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THE IMPACT OF REMITTANCES ON EASTERN EUROPEAN ECONOMIES: A COMPARATIVE CASE STUDY OF ROMANIAN REGIONS

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Abstract:

Despite concerted efforts to promote economic development, governance improvements, and enhanced social welfare across the European Union, significant disparities persist between regions. In Eastern Europe, each country and region face its distinct challenges and opportunities, necessitating tailored approaches to address the specific needs and conditions of each area. These disparities manifest as variations in GDP growth rates, income levels, and employment opportunities. While some countries have successfully integrated into the EU, benefiting from access to broader markets and investment, others struggle with corruption, weak governance, and innovation deficits. Additionally, economic disparities exist not only between countries but also within them, with urban areas, especially capital cities, often outperforming rural regions that may still be struggling with underemployment and infrastructural deficiencies.

A crucial element of these economic disparities is the role of remittances—funds sent home by migrants working abroad, which significantly impact the economies of many Eastern European countries. For instance, in Romania, remittances constitute a notable percentage of the GDP and notably exceed the 2023 GDP allocation for the country's education system. These funds are vital for alleviating poverty, enhancing living standards, and stimulating economic growth. However, reliance on remittances can also introduce vulnerabilities, especially with economic downturns in host countries or shifts in migration policies.

This paper aims to analyse the impact of remittances on regional development within Romanian regions, in context with the EU and neighbouring countries, using existing statistical data. It seeks to identify correlations between remittances and regional development to inform more effective policy-making at the decision-making level.

Key words: remittances, economic development, regions, migration.

JEL classification: F22, F24, O15

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1. INTRODUCTION

Migration is a global phenomenon that gradually increases in scope, impact, and complexity. Today, practically all countries in the world are simultaneously countries of destination, origin, and transit for migrants. Traditional migration flows have been complemented by new waves generated by economic, demographic, political, or social changes, and these new trends affect both the size and structure of the migrant population, as well as the economies and societies in both the countries of origin and destination.

Different levels of economic development create disparities in the demand for labor with specific characteristics, and as a result, in every country, even in developed ones, there are sectors where native workers are lacking. There are cases where a worker rejects a job, even though unemployment is high. Those who balance the economy are foreign workers who accept low-paying jobs and compensate for the gap.

Few international economic transactions and agreements impact the living standards or financial stability of developing countries as much as migration does. As a result, perspectives on this phenomenon are influenced by the field from which the analysis is conducted. On one hand, some prioritize strengthening and promoting the positive impact of migration, viewing it as an opportunity for individuals to increase their productivity for the benefit of their home country. On the other hand, others see migration as a reliable and, in some cases, quick method for human resources to effectively drain away to other horizons, serving the economic interests of those new destinations.

But the economic benefits of migration are primarily found in remittances, as these often represent the only source of income for families remaining in the home country. With their help, national consumption is stimulated through the construction of homes, the purchase of various consumer goods, and a direct result is the creation of jobs in related fields (construction, commerce, etc.). It should be noted, however, that estimates typically cover formal channels of transfer, indicating that the actual value of remittances is certainly much higher in reality.

International migration of Romanians represents a socio-economic phenomenon of great scale and complexity, with profound implications for national demographics and economy. This phenomenon has undergone various historical stages, each influenced by specific factors related to the socio-political and economic context of the respective periods. From the economic and political migrations during the interwar and communist periods to the massive waves of migration following Romania's accession to the European Union in 2007, Romanians have consistently sought better opportunities abroad. Migration has a profound impact on the demographics and economy of Romania. In the long term, it contributes to population aging, as emigrants are usually young and economically active. This phenomenon exacerbates demographic challenges and puts pressure on pension and healthcare systems. At the same time, remittances sent by emigrants are an important source of income for many families and contribute to the economic stability of the country.

For Romania and also for several Eastern European nations, remittances constitute a major source of foreign income, surpassing international aid and, in some cases, direct foreign investment. These funds help stabilize the national economy by increasing the disposable income of households, thereby boosting domestic consumption and contributing to GDP.

This paper aims to present a method to distribute the value of remittances at regional level (and even at county level if needed) in order to achieve important data to create customized policies in order to stimulate economic development and reduce dependence on remittances, thereby ensuring sustainable and equitable economic growth.

2. LITERATURE REVIEW

In the specialized literature regarding the economic impact of migration, it can be observed that the relatively small number of studies focus largely on North America and the European Union. Most researchers concentrate on the effect of immigrants on destination countries and, to a lesser extent, on the effects on countries of origin, such as the impact of remittances.

When it comes to migration and its effects, a substantial contribution has been made by George J. Borjas, who has been described by the media as America’s foremost migration economist. His studies have primarily focused on the American continent, highlighting the impact of migration on the U.S. economy (especially immigration) and the growing importance of migration for the global economy. For example, G. J. Borjas focuses on the impact of immigrants on the American economy, with one of his most significant studies concluding that immigration has a positive impact on the U.S. economy but only a minor effect on the labour market (for instance, the effect on wage levels is very low). Nevertheless, Borjas notes that immigrants contribute to the labour market for unskilled workers, partially attributing the decline in their incomes to this group. He concludes that the effects of immigration are visible in the long term, making the development of policies and strategies always welcome (Borjas, 1994).

In her study, M. Roman notes that most authors reach similar conclusions, particularly regarding the clear influence of immigrants on the sector of unskilled or low-skilled workers. However, she mentions U. Kohli, who arrives at different conclusions in his studies on Switzerland. Kohli argues that a high level of immigrants reduces the incomes of all native workers or increases unemployment if wages do not decrease. In fact, M. Roman conducts one of the few specialized studies on the effects of Romanian emigration on the Romanian economy. His book highlights the effects of labour migration abroad on the migrants themselves, as follows: incomes are positively influenced by experience and ICT skills, working abroad has a positive effect on employees' incomes and the most important factor is education, directly influencing income levels. By applying a linear regression model to a dataset from a nationally representative migration study conducted between 1990-2006 by the Open Society Foundation (FSD), the following conclusions about the effects of migration on the economy of the country of origin can be drawn, with the most important being related to severe imbalances and numerous dysfunctions in the labour market, as follows: the potential employment capacity of the workforce, the unemployment rate and its characteristics, mass emigration of skilled labour or the "brain drain" capable of creating higher added value, wage distortions and labour market segmentation, the growth of the informal economy, the use of migrants to compensate for the lack of local labour (Roman, 2012).

In last decade, several studies have emerged regarding the effects of migration on the country of origin, in this case, Romania. Pociovălișteanu and Dobrescu analyse the effects of migration on labour market demand and supply, concluding that the living standards of the population, the migration policies adopted by our country and the European Union, the evolution of the economy, and the unemployment rate in the current context will influence Romanian citizens' decision to migrate or not. Migration can successfully compensate for the population decline in EU member states and balance the supply and demand for jobs (Pociovalisteanu and Dobrescu, 2014).
Anghel presents the socio-economic effects of Romanian migration, addressing remittance behaviour and its development in recent years. Starting from the fact that Romanian migration is today one of the largest, most complex, and dynamic migrations to Western Europe, the authors reach a series of interesting conclusions about the effects of the brain drain phenomenon: although there is a general consensus in the literature on the negative effects of skilled worker migration, especially in sectors such as health and education, they also highlight the beneficial effects of the brain drain on the countries of origin (Anghel, 2017).

Regarding the influence of remittances on economic development and their influence over GDP, several very recent works have been identified in the specialised literature which offers a perspective over the growing attractivity of the subject. These findings can also be extrapolated to regional development, but no models have been identified for calculating how these remittances could be statistically allocated to the regions or counties from which the emigrants originate. For example, a 2021 study explores the long-term impact of remittances on GDP in 80 developing countries, finding a generally positive but variable relationship. On average, a 10% increase in remittances leads to a 0.66% increase in GDP. However, this effect varies from one country to another, suggesting that the long-term impact of remittances on economic output is not uniform. This underscores the importance of tailored policies to enhance the benefits of remittances for economic development (Ahmad, 2021).

Another article, published by a group of Romanian researchers in 2020, uses a multifactorial regression model to analyse the influence of GDP per capita, labour force participation rate, gross fixed capital formation, and remittances on economic growth. The model was applied for the period 1996-2019 and validated through econometric techniques and could be adapted to distribute remittances by regions by including specific regional variables, although the criteria for this distribution cannot be determined (Soava et al, 2020). Another 2020 article also uses time series analysis from 72 developing countries to examine the volatility and concentration of remittances by regions of the globe. The analysis can be extended to include regional variables (from EU countries, for example) and migration networks, providing a detailed distribution of remittances by regions, but a methodology for identifying these variables is necessary (Hosny, 2020).

Finally, an approach from 2023 suggests the combined use of a data-driven model and surveys to estimate informal remittance flows. The data-driven model uses official statistical information, while the surveys provide detailed and updated insights directly from emigrants. This method can be adapted to estimate remittances by regions within an EU country, ensuring the most accurate distribution, provided that a significant number of emigrants from that region are identified and interviewed (Fernandes et al, 2023).

3. RESEARCH METHODOLOGY

Having in mind the subject of remittances and GDP we could say that the share of remittances relative to GDP actually reflects how important or significant the migration has become for a labour-exporting country. The table below presents the shares of remittances in GDP for EU countries, estimated for the year 2022:

Table no. 1. Estimated Remittance Flows for 2022 (million $) and share of GDP

Crt. no.	Country	Remittances (mil. $)	Share of GDP
1.	Croatia	3,701	5.3
2.	Romania	11,064	3.7
3.	Latvia	1,500	3.7
4.	Luxembourg	2,000	2.4
5.	Belgium	13,500	2.3
6.	Cyprus	527	2.0
7.	Slovakia	2,300	2.0
8.	Portugal	4,694	1.8
9.	Malta	271	1.6
10.	Estonia	626	1.6
11.	Czechia	4,539	1.5
12.	Slovenia	800	1.3
13.	Hungary	2,404	1.3
14.	Poland	8,000	1.1
15.	Bulgaria	850	1.0
16.	France	28,520	1.0
17.	Lithuania	700	1.0
18.	Austria	2,700	0.6
19.	Spain	8,500	0.6
20.	Italy	9,000	0.5
21.	Denmark	1,517	0.4
22.	Sweden	2,565	0.4
23.	Germany	18,000	0.4
24.	Greece	665	0.3
25.	Finland	880	0.3
26.	Netherlands	2,000	0.2
27.	Ireland	249	0.05

Source: Prepared by the author, based on World Bank data https://data.worldbank.org

From the table above, it can be observed that Romania ranks second in the EU in terms of the share of remittances in GDP (3.7%), followed by Latvia, which has the same value. In comparison, for France, the EU leader in the value of incoming remittances, only 1% of GDP is covered by remittances – practically, the economic effects of migration are not as significant as in our country (as a side note, the remittances received by Romania could sufficiently cover the allocation from GDP for education in recent years).

At the national level, the databases can provide relevant data on the value of remittances. However, data on the proportion of migrants vary at the regional level and it would be useful to have a tool to determine the value of remittances received by regions and even by counties. Logically, the size of the emigrant population and the resident population can influence the value of remittances a country receives. Still, there are much more difficult factors to quantify, such as the value of wages in destination countries, the economic situation of the host country, or even the frequency with which remittances are sent (for example, 1,000 emigrants from a country like France or Germany can send a larger volume of remittances than 2,000 emigrants from Greece or Portugal).

To determine a method for distributing remittances from the national to the regional level (by development regions) and subsequently to the county level, we tested using the SPSS program if there are correlations between remittances and a series of statistical indicators that can be obtained even at the regional or county level (except for the Human Development Index, which is still a country-level indicator) and which could later be used to create a mathematical model for distributing remittances. The choice of these indicators is justified by the need to obtain a holistic perspective on the impact of remittances and migration on the economy and society. Each indicator brings an important dimension to the analysis, allowing a detailed and well-founded assessment of the economic and social effects of remittances in the context of migration.

From the table below, it can be observed that only one of the correlations seems not to be statistically significant (Unemployment Rate – Human Development Index).

Table no. 2. Correlations: remittances, resident population, permanent emigrants, GDP, unemployment rate, Human Development Index (period 2007-2022)

		Remittances (World Bank) $	Resident population POP105A	Definitive emigrants POP309A	GDP/capita (World Bank) $	Unemployment rate (National Institute of Statistics)	Human Development Index (United Nations)
Remittances (World Bank) $	Pearson Correlation	1	-,873**	,772**	,825**	-,760**	,669**
	Sig. (2-tailed)		,000	,000	,000	,001	,005
	N	16	16	16	16	16	16
Resident population POP105A	Pearson Correlation	-,873**	1	-,893**	-,817**	,571*	-,862**
	Sig. (2-tailed)	,000		,000	,000	,021	,000
	N	16	17	16	16	16	16
Definitive emigrants POP309A	Pearson Correlation	,772**	-,893**	1	,860**	-,611*	,718**
	Sig. (2-tailed)	,000	,000		,000	,012	,002
	N	16	16	16	16	16	16
GDP/capita (World Bank) $	Pearson Correlation	,825**	-,817**	,860**	1	-,781**	,683**
	Sig. (2-tailed)	,000	,000	,000		,000	,004
	N	16	16	16	16	16	16
Unemployment rate (National Institute of Statistics)	Pearson Correlation	-,760**	,571*	-,611*	-,781**	1	-,336
	Sig. (2-tailed)	,001	,021	,012	,000		,203
	N	16	16	16	16	16	16
Human Development Index (United Nations)	Pearson Correlation	,669**	-,862**	,718**	,683**	-,336	1
	Sig. (2-tailed)	,005	,000	,002	,004	,203	
	N	16	16	16	16	16	16

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Source: Prepared by the author using IBM SPSS Statistics based on INS statistics (2024), TEMPO Online, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table, World Bank (2024) https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT

From the table above, it can be observed that there is a strong negative correlation (-0.873) and significant at the 0.01 level between remittances and the resident population, suggesting that as the resident population decreases, remittances increase. This can be interpreted as the fact that more emigrants (who lead to the decrease in the resident population) send money home, contributing to the increase in remittances.

For permanent emigrants, the positive correlation (0.772) and significant relationship indicates that an increase in the number of permanent emigrants is associated with an increase in remittances, and the positive correlation (0.825) and significant relationship with GDP suggests that remittances categorically influence the Gross Domestic Product. There is a strong negative correlation (-0.760) with unemployment, indicating that remittances are higher in periods with lower unemployment rates or that practically, remittances could lead to a decrease in the unemployment rate. The positive correlation with the Human Development Index (0.669) suggests that remittances are higher in countries with a higher human development index, and implicitly, they contribute to the increase of this index.

From this analysis, it could be concluded that a mathematical model that takes into account the weights of the proposed indicators above or other indicators could be used to calculate the distribution of remittances by development regions and even by counties. The correlations obtained above can be relevant and self-sufficient. For example, a distribution of remittances by regions based on the resident population (where the highest percentage correlation was recorded) is presented below:

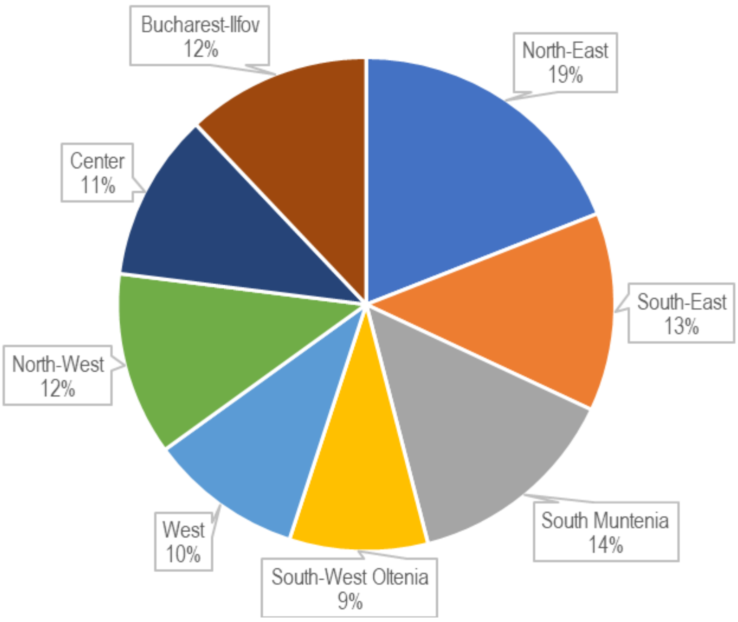

Figure no. 1. Share of Remittances by Regions Based on Resident Population (2022)
Source: Own elaboration using the mentioned data sources

We can observe that the distribution of remittances by regions highlights regional economic disparities and the dependence of different parts of Romania on the income sent by emigrants. Poorer regions with higher emigration rates, such as the North-East and South Muntenia, receive proportionally more remittances, underscoring their crucial role in supporting local economies and household welfare.

If we were to consider the share of remittances by regions in opposition to the share of GDP, in a mirrored view, they would look as follows:

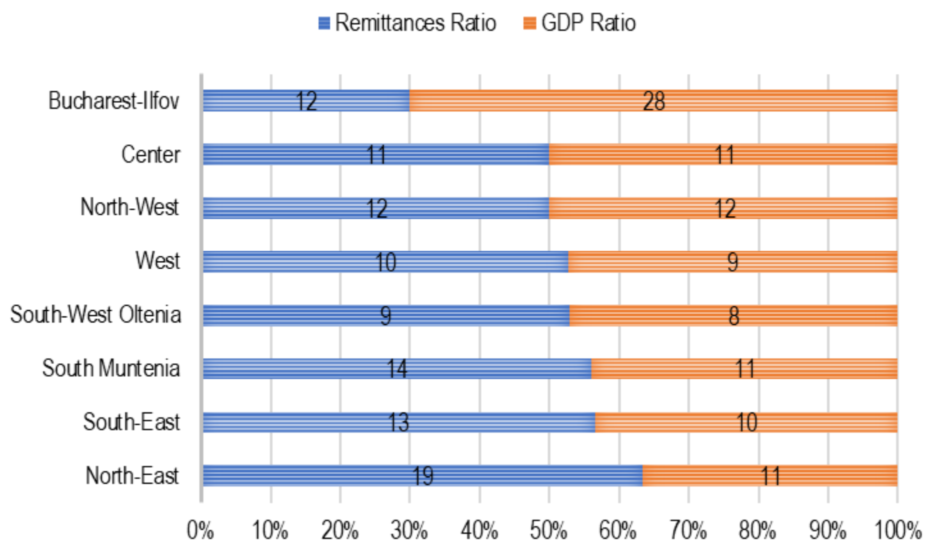

Figure no. 1. Share of Remittances vs. Share of GDP by Regions (2022)
Source: Own elaboration using the mentioned data sources

The graph highlights regional variations in dependence on remittances and GDP, providing a clear picture of economic disparities in Romania. Regions with higher GDPs, such as Bucharest-Ilfov, have a more diversified economy and are less dependent on remittances. On the other hand, regions like North-East and South Muntenia rely heavily on funds sent by emigrants, reflecting a lack of local economic opportunities and significant migration.

The Bucharest-Ilfov region presents a significant contrast between remittances and GDP. Remittances represent 12% of the region's income, while GDP accounts for 28%. This ratio suggests that although remittances play a notable role, the region's economy is predominantly supported by local economic activities and internal investments. As an economic and administrative centre, Bucharest benefits from a high GDP due to the concentration of businesses, financial institutions, and infrastructure.

In contrast, the North-East region, with remittances at 19%, shows the highest dependence on these funds compared to a GDP of only 11%. This underscores the crucial importance of remittances for this region, where money sent by emigrants plays an essential role in supporting the local economy. The North-East is known as one of the poorest regions in Romania, with limited economic opportunities, prompting many residents to emigrate in search of better living conditions.

This unequal distribution underscores the need for regional policies that stimulate economic development and reduce dependence on remittances, thus ensuring sustainable and equitable economic growth.

4. CONCLUSIONS

Remittances are a vital component of the economies of many Eastern European countries, offering both opportunities and challenges. Understanding the dynamics of remittances and their effects is crucial for designing policies that leverage these flows for economic development while minimizing potential drawbacks.

As Romania and other countries from Eastern Europe continues to navigate its complex relationship with migration and remittances, thoughtful policy interventions will be key to ensuring that the benefits of these financial flows are maximized for the broader economy and society.
To maximize the benefits of remittances, policymakers in Eastern European countries should consider strategies to: improve financial services, promote economic diversification and strengthen social protection.

Regarding the proposed statistical correlations for remittances, these could represent a starting point for developing a mathematical model for calculating the distribution of remittances by development regions and even by counties, which could be replicated for other EU countries as well. Future research directions: to improve the distribution of the personal remittances value per region by using a combination of methods, to enhance the data in terms of migration population and to incorporate a dataset that covers multiple years to enhance the robustness and depth of correlation analyses conducted.

BIBLIOGRAPHY

1. Ahmad, N. (coord.), (2021), *The role of remittances in economic development*, *https://globaldev.blog/role-remittances-economic-development/* [accessed on 28.04.2024]
2. Anghel, R. (coord.), (2017), *International Migration, Return Migration, and Their Effects: A Comprehensive Review on the Romanian Case*, IZA DP No. 10445
3. Borjas, G. J., (1994), *The Economics of Immigration*, Journal of Economic Literature, Vol. XXXII (Dec. 1994), pp. 1713–1714
4. Fernandes, D., Gravesteijn, R., Aneja, A. (2023), *Migrant Money Notes 7: Approaches to Evaluating and Estimating Informal Remittance Flows in Developing Economies*, 2022 United Nations Capital Development Fund, https://migrantmoney.uncdf.org/wp-content/uploads/2023/02/Migrant-Money-Note-7-FINAL-1.pdf [accessed on 28.04.2024]
5. Hosny, A. (2020), *Remittance Concentration and Volatility: Evidence from 72 Developing Countries*, IMF Working Paper, Strategy, Policy and Review Department, January 2020,
6. https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT [accessed on 28.04.2024]
7. Pociovălișteanu, D.-M., Dobrescu, E. M. (2014), *The impact of migration on Romania's economical and social development*, Annals of the „Constantin Brâncuşi" University of Târgu Jiu, Economy Series, Issue 1/2014
8. Roman, M. (coord.), (2012), *Emigrația românească. Implicații economice și demografie"*, Ed. ASE, București, 2012
9. Soava, G., Mehedințu, A., Sterpu, M., Răduțeanu, M. (2020), *Impact of Employed Labor Force, Investment, and Remittances on Economic Growth in EU Countries.* Sustainability 2020, 12, 10141
10. TEMPO Online, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table [accessed on 28.04.2024]
11. World Bank, https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT [accessed on 28.04.2024]