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Corruption as a Driver of Emigration in Post-Soviet Economies

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Abstrakt

Dieser Beitrag untersucht Korruption als Push-Faktor der Auswanderung in postsowjetischen Ländern von 2007 bis 2021. Die Analyse zielt darauf ab, zu begründen, ob schwache Regierungsführung und schlechte institutionelle Qualität anhaltende Abwanderungen von Menschen aus dieser Region beeinflussen. Unter Verwendung eines Panel-Datensatzes von zwölf postsowjetischen Ländern verwendet dieses Papier Schätzungen mit festen Effekten, instrumentellen Variablen (IV) und dynamischen Panels (GMM), um unbeobachtete Heterogenitäts- und Endogenitäts-Verzerrungen zu kontrollieren. Die empirischen Ergebnisse deuten darauf hin, dass ein höheres Maß an Korruption die potenzielle Auswanderung erhöht, indem ein unsicheres wirtschaftliches Umfeld, schlechte institutionelle und staatliche Leistungen und sinkendes öffentliches Vertrauen geschaffen werden.

Abstract

This paper investigates corruption as the push factor of emigration in Post-Soviet countries from 2007 to 2021. The analysis aims to justify whether weak governance and poor institutional quality impact persistent outflows of people from this region. Using a panel dataset of twelve post-Soviet countries, this paper employs fixed-effects, instrumental-variable (IV), and dynamic panel (GMM) estimations to control for unobserved heterogeneity and endogeneity bias. The empirical results suggest that higher levels of corruption increase the potential emigration by creating an uncertain economic environment, poor institutional and governmental performance, and declining public trust.

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Introduction

Migration and corruption have a straightforward correlation at first glance, the higher the level of corruption results in the increasing number of people leaving the country, but according to many studies the relationship between them is more complex and even causal. The effect of corruption on migration depends on the context and the circumstances (Cooray (2014)). Corruption can be either a push or pull factor for migration or in contrast migration can affect corruption level. Individuals usually prefer to move to countries with low corruption levels and higher institutional quality (Dimant (2013)). However, migration can also affect corruption by increasing domestic labor shortage, brain drain and economic instability (Poprawe (2015)).

This paper's main purpose is to investigate and show the nexus between corruption and migration across Post-Soviet countries, drawing existing literature on this subject and specific context of the post-Soviet region. It will be addressed by fixed effects, IV and GMM estimation techniques with comparison of two different measurements of corruption, which will offer robust analysis that will control for both observed and unobserved heterogeneity by solving the potential endogeneity of corruption.

The specific feature of this paper is the understudied geographical area for this particular topic and the implementation of the analysis using two corruption measurements for the robustness of the results. We will use CPI (Corruption Perception Index) from Transparency International, which is commonly used in many studies on corruption. Most studies were done by using CPI as a main measurement of corruption (Glathe (2024), Dimant (2013), Goel (2010), Bertocchi (2008), Dustmann (2010), Ivlevs (2012), Gupta (2002), Yusuf (2012)). And why we will use the control of corruption from the World Bank database as another corruption measurement for the robustness check.

This topic was extensively studied in international literature, but the post-Soviet region has not been covered in spite of the fact of big emigration waves and highest corruption levels in the past several decades, especially after the disintegration of the USSR. Therefore, our contribution to the existing

literature is threefold:1) whether corruption is a push or a pull factor for migration in post-Soviet countries, 2) comparison of two different measurements of corruption and their effect on emigration, and 3) political stability is a determinant of corruption. The structure of this paper is as follows, in the second part is the literature review of the previous studies on corruption and migration and post-Soviet historical context. In the third part there are model estimation techniques, descriptive statistics for the data that was used and expected signs according to other studies. In the fourth part, results of estimations with interpretations, robustness check and comparisons of two measurements of corruption. In the final part, concluding thoughts on the results of the paper.

Literature review

According to the Neoclassical migration theory migration decision is based on the salary comparisons, the higher the wage the higher the chances of moving. While the NELM (New Economics of Labor Migration) theory states that individuals consider many factors before moving, some of them having a family or because of the political and economic situation, which make the theory more complex. This theory also captures the quality of institutions, because it can affect living standards and the availability of essential services, such as education and healthcare. Institutional quality could be worsened by corruption, which erodes public trust in governmental decisions, because of the unfair allocation of resources (Dustmann (2010), Ivlevs (2012), Höckel (2018)). Corruption mostly negatively affects the economy, but there are two possible outcomes, which are the “sand on the wheel” and “grease on the wheel” hypothesis (Höckel (2018)). In developed economies using corruption helps to avoid too many bureaucracies to fasten the processes or ‘greasing the wheel’, which at the end helps the economy of the country to keep process work faster, so corruption stands as a pull factor. But in developing countries with already poor institutional quality it just keeps worsening the quality of work and slowing down all processes.

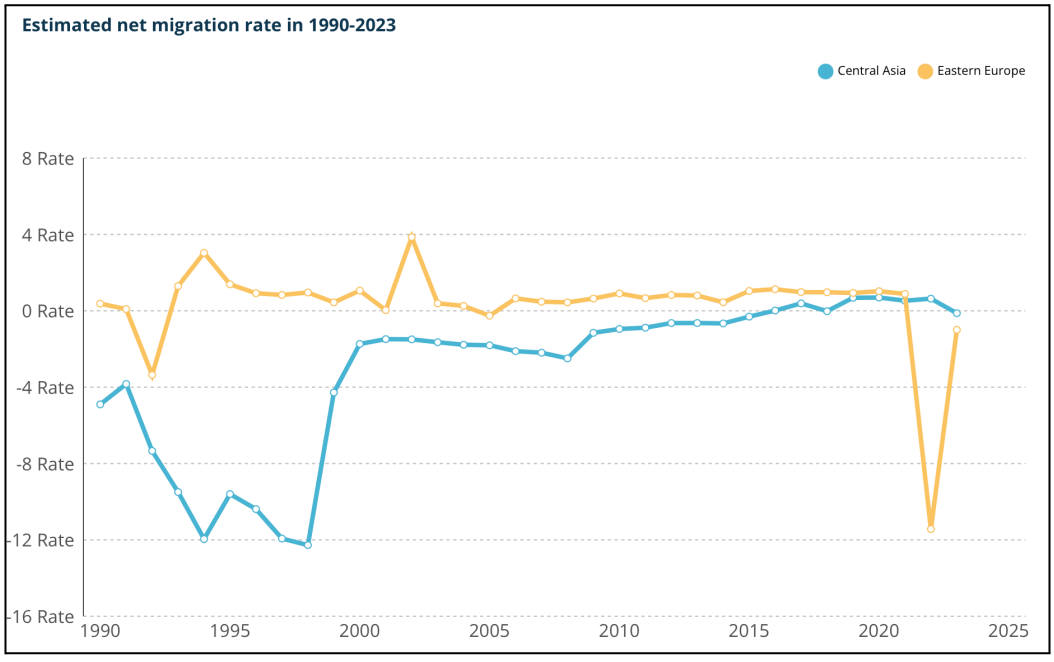
Most economists justifies that corruption hurts migration and increases the number of emigrants (Poprawe (2015), Dustmann (2010), White (2018), Cooray (2014), Melville (2016)). The study concludes that corruption harms migration and that good governance and lower levels of corruption are likely to attract more migrants. The finding that corruption has a stronger negative effect on skilled workers and individuals with higher levels of education suggests that corruption can lead to a brain drain, where a country's most talented individuals choose to emigrate to escape the negative effects of corruption. Empirical studies by Poprawe (2015) and Cooray and Schneider (2014) have established that corruption is a statistically significant determinant of emigration. Poprawe's work, in particular, demonstrates that for many migrants, the decision to leave is driven by a desire for better governance and more transparent institutions. When the corruption level increases it forces people to make decisions out of three available options: exit, "voice" or being loyal to the system (Hirschman (1970)). Where "voice" is trying to change the system internally, exit means the decision to emigrate. According to my empirical results on the relationship of political stability on corruption, which is positive and statistically significant, explains that regimes often rely more on "corrupted connections" rather than public trust. Deciding to 'voice' in such politically insatiable and highly corrupted countries can cost a lot, there are many examples of imprisoning people who were against the government. In the case of a famous Russian oppositioning journalist who was against Putin, after being imprisoned for his opinion he was killed in strange circumstances in prison. And it leaves rational individuals only one possible outcome to emigrate.

Corruption and migration context for post-Soviet countries

In the early 1980s mainly the reason for emigration was repatriation of ethnic Russians and other minorities, because of the focus on the restoration of national identity in previously colonized post-Soviet countries who gained newly independent status (Ivlevs (2012)). The decolonization waves of newly independent countries were creating language barriers, pressure and discrimination for ethnic minorities. However, after the 2000s the reason for emigration switched to the goal of improving living standards. Until nowadays the number of emigrants has increased annually. Post-Soviet countries represent regions

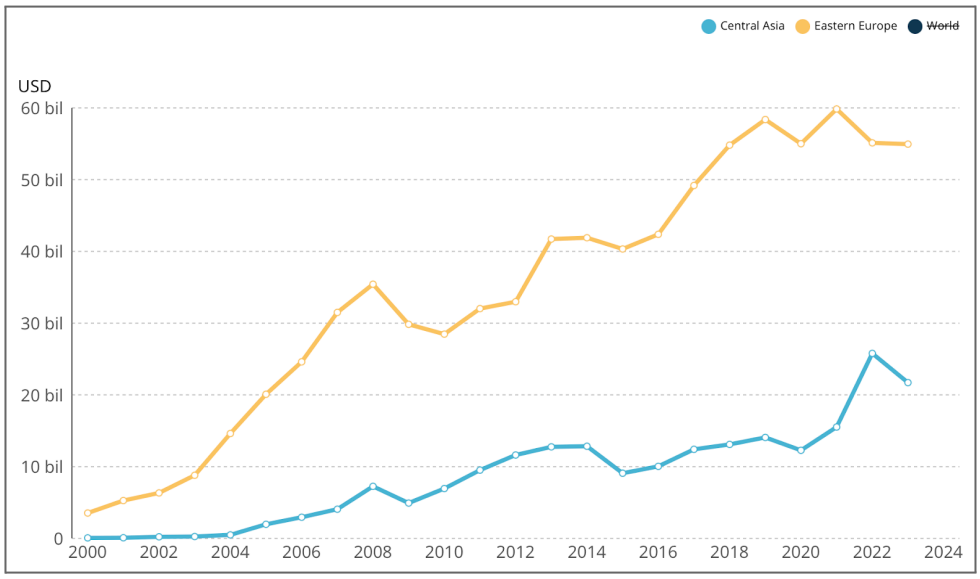
with the highest outflows of people, creating a complex relationship between shortages in domestic labor markets and huge dependencies on remittances. According to figures 1 and 2, in the last two decades there was a massive population decline in the region. Net migration rate is the difference between people who immigrate minus those who emigrate from the country over some period of time (Dimant, 2013). The average net migration rate for post-Soviet countries is -14,000 people, meaning that the number of emigrants is exceeding the number of immigrants to the countries. In the Migration data portal remittance inflows recently reached $21.7 billion in Central Asia and $55 billion in Eastern Europe. This proposes that for a large segment of the population, who live abroad and send remittance to home, the home country is no longer a place with opportunities to earn more. Remittance can stay as an economic safety cushion for a corrupted government, which creates a vicious cycle (Ivlevs (2015)). People in need for better opportunities leave their home country, but to support their families and not having enough money to move with their whole family, send remittance home. This remittance increases domestic consumption and stabilizes the economy, so for the government there is no need for actions changing the roted institutional system. This cycle makes the economy artificially stable.

Figure 1: Net migration rate of post-Soviet region from 1990 to 2021



Source: Data available at:https://www.migrationdataportal.org/dashboard/compare-geographic?c=&i=9731&r=&s=143_151&t=1990_2023

Figure 2: Remittance inflows in post-Soviet region from 2000 to 2024



Source: Data available at:https://www.migrationdataportal.org/dashboard/compare-geographic?c=&i=9691&r=&s=151_143&t=1990_2024

Data from a 2007 Gallup report, where citizens of Post-soviet countries were asked whether corruption increased after the collapse of the Soviet Union, most of the people claimed that corruption increased more than 5 times. During the Soviet Union the corruption percentage was 8%, but after the collapse the lowest level was 34% (Uzbekistan) and the highest was 85% (Kyrgyzstan). We can conclude that corruption perception tremendously increased in Post-soviet countries comparing results. The poor institutional quality could be a main discouraging factor for individuals to stay (Poprawe (2015)).

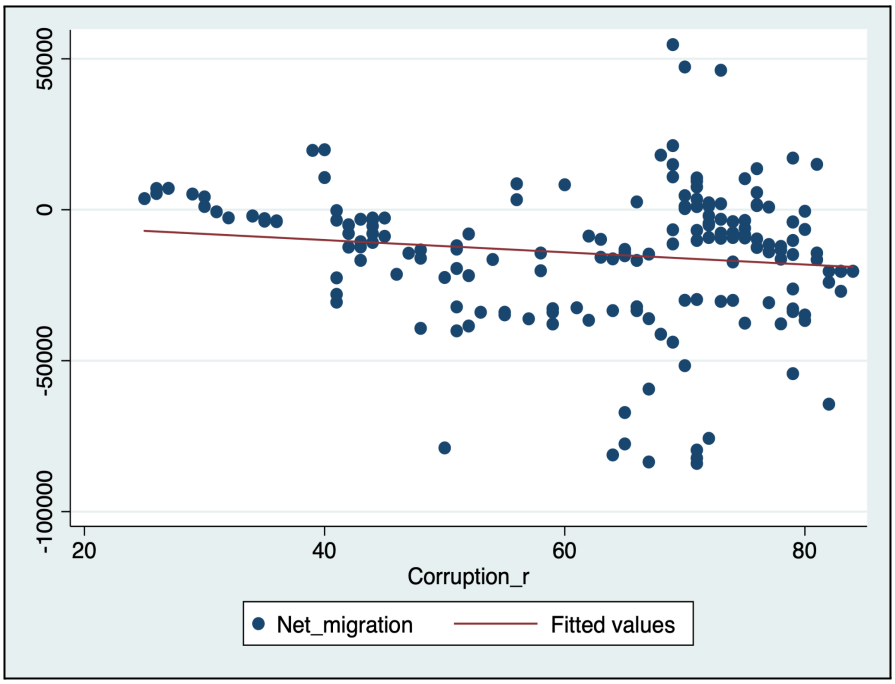
To address the corruption and migration for the post-Soviet region it's very important to study the context of this geographical area. Most of the post-Soviet countries have autocratic regimes, even those who officially represent them as democracies in reality have an autocratic regime. After the 2000s, instead of economic stability after some process of economic development after the collapse, most of the countries faced high political instability due to decisions of the new 'autocratic' regimes, which further resulted into civil wars, revolutions and high corruption levels. The list of civil wars, revolutions, and protests are quite

lengthy, which shows the non-recognition of political systems and governmental authorities by citizens. According to IFES most of the politicians changed the result of the final voting. In Belarus, Russia, Tajikistan, Kazakhstan, Uzbekistan, Kyrgyzstan and Azerbaijan there are good examples of high political instability and use of public power for private gain. In some of the post-Soviet countries, which officially are democracies, but their government operates like an autocracy and even dynastic ruling, where the son of the last president was inheriting the status like in Turkmenistan or Azerbaijan. Either president is elected several times, and has been on duty for more than several decades. In Kazakhstan, president Nazarbayev was ruling for more than 20 years. In Belarus, president Lukashenko ruled for more than 30 years from 1994 till nowadays.

Methodology

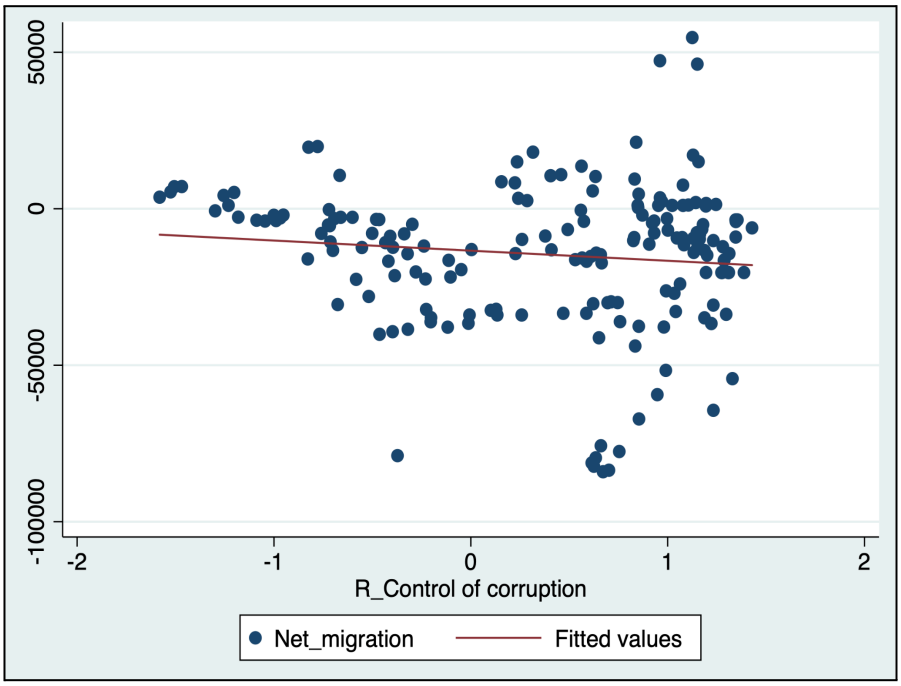
The methodology of this thesis is a quantitative approach to analyse the nexus between corruption and migration using a panel data set in the post-Soviet region from 2007 to 2021. A standard Ordinary Least Squares (OLS) estimation is unsatisfactory and limiting the analyses because it fails to account for three important statistical barriers, such as unobserved country-level heterogeneity, the endogeneity of institutional variables, and the path-dependency of demographic movements. The essential complexity of migration flows within the post-Soviet region requires a multi-staged econometric approach. To ensure that the reported coefficient for corruption represents a robust causal effect, this study employs Fixed Effects, IV, and Dynamic GMM estimators. This three-step approach allows to gradually address different econometric issues, such as endogeneity and the dynamic nature of migration flows. In Figures 3 and 4, there are scatter plots of the correlation between corruption and migration of two different measurements of corruption with fitted values. For the simplification of understanding, we have reversed the corruption measurements, so it is explained as the higher is corruption measurement the higher is the corruption level. According to the fitted value arrow in scatter plots the analysis satisfies the first hypothesis, the negative correlation between our dependent and main independent variables, that higher levels of corruption drives emigration from post-Soviet countries.

Figure 3: Scatter plot between corruption (CPI) and migration in post-Soviet region from 2007 to 2021



Source: Calculated by Stata using data from descriptive statistics.

Figure 4: Scatter plot between control of corruption and migration in post-Soviet region from 2007 to 2021



Source: Calculated by Stata using data from descriptive statistics.

Descriptive statistics

We use data on migration, corruption and further control variables, which are presented in (Table 1) descriptive statistics table, for 12 post-Soviet countries except Russia, Ukraine and Turkmenistan between 2007 and 2021. These three countries were excluded for the possible bias, because a sufficient number of the emigrants from Central Asia and Eastern Europe move to Russia, bringing it to the top list for the number of immigrants in the world. Ukraine could also cause bias due to the high number of emigrants, specifically starting after the war in 2014 till nowadays. Finally, there is not much data available for Turkmenistan due to their closed economy, which can also alter results.

Our main dependent variable, net migration, is the difference between the number of people who immigrate to a country and the number of people who emigrate within one country (Ivlevs (2015)). A negative net migration rate is explained as the number of people leaving a country is higher than entering, while a positive is vice versa. The net migration rate is an important indicator which shows a country's population growth or decline, as well as the demographic trends.

The Corruption Perception Index (CPI) from Transparency International database is a commonly used indicator of perceived corruption level, which is published annually. The CPI measures the perceived level of corruption in the public sector, based on specific assessments and surveys evaluated by experts (Dimant (2013)). For ease of interpretation, the CPI is reversed by subtracting the original index from 100, so that higher values of this measurement are correlated to higher levels of perceived corruption in the country. This approach is commonly used in empirical works dealing with similar institutional indicators for simplifying the results of the paper. In our analysis the reversed CPI score has a range from 0 to 100, with 0 indicating countries with very low levels of corruption and 100 indicating highly corrupt countries for the simplification of further analyses (Dimant (2013)). The CPI score is based on different factors, including the frequency and size of bribes, the level of corruption in government processes, and the degree of accountability of public representatives.

Table 1 Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Net migration	180	-14601.878	23134.461	-84039	54704
Corruption (CPI index)	180	62.533	15.623	25	84
Control of corruption	180	.372	.802	-1.581	1.429
GDP	180	41634.85	46181.899	3719.525	236634.61
Savings	180	1604.422	1593.737	158.601	7715.979
Population	180	.379	1.218	-2.258	2.558
Political stability	180	-.148	.584	-1.362	.965
Unemployment rate	163	7.996	5.324	.5	22.974
Wages	180	64.067	21.884	31.33	96.2
Resource rents	180	6.524	9.311	.009	43.041
Press freedom index	168	53.398	24.256	-9	99

Source: Transparency International database, Migration data portal and World bank databases.

The other measurement of corruption that was used is control of corruption, it shows the governmental quality and the control of the corruption levels, its range is from -2.5 to 2.5. For the simplification of the analysis, the measurement was reversed, so the -2.5 explains low corruption levels, while positive 2.5 explains higher corrupted countries. It's measured by the World Bank on an annual basis. The other socioeconomic development indicators were used as the control variables, including GDP, amount of savings, political stability, wage, unemployment rate and the total natural resource rents. GDP and unemployment rate are the main indicators and determinants of migration. GDP is expected to have a positive correlation with migration, which means the higher the economic growth increases the number of immigrants. Unemployment rate expected to have a negative correlation by driving migrants out (Cooray (2014)). Average wages based on neoclassical migration theory is important for the migrants' decisions, having positive correlation. Political stability and press freedom capture the broader institutional environment; while the correlation seems to be simple, for this region it's very complex, which we will cover in further analysis. Finally, population size is to control the proportional nature of demographic

shifts. These control variables altogether support the estimated impact of corruption on migration being isolated from broader macroeconomic shocks and socio-political fluctuations (Habibov (2017)).

Results

Fixed effects results

To demonstrate the baseline of understanding how corruption contributes to migration, we employed Fixed Effects regression model, which controls for unobserved heterogeneity. For the post-Soviet region there could be many time-invariant characteristics that could simultaneously affect both corruption level and migration patterns, such as historical roots, geographic position, and cultural, and traditional norms.. By applying fixed effects the model allows the analysis to isolate and estimate the impact of within-country variations in corruption over time by holding these constants.

Fixed effects model is estimated to control for unobserved, time-invariant country characteristics:

$$Emigration_{it}=\alpha_i+\lambda_t+\beta_1 Corruption_{it}+\beta_2 X_{it}+\epsilon_{it},$$

where α_i and λ_t represent country and year effects, and X_{it} is a vector of control variables and ϵ_{it} is an error term.

Results from Table 2 show a sufficient difference in the relationship of net migration between different measures of corruption. The Corruption Perception Index (CPI) results in a coefficient of -462.7, which is statistically significant at the 10 percent level. The negative correlation between corruption and migration satisfies our main hypothesis. This result explains that with 1 point increase in corruption level emigration increases for about 462 people, which support that corruption is a definitive "push factor" for emigration and the perspective of the “sand on the wheel” hypothesis for these economies. In such a situation, the only possible solution for the people is to leave the country, especially for high-skilled labor that is suppressed by the nepotism and rotting nature that corruption breeds (Ivlevs (2015)). In the first column

of the table we will analyse the effect of CPI on migration and the effect of Control of Corruption on migration.

Table 2 Fixed Effects results

	(1)	(2)
Corruption (CPI)	-462.727*	
	(265.131)	
Control of corruption		-3840.742
		(7395.554)
GDP	.261	.293
	(.205)	(.206)
Savings	-2.612	-3.39
	(4.506)	(4.555)
Population	5437.134	6718.523*
	(3586.507)	(3566.686)
Political stability	12633.926**	11164.862**
	(4884.17)	(4867.228)
Unemployment rate	-1442.848***	-1570.878***
	(475.095)	(481.612)
Wage	428.311	537.086
	(572.952)	(605.841)
Resource rents	278.769	171.772
	(338.289)	(335.33)
Constant	-10989.317	-43909.909
	(42825.505)	(39321.377)
Observations	163	163
R-squared	.277	.263

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

The result of the Control of Corruption indicator contradicts CPI in a large but statistically insignificant coefficient of -3840.742. Lack of significance could be explained by different factors. For example, the contradictions of post-Soviet governance, where many states officially represent themselves as

democracies while operating in autocratic regimes in reality as we mentioned in literature review. World Bank's governance control indicators usually fail to capture the reality of the citizens (Nurzat (2022)). The decision to abandon the home country is mostly driven by the deeply entrenched, daily perception of corruption (Junisbai (2012)).

Instrumental variables (IV) results

Even though the fixed-effects model provides robust baseline estimates, it fails to solve the issue of endogeneity due to the bilateral relationship of corruption and migration. Thus the Two-Stage Least Squares (2SLS) instrumental variable approach is employed to address reverse causality and to isolate the direct causal impact of corruption on migration. This technique relies on an instrument that is highly correlated with the corruption variable but uncorrelated with the error term of the migration. We use the press freedom index as the instrumental variable. This instrument was implemented by other researchers (Habibov (2017), Kakhkharov (2020), Castelli (2018)). It stands that the lower is the actual level of democracy the less the freedom of press, because it's advantageous for the ruling parties to use news and information to control public opinion. If people wouldn't be aware of some information on governmental authorities through the independent investigations of journalists it would be easier for the government to hide the evidence of bribery or disallocation of public resources. The media is a very essential tool to form the opinion of the public, that's why the level of its independence shows good institutional quality because there is nothing to hide. Previously total natural resource rents was used as an instrument, because it's often used as an instrument in papers on the effect of corruption, but after running the model the F statistic was 4.35, which means it's a weak instrument. Total natural resource rent could have been correlated directly to migration, which caused altered results. After considering and testing other instruments, the Press freedom index perfectly aligns with our research, because the index of freedom of press fluctuates directly with the mostly corrupted countries in the region of our interest. In Kyrgyzstan, after the last revolution, president Sadyr Japarov, during 3 years of his termination, had already sent about 50

journalists and social-media bloggers ещ зкшыщт. Even the Constitution has been amended, which now controls what people are writing in social media. In most of the cases, even irrelevant ones, they refer to the inciting ethnic conflicts. In Kazakhstan there is a system that turns down the internet in specific areas, so people cannot use social media to report what is happening there. It happened during the civil revolution in 2020, where many people were killed. In Russia instagram, youtube, telegram, and other social media are illegal to use there at the constitutional level.

In the first stage, corruption is regressed on press freedom index and control variables:

$$Corruption_{it}=\pi_0+\pi_1 Press\ Freedom\ Index_{it}+\pi_2 X_{it}+\epsilon_{it}$$

In the second stage, net migration is regressed on the predicted level of corruption from Table-3 obtained from the first stage:

$$Emigration_{it}=\alpha_i+\lambda_t+\beta_1 Corruption_hat_{it}+\beta_2 X_{it}+\epsilon_{it},$$

The results from Table 3 confirm the causal relationship between corruption and migration, because after instrumenting the CPI coefficient it has increased to -507.8 at the 10 percent level significance. This adjusted result using the Press freedom index justifies that corruption drives emigration in this region. Furthermore, the Control of corruption repeatedly was showing insignificant results with the coefficient of -4474.935, it exposes a credibility gap within regional governance. For local citizens the everyday experience of systemic unfairness dictates long-term life decisions. People just no longer perceive their home countries as capable of offering merit-based opportunities, prompting a continuous and permanent search for better living standards somewhere abroad. To ensure the validity of the Two-Stage Least Squares (2SLS) estimation, F test was conducted, to find whether the chosen instrument exhibits a sufficiently strong correlation with the endogenous corruption variables. The first-stage F-statistic using a model with the Corruption Perception Index (CPI) was 9.96, while the model estimating the alternative corruption measurement results in an F-statistic of 7.23. If the F test shows the result adobe 10, it's generally preferred to rule out the problem of weak instruments , which was with the previous instrument

total natural resource rents. For CPI the Press freedom index is a sufficiently strong instrument that deepens our analysis by showing more accurate and robust results, solving the problem of reverse causality between corruption and migration. But for control of corruption the results are statistically insignificant.

Table 3 2SLS

	(1)	(2)
Corruption (CPI)	-507.8*	
	(283.472)	
Control of corruption		-4474.935
		(7776.314)
GDP	.238	.273
	(.215)	(.217)
Savings	-2.308	-3.143
	(4.742)	(4.797)
Population	6485.702*	7757.042**
	(3816.501)	(3809.783)
Political stability	13390.223***	11755.634**
	(5092.695)	(5073.356)
Unemployment rate	-1445.575***	-1557.022***
	(497.116)	(507.395)
Wage	411.259	538.414
	(600.087)	(631.27)
Resource rents	254.642	143.27
	(359.899)	(357.918)
Constant	-6778.759	-43473.182
	(45276.865)	(40973.662)
Observations	152	152
Pseudo R^2	.z	.z

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

GMM estimation

The third step is to use a dynamic panel model using the System GMM approach (Arellano–Bover /Blundell–Bond) to account for potential simultaneity problems and study migration flows. Due to networking and path dependence migration decisions could be continuous. When migration flow has been already created, existing migrant networks reduce the costs and risks of future migration, increasing emigration dynamics (Poprawe (2015)). To account for this, a dynamic panel specification is estimated using the System GMM estimator. The dynamic model from Table 4 includes lagged net migration as an explanatory variable. Including a lagged dependent variable in a fixed-effects model introduces bias because the lagged term is mechanically correlated with the error term. System GMM addresses this issue by using lagged levels and differences of the variables as internal instruments.

The dynamic model takes the form:

$$Emigration_{it}=\alpha_i+\rho Emigration_{i,t-1}+\beta_1 Corruption_{it}+\beta_2 X_{it}+\mu_t+\lambda_t+\epsilon_{it},$$

The Arellano-Bond test for AR(2) (p = 0.380) for CPI fails to reject the null hypothesis of no second-order serial correlation, confirming that the lagged instruments are valid. While the Sargan test (p = 0.374) suggests that the instruments are not correlated with the error term. However, the Hansen test produces a p-value of 1.000, which typically signals instrument proliferation—a condition where the number of instruments becomes large relative to the number of clusters (countries). While this is a common occurrence in small-N panels, it suggests that the Hansen test may have weakened power, and the results should be interpreted with appropriate caution.

Table 4 GMM

	(1)	(2)
L.Net_migration	.71***	.711***
	(.123)	(.135)
Corruption (CPI)	525.567	
	(385.154)	
Control of corruption		-12234.616
		(9011.013)
GDP	-.025	-.051
	(.18)	(.165)
Savings	-.005	.31
	(3.907)	(3.26)
Population	4072.2	3373.82
	(6374.313)	(6798.555)
Political stability	2949.955	4522.27
	(6164.173)	(4266.665)
Unemployment rate	-557.793	-674.95
	(448.601)	(445.353)
Wage	1041.477	931.593
	(923.499)	(981.539)
Resource rents	-456.662	-285.64
	(271.4)	(224.112)
		(9011.013)
Observations	117	117
Pseudo R^2	.z	.z

Robust standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

As presented in Table 4, the lagged dependent variable (L.Net_migration) emerges as a highly significant predictor, exhibiting a coefficient of 0.710 at the 1 percent level, being highly statistically significant. This indicates a severe path dependency within the post-Soviet region. Once an initial wave of emigration is generated—resulting by the poor institutional quality established in the previous models—the outflow becomes entirely self-sustaining. This structural system is heavily caused by massive remittance inflows, which recently peaked at $21.7 billion in Central Asia and $55 billion in Eastern Europe. The paradox is that the corruption pushes people to leave, the remittance inflows create a vicious economic cycle, because they act like an economic cushion for corrupt autocracies by artificially stabilizing the economy and domestic consumption. Thus untying hands of autocratic regimes, because they are eased from political pressure to implement actual institutional reforms. That's why both of the corruption

measurements lost their significance in GMM specification, because simultaneously of the complex structural system and deeply rooted diaspora network. These dynamic results show that migration is indeed a complex phenomenon. According to previous results, corruption is a push factor of emigration, but the path dependency also influences the migrants decision over leaving or staying. If an individual has a family or some relatives abroad, he or she is more sensitive to the political instability, opportunities and lower living standards caused by high corruption levels. It doesn't cost this person the same costs and risks as for other people who previously migrated.

Political stability and corruption

According to the results in Table 5, political stability positively affects corruption at the high statistically significance level. The coefficient of 4.074 indicates that for every one-unit increase in the political stability index, the perceived corruption level (CPI) increases by approximately 4.07 units. Political stability is a measurement by the World Bank, which is a range from -2.5 to 2.5, where the positive number correlates with higher political stability in a country. It's published on an annual basis. We used CPI for testing this hypothesis, because control of corruption is from the same data set and with the same data range, it could cause an omitted variable and not sufficient results.

Previously in literature review it was mentioned that the post-Soviet region faced high political instability after the disintegration of the USSR. Until nowadays the list of civil revolutions, wars continuously increasing, including conflicts: between Russia and Ukraine from 2022, Azerbaijan and Armenia for the last 35 years till 2026, Kyrgyzstan and Tajikistan border conflict in 2023, and many civil revolutions in this region for the past two decades. Political stability is one of the determinants of corruption, which explains the significant correlation between them (Junisbai (2012)).

Table 5 Political stability and corruption correlation

Corruption (CPI)	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Political stability	4.074	1.354	3.01	.003	1.395	6.753	***
GDP	0..052	0.059	-0.89	.376	-0.017	0.064	
Savings	.002	.001	1.21	.228	-.001	.004	
Population	-2.096	1.032	-2.03	.044	-4.138	-.055	**
Press freedom	-.093	.016	-5.89	0	-.124	-.062	***
Unemployment rate	.084	.141	0.60	.551	-.194	.363	
Wage	-.665	.161	-4.12	0	-.984	-.346	***
Resource rents	.291	.097	2.99	.003	.098	.483	***
Constant	106.183	10.551	10.06	0	85.312	127.055	***

Mean dependent var	60.961	SD dependent var	15.833
R-squared	0.469	Number of obs	152
F-test	14.549	Prob > F	0.000
Akaike crit. (AIC)	863.262	Bayesian crit. (BIC)	890.476

*** $p<.01$, ** $p<.05$, * $p<.1$

Robustness check

In this paper we used two different corruption measurements for the reliability of empirical results and to capture the ambiguous nature of corruption. They both capture two different dimensions of the institutional environment. The CPI represents the perception of corruption in everyday life, while Control of corruption evaluates the administrative and official processes done by the governmental authorities. There is a big discrepancy in the Fixed effects and Two-Stage Least Squares (2SLS) results between these measurements. After the instrument was estimated, the corruption perception resulted in a statistically significant negative coefficient of -507.8, which aligns with our expected results based on literature review. However, the Control of Corruption index fails to achieve a statistical significance through the same econometric approaches. From an economic perspective the discrepancy is a profound theoretical finding, because rational individuals do not make migration decisions based on the international rankings or on anti-corruption policies. Instead, individuals are making decisions based on the living quality without any ‘informal taxes’ charged permanently, as a necessity of connections for progress in career, bribery for any state services and just systematic unfairness in every layer of the system. The analysis in

Table 5 supports this dynamic with the correlation between corruption and political stability. In this example political stability stands as a double-edged sword, because of the eroded governmental system, especially after the collapse of the Soviet Union. There were many organised crime groups, some of them even worked with governmental authorities and presidents. Till nowadays, there are many "illegal paths" that all citizens acknowledge, but there is no official documentation because of nepotism and connections. Thus the perception of corruption is better in catching these issues, because it's something that people face in real life and it alters the perception of corruption. While control of corruption has limitations in measuring corruption, because of the region specifications. Finally, the robustness check satisfies the core hypothesis, that corruption level is definitely a driver for emigration.

Conclusion

The aim of this paper is to show the relationship between corruption and migration in Post-soviet countries from 2007 to 2021 using a three step econometric approach with two different measurements of corruption for reliable results. The results support the three hypotheses put forward in the study. The findings show that as corruption levels increase, the emigration rate also increases in the Post-soviet countries. In addition, civil wars and financial crises increase corruption and furthermore outflow of migrants.

Across all models CPI showed statistically significant results with negative correlation with migration, which satisfies the first hypothesis, being a push factor emigration. In contrast, Control of Corruption remained with insufficient results due to the context of this region. This suggests that for the citizens of the post-Soviet region, the decision to emigrate don't based on institutional reforms or administrative rankings in the official polls, rather on the living standards and the possibility of better opportunities. Also, according to GMM empirical results, estimations reveal the path dependency, which is also an important factor for emigration. Due to already created huge migration outflows, people are more sensitive to the economical and political decisions of governmental authorities, the emigration will cover

lower risks and costs for them if they know some people abroad who previously moved (Junisbai (2017)). Finally, it creates a vicious cycle, because the remittances that migrants send home create an artificial balancer of an economy, letting the government not take any actions to improve the situation in the country (Ivlevs (2012)).

To solve this complex problem, the policy implication shouldn't be any top-down anti-corruption policies or measures, but the tangible change in the public trust in fairness of the political system. The post-Soviet region should address systematic barriers that were created by corruption, by a facilitator of merit-based growth (Poprawe (2015)). If there wouldn’t be a fundamental shift in the direction of the decisions of this region, in the future there will be a permanent demographic decline.

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