ejq004

Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica: Journal of the Econometric Society,* 1417-1426. https://doi.org/10.2307/1911408

Okey, M. K. (2016). Corruption and emigration of physicians from Africa. *Journal of Economic Development*, *41*(2), 27.

Poprawe, M. (2015). On the relationship between corruption and migration: empirical evidence from a gravity model of migration. *Public Choice*, *163*, 337-354. https://doi.org/10.1007/s11127-015-0255-x

Ramos, R. (2016). Gravity models: a tool for migration analysis. *IZA World of Labor articles*. http://dx.doi.org/10.15185/izawol.239

Ruyssen, I., Everaert, G., & Rayp, G. (2014). Determinants and dynamics of migration to OECD countries in a three-dimensional panel framework. *Empirical Economics*, *46*, 175-197. https://doi.org/10.1007/s00181-012-0674-1

Schneider, F. (2015). Does corruption promote emigration? *IZA World of Labor articles*. https://doi.org/10.15185/izawol.192

Vidovic, H., Mara, I., Koettl-Brodmann, S., Reyes, G., Arandarenko, M., & Aleksic, D. (2018). *Western Balkans Labor Market Trends 2018* (No. 124354, pp. 1-118). The World Bank.

Contribution of each author to the manuscript:

	% of contribution of each author	
Task	**A1**	**A2**
A. theoretical and conceptual foundations and problematization:	50%	50%
B. data research and statistical analysis:	60%	40%
C. elaboration of figures and tables:	40%	60%
D. drafting, reviewing and writing of the text:	50%	50%
E. selection of bibliographical references	50%	50%
F. Other (please indicate)	-	-

Indication of conflict of interest:

There is no conflict of interest

Source of funding

There is no source of funding

Acknowledgments

There is no acknowledgment