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## IMPACT OF MIGRANT REMITTANCES TO POST- TRANSITION COUNTRIES ON SELF-EMPLOYMENT

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**ABSTRACT.** The objective of this paper is to examine the impact of remittances on self-employment rates in post-transition countries, with a particular focus on the difference in remittance effects between male and female self-employment rates. This paper uses panel data analysis to examine a sample of 25 countries over the period from 2008 to 2022. The remittance effects are estimated through the application of the System GMM approach. The findings indicate that remittance inflows have a positive and statistically significant impact on the self-employment rate. Specifically, a 10 percent increase in remittances per capita has been shown to increase the total self-employment rate by 0.08 and the female self-employment rate by 0.12 percent. By contrast, though remittance inflows contribute to an increase in the male self-employment rate, this effect is statistically insignificant. Analysis by region reveals that remittances support self-employment activities in SEE and CIS countries; however, remittance effects are negative in the Central and Eastern European - EU member states. Thus, the findings of this study suggest that remittance-receiving countries should devise effective measures for unconstrained remittance flows and remittance channeling into entrepreneurial activities.

**JEL Classification:** F24, J21,  
C23

**Keywords:** remittances, self-employment rate, post-transition countries, GMM approach, entrepreneurship

### Introduction

In recent decades, remittance inflows have increased rapidly in post-transition countries, largely due to the growth in emigration prompted by the dissolution of three federal states as well as the accession of Central and Eastern European (CEE) countries to the European Union. Remittances are crucial in overcoming household budget constraints and providing financial support during economic instabilities. Moreover, the share of remittances in GDP indicates their significant role in the external financing of the economy. In remittance-receiving countries,

remittances have become an important source of financial inflows, alongside foreign direct investments (Zatonatskiy et al., 2024; Peković, 2025). In CIS countries such as Tajikistan (almost 39 percent of GDP), Kyrgyzstan (18.6 percent of GDP), and Moldova (12.3 percent of GDP), remittances account for a significant share of foreign assets. In 2023, Montenegro and Bosnia and Herzegovina (10.9 percent and 10.5 percent, respectively) had the largest share of remittances in GDP among the South Eastern European countries, followed by Albania (8.6 percent) and Serbia (7.7 percent). Meanwhile, although new EU member states receive substantial amounts of remittances, these do not constitute a significant share of GDP (World Development Indicators, 2024).

A review of previous literature reveals that the majority of existing studies have focused on the potential impact of remittances on consumption. However, a significant portion of remittances is directed toward investments in productive assets and entrepreneurial activities. Indeed, there is considerable empirical evidence that the remittances play a supportive role in the start-up of family businesses (Kakhkharov, 2019; Piras, 2023; Vaaler, 2011). Furthermore, the topic has recently been raised in connection with the concerns regarding the labour market effects, particularly labour participation and employment of non-migrant household members. The research on the impact of remittances on employment has primarily focused on self-employment and informal employment using household survey data from a single country. Most studies conclude that remittances support self-employment among remittance-receiving household members. The empirical literature based on cross-country analysis is relatively scarce and tends to indicate negative effects of remittances on self-employment rates. Moreover, a number of studies have not found a statistically significant relationship between remittances and self-employment. Thus, previous empirical evidence does not provide clear and unambiguous conclusions regarding the effects of remittances on self-employment.

The objective of this paper is to examine the relationship between remittance inflows and self-employment rates in post-transition countries. In this paper, the author attempts to answer the following research questions: 1) Do remittances have statistically significant effects on the total self-employment rate in post-transition countries? 2) Is there a difference in the impact of remittances on the self-employment rate of men and women in post-transition countries? 3) Is there a difference in remittance effects on the self-employment rate in post-transition countries by region? There are several aspects in which this study contributes to the existing empirical literature. While a majority of previous studies attempted to estimate remittance effects on self-employment in a single country context, this paper uses cross-country aggregate data. Furthermore, this paper is focused on the impact of remittances on gender gap in self-employment. In addition, since the empirical literature studying remittance effects on self-employment in post-transition countries is relatively scarce, this paper contributes to a more comprehensive overview of the issue.

The paper is organized as follows: Section 1 reviews recent empirical findings; Section 2 outlines the data, the empirical model specification and the methodology; Section 3 presents the results; and the final section presents concluding remarks.

## 1. Literature review

Although remittances are private transfers primarily used for consumption, they can influence the economic activity in multiple ways. Their spending to purchase consumption goods has expanded economic activities further. Remittances have increased the purchasing power of receiving households and contributed to poverty alleviation (UNCTAD, 2011; Gupta et al., 2009; Pekovic, 2017). On the other hand, directing remittances toward investment activities provides a source of capital and alleviates financial constraints faced by entrepreneurs

(Giuliano & Ruiz-Arranz, 2009), while also supporting financial development (Aggarwal et al., 2011; Azizi, 2020).

Numerous empirical studies have examined whether remittances are associated with the establishment of business enterprises. These studies mostly find that remittance inflows have a supportive effect on entrepreneurial activities. But most of the empirical literature is country-specific. Research on the entrepreneurial likelihood of remittance-receiving households in Uzbekistan shows that remittances do not increase the probability of family business ownership. However, this decision depends on the level of household income. At higher income levels, remittance-receiving households are more likely to start a business and this effect is statistically significant. Obviously, remittance channeling into investment activities is an option for households after their basic consumption needs are satisfied (Kakhkharov, 2019). Similar results have been found for Nigeria and Uganda, where the relationship between remittances and job creation is U-shaped, and job creation declines when the share of remittances is less than half of the total household income (Ainembabazi & Kemeze, 2022).

The other group of empirical studies is focused on cross-country analyses. Namely, Yavuz and Bahadir found a positive relationship between remittances and new business creation in a sample of 64 developing countries. According to their results, a 10 percent increase in remittances is associated with a 2.2 percent growth rate in the number of newly created businesses (Yavuz & Bahadir, 2022). Similarly, Nanyiti and Sseruyange used a dynamic panel procedure on a body of data from 63 countries in the period 1981-2011, which showed that remittances have a positive impact on new business density. This effect is more pronounced in low-income countries, while in high-income countries there is no statistically significant influence on entrepreneurial activities. A one-unit increase in remittances results in a 0.093 unit increase in the new business density of the total sample and a 0.077 increase in the new business density in low-income countries (Nanyiti & Sseruyange, 2022). Piras has also emphasized that real remittances per capita are more likely to impact the creation of new firms in less developed countries, which is attributed to their low economic complexity (Piras, 2023). A number of empirical studies found that remittance effects on entrepreneurial activities can depend on the level of economic informality. Martinez et al. noted that remittances increase venture capital funding if the level of the informal sector is above 46 percent of GDP (Martinez et al., 2015). In addition, there is empirical evidence showing that remittances increase the new business start-up rate when the public sector in developing countries is sufficiently small (Vaaler, 2011).

Besides these positive consequences on entrepreneurial activities, concerns have arisen recently regarding remittance effects on labour market outcomes. There is evidence in empirical literature that remittances tend to reduce labour market participation, particularly among women, rather than men (Ayalew & Mohanty, 2022; Sousa & Garsia-Suaza, 2018). Empirical studies into remittance effects on employment are mostly focused on their impact on self-employment. The majority of past studies examined remittance effects on self-employment using household survey data, while empirical literature at a cross-country level remains scarce. Shair et al. have found that remittances increase the likelihood of participation in self-employment (Shair et al., 2023). Similarly, Petreski and Mojsoska-Blazevski investigated whether remittance receiving impacts youth self-employment in North Macedonia. They found that youths in remittance-receiving households have considerably greater tendency to become self-employed, with the percentage ranging from 28 to 33, compared to other members of their households and members of non-receiving households (Petreski & Mojsoska-Blazevski, 2015). A study into migration effects on the labour market in Georgia confirms the positive impact of remittances on self-employment of remittance-receiving household members. It emphasizes that remittances contribute to a larger increase in self-employment in rural areas than in urban areas (OECD, 2017).

On the other hand, there is also evidence that remittances have a negative impact on self-employment. The results of an empirical study in Nigeria suggest that remittance inflows have reduced the probability of recipients self-employment by 28.4 percent (Salman, 2016). Using panel data from 63 countries, Nanyiti and Sseruyange have found different remittance effects on self-employment in high-income compared to low-income countries. According to their results, a one percent increase in the share of remittances to GDP results in a 1.687 percent rise in the self-employment rate. However, remittance effects on the self-employment rate in low-income countries are positive, while these effects in high-income countries are negative (Nanyiti & Sseruyange, 2022). A panel data study of seven Southeast European countries indicates that there is no statistically significant relationship between remittances and self-employment in the long run (Kokotović & Kurečić, 2022). Similarly, Acosta has not found major effects of remittances on self-employment (Acosta, 2020).

## 2. Methodological approach

Based on the availability of data for the relevant model variables, the author has identified a sample of 25 post-transition countries for estimating the impact of remittances on the self-employment rate. The sample includes post-transition countries that are members of the European Union, as well as countries from South-East Europe (SEE) and the Commonwealth of Independent States (CIS). The list of countries that make up the sample is presented in Table 1. Most of the post-transition countries included in the sample receive remittances which account for a significant share of GDP. There are, however, large differences between self-employment rates of the post-transition countries. In several CIS countries, such as Azerbaijan, Armenia, and Moldova, self-employed workers account for more than 50 percent of total employment. On the other hand, in the European Union member states, self-employed workers are significantly less represented in total employment than in other sample countries (in the Slovak Republic and Czech Republic 15 percent on average, in Lithuania and Hungary 12 percent, in Bulgaria 11 percent, in Estonia 10 percent). It should, therefore, be noted that the sample is heterogeneous in this respect.

The observation period runs from 2008 to 2022 because of the availability of the data for this period for the specified sample countries and the relevant model variables. The data series are taken from the World Bank's World Development Indicators (WDI) Online. It should be noted that the data quality is somewhat limited, particularly in terms of remittances. The remittance data are taken from the "Personal remittances" category which includes personal transfers and compensation of employees. However, a certain amount of remittances goes through informal channels, which is why the actual amount of remittance inflows presented in the official data may be underestimated.

Table 1. List of countries

|  |
|--|
| Central and Eastern Europe – EU members  |
| Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, Slovenia |
| South-East Europe countries  |
| Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, the Republic of Serbia                                       |
| Commonwealth of Independent States   |
| Armenia, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Tajikistan, Ukraine, Uzbekistan                    |

*Source:* Own compilation of the data for 25 post-transition countries. The data series are from the World Bank's World Development Indicators (WDI) Online. The observation period runs from 2008 to 2022.

Based on previous empirical models of the effects of remittances on self-employment and other labour market outcomes, the specification of the panel data model can be written as:

$$LnSELF\_EMP_{it} = \alpha_i + \beta_1 lnSELF\_EMP_{it-1} + \beta_2 lnREM_{it} + \beta_3 lnGDP_{it} + \beta_4 lnUNEMP_{it} + \beta_5 lnTRADE_{it} + u_{it}$$

$$(i = 1, 2, 3 \dots, N; t = 1, 2, 3 \dots, T) \tag{1}$$

where *SELF\_EMP* is self-employment measured by the total self-employment rate, the self-employment rate for men and the self-employment rate for women in a country *i* and over time *t*; *REM* is remittance per capita; *GDP* is measured as real GDP per capita adjusted for purchasing power parity, with values expressed in constant 2021 international dollars; *UNEMP* is unemployment measured by the total unemployment rate, the unemployment rate for men and the unemployment rate for women; *TRADE* is the sum of exports and imports of goods and services measured as a share of GDP; *u<sub>it</sub>* is the disturbance term. There are certain limitations to the model specification. The author recognises the importance of administrative complexity and business start-up costs in making business decisions. The author has, therefore, considered including business start-up conditions and the ease of doing business indicators as control variables in the model specification. However, the latest data available for these indicators are only up to 2019.

Table 2 presents the results of the pairwise correlation matrix. Although the correlation between the self-employment rate and remittances per capita is negative, it is not statistically significant. The self-employment rate has a statistically significant negative correlation with other variables while the correlation with the unemployment rate is statistically insignificant.

Table 2. Correlation matrix

|             | Ln_SELF_EMP | Ln_REM  | Ln_GDP  | Ln_UNEMP | Ln_TRADE |
|-------------|-------------|---------|---------|----------|----------|
| Ln_SELF_EMP | 1.0000      |         |         |          |          |
| Ln_REM      | -0.0671     | 1.0000  |         |          |          |
| Ln_GDP      | -0.6088*    | -0.0827 | 1.0000  |          |          |
| Ln_UNEMP    | -0.0940     | 0.1988* | -0.0104 | 1.0000   |          |
| Ln_TRADE    | -0.6507*    | 0.2308* | 0.5474* | -0.0339  | 1.0000   |

Source: *Authors' results.*

Note: \* indicates statistical significance at the 0.05 level

There are several unit root tests to determine whether a panel data series has a unit root. In this paper, the Levin-Lin-Chu test and the Im-Pesaran-Shin test were used to determine the stationarity of the panel data series. The Levin-Lin-Chu test examines whether the panels contain a unit root against the alternative hypothesis that the panels are stationary (Levin et al., 2002). The Im-Pesaran-Shin test examines whether all panels contain a unit root or if some panels are stationary (Im et al., 2003). Besides the level of variables, it was tested whether the first difference of the variables' data series has a unit root or is stationary. The results presented in Table 3 show that the coefficients of the variables' first difference are statistically significant at the 1 percent level. It can be concluded that all variables are stationary at first difference.

Table 3. Results of unit root tests

|                  | Levin-Lin-Chu       |                      | Im-Pesaran-Shin     |                     |
|------------------|---------------------|----------------------|---------------------|---------------------|
|                  | Levels              | First differences    | Levels              | First differences   |
| Ln_SELF_EMP      | -3.4876<br>p=0.0002 | -9.4887<br>p=0.0000  | -2.4509<br>p=0.0071 | -7.4522<br>p=0.0000 |
| Ln_MALE_SELF_EMP | -2.1548<br>p=0.0156 | -10.9839<br>p=0.0000 | -2.6985<br>p=0.0035 | -7.8758<br>p=0.0000 |
| Ln_FEM_SELF_EMP  | -2.8951<br>p=0.0019 | -7.9550<br>p=0.0000  | -1.9029<br>p=0.0285 | -7.3389<br>p=0.0000 |
| Ln_REM           | -3.6785<br>p=0.0001 | -7.1405<br>p=0.0000  | -2.8116<br>p=0.0025 | -8.8439<br>p=0.0000 |
| Ln_GDP           | -0.6023<br>p=0.2735 | -12.7694<br>p=0.0000 | -5.6510<br>p=0.0000 | -8.8708<br>p=0.0000 |
| Ln_UNEMP         | -3.0094<br>p=0.0013 | -7.5377<br>p=0.0000  | -3.4270<br>p=0.0003 | -5.9609<br>p=0.0030 |
| Ln_TRADE         | -6.7768<br>p=0.0000 | -11.6725<br>p=0.0000 | -4.2604<br>p=0.0000 | -7.1940<br>p=0.0000 |

Source: *Authors' results.*

In addition to the issue related to the stationarity of panel data series, it is important to consider the potential presence of endogeneity. Several empirical studies examine the issue of reverse causality between remittances and labour market indicators (Chami et al., 2018; Azizi, 2018; Posso, 2012). Moreover, several research studies confirm bidirectional causality between remittances and labour supply (Motha et al., 2022), and remittances and poverty (Yasmin et al., 2015). It may be assumed that self-employment influences the amount of remittance inflows. In empirical literature, altruism is most often mentioned as the main motive for sending remittances. However, the investment intentions of migrant family members who remain in the home country may incentivise emigrants to send larger remittance amounts. The role of remittances as a substitute for the lack of investment assets is more pronounced in rural areas and in regions with less developed financial markets. Some empirical studies confirm that remittances alleviate credit constraints and improve investment activities (Sana & Massey, 2005; Giuliano & Ruiz-Arranz, 2009). For that reason, the author employs a methodology that accounts for potential endogeneity in the estimation of the panel model.

The author estimates the model using the Generalized Method of Moments (GMM) approach. In empirical studies, the GMM approach is considered to be more efficient than other methods in performing dynamic panel data analysis since it includes lagged values of dependent and independent variables as internal instruments. Dynamic GMM estimators are suitable in situations where panel models have a small number of time periods and a large cross-sectional dimension (small T and large N), with independent variables that are not strictly exogenous (Roodman, 2009). In this study, the author applies the System GMM estimator developed by Blundell and Bond (1998) which uses instruments in both levels and first differences in the estimation process. In addition, the author adopts a two-step estimation approach, which is considered to be more efficient than a one-step procedure. The Sargan test is employed to assess the validity of the instruments, while the Arellano-Bond test is used to detect serial correlation in the model.

### 3. Research design and results

In this section the author presents the results of the empirical model estimated using the System GMM methodology, followed by an analysis. The results for three model specifications with different dependent variables are given in Table 4. As expected, the estimation results show that most explanatory variables have a statistically significant effect on the self-employment rate. The self-employment rate from the previous year largely determines the self-employment rate in the current year and this dynamic effect is statistically significant. It should be noted that, in the model specification where the self-employment rate for men is used as the dependent variable, the first two lags of the self-employment rate for men are included as explanatory variables in order to satisfy the requirements of the autocorrelation test results. The results of the Sargan test confirm the null hypothesis of valid overidentifying restrictions, indicating that the instruments are valid and sufficiently strong to address endogeneity concerns. Furthermore, the results of the Arellano-Bond test suggest the absence of serial correlation in the model.

Table 4. Results of SYS – GMM model

|                        | Dependent Variable      |                         |                         |
|------------------------|-------------------------|-------------------------|-------------------------|
|                        | Ln_SELF_EMP             | Ln_MALE_SELF_EMP        | Ln_FEM_SELF_EMP         |
| Ln_SELF_EMP (t-1)      | 0.86412***<br>(0.0139)  |                         |                         |
| Ln_MALE_SELF_EMP (t-1) |                         | 1.09285***<br>(0.0289)  |                         |
| Ln_MALE_SELF_EMP (t-2) |                         | -0.17776***<br>(0.0274) |                         |
| Ln_FEM_SELF_EMP (t-1)  |                         |                         | 0.81623***<br>(0.0231)  |
| Ln_REM                 | 0.00768*<br>(0.0042)    | 0.00013<br>(0.0034)     | 0.01209***<br>(0.0041)  |
| Ln_GDP                 | -0.07175***<br>(0.0132) | -0.02400**<br>(0.0100)  | -0.12835***<br>(0.0315) |
| Ln_UNEMP               | 0.00487<br>(0.0048)     | 0.00242<br>(0.0069)     | 0.00051<br>(0.0068)     |
| Ln_TRADE               | -0.01291**<br>(0.0060)  | -0.03311***<br>(0.0104) | -0.02084<br>(0.0132)    |
| Cons.                  | 1.14396***<br>(0.1627)  | 0.66259***<br>(0.1345)  | 1.84238***<br>(0.3422)  |
| No. of obs.            | 375                     | 350                     | 375                     |
| No. of instr.          | 33                      | 32                      | 33                      |
| Sargan test            | 19.5172<br>(p=0.8504)   | 22.1668<br>(p=0.6261)   | 20.6278<br>(p=0.8034)   |
| AR (1)                 | -3.4104<br>(p=0.0006)   | -3.5018<br>(p=0.0005)   | -3.0731<br>(p=0.0021)   |
| AR (2)                 | -1.2034<br>(p=0.2288)   | -1.3221<br>(p=0.1861)   | -1.062<br>(p=0.2882)    |

Source: Authors' results.

Notes: \* indicates statistical significance at the 0.10 level, \*\* indicates statistical significance at the 0.05 level; \*\*\* indicates statistical significance at the 0.01 level; standard errors are in the parentheses.

Remittances, as the crucial explanatory variable in this study, show a statistically significant effect at the 10 percent level on the total self-employment rate. The positive sign of the estimated coefficient indicates that higher remittance inflows cause an increase in self-employment. According to the estimation results, a 10 percent increase in remittances per capita leads, on average, to a 0.08 percent increase in the total self-employment rate. The relationship between remittances and starting own business may be unpredictable. Remittances can help alleviate capital constraints for households willing to start a business, or they may be allocated to consumption, real estate investment or leisure activities, depending on the household's income level. The results suggest that, once basic consumption needs are satisfied, remittances are allocated toward the establishment of self-owned businesses. GDP per capita as an income variable has a negative and statistically significant effect on the self-employment rate. A 10 percent increase in GDP per capita leads to an average decline of 0.72 percent in the total self-employment rate. The author has assumed that the self-employment decision in post-transition countries is partly influenced by the lack of wage employment opportunities. The results indicate that an increase in the unemployment rate influences an increase in the total self-employment rate, though this effect is statistically insignificant. According to the results, a higher trade-to-GDP ratio has a negative and statistically significant effect on the self-employment rate.

To properly understand remittance effects on self-employment, the author examines the gender aspects of self-employment. Informal institutions and culturally embedded patterns of behavior in particular post-transition countries may shape gender differences in entrepreneurial activities. Moreover, resource constraints combined with the traditional role of women in family responsibilities contribute to a high prevalence of home-based businesses among self-employed women. Having this in mind, as well as men's predominance in migrant activities, the author examines whether remittances have gender different effects on self-employment. The results of the GMM estimation indicate that there is a difference in the effects of remittances on the self-employment rates of men and women. The effect of remittances on the male self-employment rate is rather small and statistically insignificant. However, remittance inflows produce a statistically significant effect on the female self-employment rate, with an estimated 10 percent rise in remittances per capita increasing the female self-employment rate by 0.12 percent.

It should be noted that the share of self-employed workers in total employment varies across the sample countries. It has been previously mentioned that the percentage of self-employed workers in CIS countries is considerably higher than in EU member states. Cross-country differences in labour market institutions, tax framework, and social security system benefits may have an impact on self-employment participation. In addition, different remittance amounts, besides other factors, may influence recipients' decisions regarding remittance allocation. Therefore, the author re-estimates the model dividing remittance variables by region and including variables REM\_SEE (remittances per capita in the South-East Europe countries), REM\_CEE (remittances per capita in the Central and Eastern Europe – EU members), and REM\_CIS (remittances per capita in the Commonwealth of Independent States).

The analysis of the GMM re-estimation results, which are presented in Table 5, suggests that remittances have different effects in CIS, CEE and SEE countries. They show that in SEE and CIS countries remittances support the establishment of self-owned businesses, providing the necessary start-up capital, while in CEE countries remittance inflows cause a decline in self-employment. According to the results, a 10 percent increase in remittances per capita causes a rise of the total self-employment rate by 0.11 percent in SEE countries and 0.10 percent in CIS countries. In addition, remittance inflows contribute to the increase in the share of self-employed women in total employment, while the effect on male self-employment is negative. The author estimates that a 10 percent increase in remittances per capita increases the female

self-employment rate by 0.12 percent in SEE countries and 0.10 percent in CIS countries, while the effect on male self-employment is very small and statistically insignificant. The results for Central and Eastern European – EU member states imply that remittance inflows disincentivise self-employment among men and women. According to the results, a 10 percent increase in remittances per capita in CEE countries causes a decline in female self-employment by 0.21 percent and a decline in male self-employment by 0.18 percent. These results correspond with the studies (Piras, 2023; Nanyiti & Sseruyange, 2022) that show positive remittance effects on self-employment in less developed countries and negative effects in more developed countries.

Table 5. Results of SYS – GMM model by region

|                        | Dependent Variable      |                         |                         |
|------------------------|-------------------------|-------------------------|-------------------------|
|                        | Ln_SELF_EMP             | Ln_MALE_SELF_EMP        | Ln_FEM_SELF_EMP         |
| Ln_SELF_EMP (t-1)      | 0.79537***<br>(0.0255)  |                         |                         |
| Ln_MALE_SELF_EMP (t-1) |                         | 0.98540***<br>(0.0785)  |                         |
| Ln_MALE_SELF_EMP (t-2) |                         | -0.20849***<br>(0.0606) |                         |
| Ln_FEM_SELF_EMP (t-1)  |                         |                         | 0.77929***<br>(0.0386)  |
| Ln_REM_SEE             | 0.01108**<br>(0.0049)   | -0.00076<br>(0.0057)    | 0.01245**<br>(0.0059)   |
| Ln_REM_CEE             | -0.00467<br>(0.0068)    | -0.01851**<br>(0.0087)  | -0.02061***<br>(0.0078) |
| Ln_REM_CIS             | 0.01041*<br>(0.0058)    | 0.00711<br>(0.0045)     | 0.00997**<br>(0.0052)   |
| Ln_GDP                 | -0.06059***<br>(0.0181) | -0.05443**<br>(0.0271)  | -0.10625***<br>(0.0311) |
| Ln_UNEMP               | 0.01406*<br>(0.0072)    | 0.00163<br>(0.0094)     | 0.00239<br>(0.0093)     |
| Ln_TRADE               | -0.01543**<br>(0.0071)  | -0.01653<br>(0.0158)    | -0.02145**<br>(0.0108)  |
| Cons.                  | 1.27235***<br>(0.2279)  | 1.38201***<br>(0.2938)  | 1.85962***<br>(0.4004)  |
| No. of obs.            | 375                     | 350                     | 375                     |
| No. of instr.          | 35                      | 34                      | 35                      |
| Sargan test            | 17.5219<br>(p=0.9175)   | 17.5198<br>(p=0.8621)   | 14.7793<br>(p=0.9724)   |
| AR (1)                 | -3.4631<br>(p=0.0005)   | -3.2308<br>(p=0.0012)   | -3.1091<br>(p=0.0019)   |
| AR (2)                 | -1.1939<br>(p=0.2325)   | -1.105<br>(p=0.2692)    | -1.0671<br>(p=0.2859)   |

Source: Authors' results.

Notes: \* indicates statistical significance at the 0.10 level, \*\* indicates statistical significance at the 0.05 level; \*\*\* indicates statistical significance at the 0.01 level; standard errors are in the parentheses.

## Conclusion

The objective of this paper is to examine the relationship between remittance inflows and self-employment rates. Most empirical literature is focused on remittances providing support for entrepreneurial activities. It has been found that remittances have a positive impact on the establishment of enterprises. In empirical studies, remittance effects are mostly estimated based on the number of newly created businesses and new business density. It is necessary to consider specific contextual factors that may influence the effect of remittances on business formation. These factors include the income level of remittance-receiving households, the degree of economic complexity and the extent of economic informality. Existing research on the effects of remittances on employment has predominantly focused on self-employment. However, the empirical literature does not provide clear or unambiguous conclusions regarding the effects of remittances on self-employment. Thus, relevant cross-country studies remain relatively scarce.

This paper uses cross-country aggregate data for 25 post-transition countries in the observation period from 2008 to 2022. Remittance effects on self-employment rates are estimated applying the System GMM approach. The findings suggest that remittances have a positive and statistically significant impact on self-employment rates. According to the results, a 10 percent increase in remittances per capita leads to an average increase of 0.08 percent in the total self-employment rate. However, remittances influence male and female self-employment rates differently. Remittance inflows contribute to an increase in the female self-employment rate, with a 10 percent rise in remittances per capita increasing the female self-employment rate by 0.12 percent. In contrast, the estimated effect of remittances on male self-employment is small and statistically insignificant. The model was re-estimated by region, having in mind cross-country differences in labour markets and economic conditions. The results show that in SEE and CIS countries, remittances support the establishment of self-owned businesses, while in the Central and Eastern European - EU member states, remittances have a negative effect. In SEE and CIS countries, remittance inflows are associated with an increase in female self-employment, while the effect on male self-employment is small and statistically insignificant. The results for Central and Eastern European – EU member states imply that remittance inflows significantly discourage self-employment among men and women.

Given these empirical results, governments in remittance-receiving countries could design effective measures and policy instruments to encourage the channeling of remittances into entrepreneurial activities. It is essential to reduce bureaucratic procedure barriers and transaction costs for remittance transfers in order to increase remittance inflows. Additionally, labour market policies should integrate migration-related effects and include vocational training programs aimed at strengthening the skills required for business formation. Furthermore, it is important to develop targeted labour market policies focused particularly on increasing female participation in entrepreneurial activities.

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