IMPACT OF REMITTANCE INFLOWS ON SELECTED SOUTH-EAST EUROPEAN ECONOMIES: A PANEL AUTO-REGRESSIVE DISTRIBUTED LAG APPROACH

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ABSTRACT

The impact of remittance inflows on economic development is contested in the existing literature. This article applies a panel auto regressive distributed lag to examine the impact of remittance inflows on economic growth and self-employment percentage in a panel of seven Southeast European countries between 1996 and 2020. The countries included in the panel are characterized by higher remittance inflows and include Albania, Bosnia and Hercegovina, Croatia, Kosovo, Montenegro, North Macedonia, and Serbia. The findings of the article indicate that there is no short-run relationship between remittance inflows and economic growth, but that remittance inflows are a significant contributor to economic growth in the long run. The article finds that in the short run, remittance inflows actually decrease the self-employment rate which can be attributed to the poverty alleviation impact of remittance flows, while there is no statistically significant relationship between remittance inflows and the self-employment rate in the long-run. This indicates that there are opportunities to utilize the significant remittance inflows in more meaningful ways to stimulate investment opportunities.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

Southeast Europe is an area where migrants have approached the increasingly open market of the European Union (hereafter: the EU) that is experiencing labour shortages in several key sectors. Such trends have caused many of the countries in the area to experience concerning demographic trends [1]. Croatia is one of the countries that is experiencing rapid demographic imbalances. The opening up of labour markets in the EU has triggered a new wave of migration that has exasperated demographic trends in the country. If the current scope of migration and low birth rates are to continue, the ratio of active workers supporting the economy compared to non-participating members of the economy is expected to become 1:3 in the not-too-distant future [2]. Such demographic trends are not sustainable. There is a clear need to establish a migration policy that will lead to the repatriation of some of these migrants, as well as an effort to prevent the "brain drain" phenomenon [3]. Even in the short-term, such a high number of migrants can lead to labour costs increasing, lesser government revenue through taxation and a decrease in the number of skilled workers necessary for essential jobs. The long-term consequences are increasingly dire with potential questions being raised as to the long-term feasibility of both the healthcare and the pension system [4].

While the migration wave has negatively impacted the state of the labour market and short-term tax revenues have been hampered, there are also some other factors that need to be considered. World Bank data in 2022 indicates that remittances into Croatia now account for almost seven percent of GDP, compared to just 2,2 % in 1999. While this factor, at least, seems to be favourable for the Croatian economy as this additional revenue can be used both to finance everyday consumption and stimulate new spending, the actual academic discussion about the impact of remittances leads to the conclusion that their impact is contested in the existing literature [5-10]. It is far from clear how remittances impact the economy, particularly in an open economy highly dependent on external capital flows which are key characteristics of most economies in South-eastern Europe [11].

This article aims to fill the research void in examining the impact of remittance inflows on economic growth in South-eastern Europe. The section that follows will analyse the underlying differences in the existing literature and examine the causes for why there are so many dissenting opinions. The following section will examine the methodological approach and justify the selection of the relevant independent variables. The fourth section will present the results of the panel auto regressive distributed lags (ARDL) estimation and discuss how the findings of the article fit within the overall literature. The final section will provide relevant policy recommendations based on the findings and support the thesis that remittance inflows encourage economic growth in the long-term through poverty alleviation and the stimulation of private consumption.

LITERATURE REVIEW

There is no clear consensus between how remittance inflows impact economic growth and even the measurements of what the levels of remittance inflows are is contested as many of them arrive through informal flows [5]. The models that consider the impact of remittance inflows are differently specified with different broad base growth models that include [12] that have also been reconceptualized into additional contemporary models such as [13]. The different conceptualizations of base models of economic growth, as highlighted in [14] is an area of continued activity in the field of economics as there are minor modifications in the factors of production considered and the underlying variables necessary to properly account for their activity.

There are different approaches such as those by [15] that have encouraged that these models need to also better account for human and knowledge capital as significant contributors to economic growth. Additionally, the impact of research and development given its significance to economic activity is insufficiently measured and considered in most econometric models [16]. The different base models, approaches to measuring remittance inflows and economic growth as well as different geographical regions around the globe are likely causes of why there are so many significant differences between how remittance inflows impact economic growth. Broadly, the literature examined can be subdivided into three separate categories:

1. the authors who believe that remittances inadvertently hamper economic growth [5, 6, 17, 18],
2. the authors who believe that remittances help promote economic growth and alleviate poverty [7, 19],
3. authors who find no statistically significant relationship between remittances and economic growth or find that the impact of remittance inflows may be different across different regions or countries [9, 20, 21].

Initially, there is a number of authors who believe that remittance inflows may inadvertently have an adverse impact on the aggregate economy including [6]. The authors argue that remittances do contribute to the consumption of non-tradable goods and that such an approach then causes the price of other goods in the economy to increase [6]. The authors believe that regardless of the well-meaning intentions of remittance providers that they actually contribute to the 'Dutch Disease' in small and open economies [6]. The authors further argue that as a result of having more disposable incomes, those receiving remittances then have less incentive to work which can lead to labour shortages and higher costs of goods and services [6]. A similar viewpoint is presented in [17]. In their study of a panel of Latin American and Caribbean countries, the authors employ a panel regression analysis and find that the impact of remittance inflows increases the real exchange rate [17]. As a result of these factors, the economic growth of the countries examined is hampered and prices increase for consumers [17]. The impact of remittances in Bangladesh between 1995 and 2006 was examined and a similar conclusion was reached by implementing regression analysis and finding that remittances adversely impact economic growth. The author also emphasized the need for country-specific countries and argued that some overly broad conclusions have been made based on panel data [18].

A slightly more nuanced viewpoint is presented in [5] where the authors emphasize that the formal remittance inflows probably account for between 35 % and 75 % of the actual volume of remittances. The authors find this problematic as they believe that many of the countries that have high inflows of remittances do not fully benefit from the possible government revenues that could be derived from remittances as they remain a part of the shadow economy [5]. As emphasized by [5], many countries including Ireland and Thailand are taking deliberate trends to attempt a reversal of migration trends and have attempted to ensure that qualified individuals return to their home countries. Overall, it is indicated that remittance inflows at best are not fully utilized as many of the informal channels through which these remittances flow do not have benefits for the aggregate economy. There are also similar articles that do not provide a clear response to how remittance inflows impact the aggregate economy or that the impact of remittance flows may be differ across countries.

An example of such a article is [8] as the authors argue that much of the existing literature has minor methodological concerns by utilizing approaches based on GMM or standard OLS regressions. The authors argue that such an approach is not methodologically valid given the fact that it does not fully account for the spatial interdependence of economic growth. Another methodological concern identified by the same authors is omitted variable bias as the authors believe that many studies combine remittance inflows with only some other foreign

capital flows or develop regression models that have a limited explanatory value. The authors believe that it is necessary to account for all of the possible foreign capital inflows including foreign aid, remittance flows, and FDI, and they have found that the impact of remittances is not consistent across the different areas they have observed and have found that remittance inflows do not have a statistically significant impact on economic growth in the African economies they observed. On the other hand, they have also found evidence of such a link in a panel of Latin American and Caribbean countries thus highlighting spatial differences in the impact of remittance inflows on economic growth [8].

Similarly, [9] has conducted an analysis of the 11 South-Mediterranean countries between 1984 and 2014 to examine whether there is a link between remittance inflows and economic growth. The author has established that remittance inflows do not directly positively impact economic growth based on a GMM approach. The author does find that in some cases institutional factors are a precondition for stability and that there is some correlation with ensuring higher levels of economic growth when countries that have functioning institutions also have higher levels of remittance inflows. The authors however do not establish that there is a direct link between remittance inflows and economic growth, but the author considers them to be complements that can enable the long-term foundations for economic growth.

The impact of remittances in Croatia was for example also examined [20]. It was concluded that remittance inflows had a favourable impact on the economy. The authors implemented a GMM panel approach that examined the MENA countries and concluded that, compared to other outside capital flows such as foreign aid, remittance inflows have a comparatively stronger impact on poverty alleviation in the MENA countries. The authors believe that the governments of these countries face significant problems in ensuring the prerequisites for economic growth given the failures of privatisation.

An analysis of remittance inflows on the economic growth of the MINT (Mexico, Indonesia, Nigeria, and Turkey) countries from 1980-2019 was also conducted [19]. The authors believe that omitted variable bias was one of the reasons why numerous models failed to fully capture the impact that remittance inflows can have on economic growth. The authors believe that the impact of the financial capital development variable is significant to the overall estimation of the model. The authors have employed a panel ARDL approach to consider the impact of the relevant variables. The authors have concluded that remittance inflows have a long-term positive impact on economic growth. As such, the authors believe that the facilitation of remittance inflows are significant, even though most of the spending supported by it is being spent on everyday consumption. This is comparable to the findings [7], where impact of remittance inflows in Bangladesh, India, Pakistan and Sri Lanka through a regression model reviewing data between 1976 and 2012 was examined. The author similarly found that remittance inflows could not only be used to stimulate consumption, but could also be used to stimulate entrepreneurial activities. The author includes relevant control variables including openness to trade, FDI as well as infrastructure to ensure that the regression findings are not spurious. This is also compatible with the findings in [10] where the importance of remittance inflows for investment activities and growth in the Philippines was studied. Examined were 1646 households that had at least one member of their family to migrate abroad and were receiving some form of remittance inflows. The author concluded that not only did remittance inflows support everyday consumption, but individuals who had consistent remittance support were more likely to engage in entrepreneurial activities and be self-employed. As a result, the author believes that remittance inflows are highly significant for the aggregate development of the Philippines and that they should be encouraged.

A panel of 25 sub-Saharan economies was examined [21] and complementary finding to those of [10] were found. The authors have emphasized that one of the problems in dealing with the study of remittance inflows is a lack of possible explanatory exogenous variables and also implemented a GMM approach. The authors believe that remittance inflows can have an effect in generating an alternative form of liquidity and, therefore, believe that remittance inflows should be encouraged as they have a positive impact on stimulating economic activity.

The findings are similarly varied when examining the impact of economic growth in the area of Southeast Europe. It should be noted that not all of the articles examined had the same sample of countries as those utilized in this article. A Delphi questionnaire approach that surveyed 10 experts and 20 remittance receivers per country was conducted by [22]. The authors concluded that most adverse demographic trends will be mitigated as persistent migration will no longer be as prominent in most countries, with the exception of Serbia. Furthermore, the authors concluded that, with the exception of North Macedonia, remittance inflows do fuel economic activity that is beneficial to the aggregate economy.

Other authors [23] examined the macroeconomic impact of remittance inflows in Southeast Europe and summarized key points from the existing literature. The authors found that generally, remittance inflows tended to have a positive impact on national incomes, but that there were concerns that remittance inflows tended to be associated with inflation. Further, authors focused their analysis exclusively on Romania and found that remittances have a significant impact on the aggregate economy. The authors further determined that after the first year, remittance inflows tend to decrease from migrants and that migrants tend to send back fewer resources during times of financial crisis [24].

A general impact of migration on Southeast Europe and conducted an extensive literature review of the topic was examined by [25]. The authors note that the entire area has a history of migration and that joining the EU has caused significant increases in the aggregate levels of remittances sent back, but highlight that the general impact of migration on development is contested. It can therefore be concluded that there is no consensus in the existing literature on how specifically remittances impact economic growth with numerous authors including [6] believing that remittance inflows can increase the costs of goods, decrease labour supply and cause the 'Dutch Disease'. On the other hand, authors such as [10] have highlighted those remittances have not only encouraged economic growth and stimulated consumption, but have also enabled individuals who receive remittances to invest in new businesses and thus stimulate additional levels of economic growth. It can be argued that part of the lacking consensus may stem from the fact that authors are examining different areas and economies and using entirely different models to examine the impact of remittances. The arguments specified by [8] concerning potential omitted variable bias may also be significant.

METHODOLOGY AND DATA

In order to examine the impact of remittance inflows on a panel of economies in Southeast Europe, data was downloaded from the World Bank. The article initially considered a general growth model as described in [26], represented by the following equation:

$$g_i = \gamma(z_i)'X_i + \epsilon_i, \tag{1}$$

where $\gamma(z_i)$ accounts for country-specific parameters and represents a broader approach to the Solow model, thus enabling for the inclusion of variables that best describe the economic growth of Southeast Europe. It also includes g as the aggregate level of economic growth, as measures by changes in GDP. The equation also includes an error term and considers the time period indicated by i. From this basic equation, the article developed an autoregressive distributed lag approach to fully capture the impact of the relevant variables on economic growth. The selection of the

ARDL panel model is mainly due to the fact that the method can be used both for short-term and long-term estimation of the coefficients [27]. Rather than using a GMM approach, the coefficients are estimated through a Pooled Mean Group (PMG) estimator developed by [28].

It can also be utilized even when the variables are either stationary or stationary in their first difference, which shall be empirically tested by utilizing the test developed by [29]. Stationarity is a term that indicates consistency in terms of the property of a time series not changing as a result of influencers such as trends or seasonality. This will also be supported by validating these results by using the panel unit root test proposed by [30]. The null hypothesis of the test proposed is that the variable is non-stationary, as is that of the test proposed by [29]. As emphasized by [31], an ARDL approach is not viable if a variable is $I(2)$ or higher. ARDL models can include lags of both the dependent variable and the regressors and the number of lags will be determined automatically based on the Akaike information criterion.

Aside from estimating the model that will analyze the impact of remittances on economic growth, a second model will also be estimated that will examine the impact of remittances on the self-employment rate to test whether [10] research can also be applied to the area of Southeast Europe. Thus, the research is based on the following equations:

$$\Delta GDP_{i,t} = \varphi_i + \sum \gamma_1 \Delta GDP_{i,t-j} + \sum \gamma_2 \Delta FDI_{i,t} + \sum \gamma_3 \Delta GFCF_{i,t} + \sum \gamma_4 \Delta RI_{i,t} + \epsilon_{i,t}, \quad (2)$$

$$\Delta SE_{i,t} = \varphi_i + \sum \beta_1 \Delta SE_{i,t-j} + \sum \beta_2 \Delta FDI_{i,t} + \sum \beta_3 \Delta EE_{i,t} + \sum \beta_4 \Delta RI_{i,t} + \epsilon_{i,t}, \quad (3)$$

where we assume that GDP is impacted by an array of possible explanatory variables and the key factor of the article is determining how remittances as an independent variable impact economic growth. The full list of abbreviations for the variables is included in Table 1. N accounts for the cross-section units and t accounts for the examined time period. The second model uses the rate of self-employment as an imperfect proxy to measure investment activity and entrepreneurial methods, that [10] has shown to increase as a result of remittance inflows. All of the previously mentioned independent variables have been included as they are considered by some articles, including [10] to be strong determinants of GDP. Both models include a group-specific intercept (φ) and an error term (ϵ) as well as the relevant coefficients of both of the models ($\beta_{1...4}$ and $\gamma_{1...4}$).

Information concerning the data used in the variables as well as other technical information is provided in Table 1 below.

Table 1. Key variables considered by panel ARDL models (World Bank 2022 data).

Variable	Variable abbreviation	Measurement	Relevance
Gross domestic product	GDP	Real $2015	Dependent variable of first model
Remittance inflows	RI	Real $2015	Independent variable of both models
Foreign domestic investments inflows	FDI	Real $2015	Independent variable of both models
Education investment	EE	Real $2015	Independent variable of second model
Gross fixed capital formation	GFCF	Real $2015	Independent variable of first model
Self-employment rate	SE	Percentage of self-employed individuals compared to all individuals employed	Dependent variable of second model

Based on evidence from the existing literature, it is possible to assume that FDI should be associated with an increase in economic growth as the increased economic activity caused by these investments should have a spill-over effect into other sectors as well. Such views are also present in other articles [7, 10]. As has been elaborated in greater depth in the literature review, the impact of remittance inflows is inconsistent across the examined literature including [5, 6, 17], so one of the primary goals of the article is to determine the relationship between remittance inflows and GDP. It is unclear whether additional remittance inflows adversely impact the economy as they may stimulate the 'Dutch Disease' or these inflows benefit the economy through additional resources that individuals receiving remittances may then spend and thus stimulate the economy.

While most of the existing literature including [1] assumes that additional spending in education results in better jobs thus leading to better wages and stronger economic growth, this is contingent on multiple factors. One area that may be unclear is whether higher wages can be achieved through educational spending as there are many other determinants to the level of wages. As such, despite the findings in [1], the final relationship between educational spending and GDP growth should also be verified.

Additionally, summary statistics of the data are shown in Table 2. A logarithmic transformation has been applied to all of the variables with the exception of the self-employment rate. The rationale for doing so is that this minimizes the values of skewness and kurtosis of the individual variables that could have resulted in a spurious regression. The use of inflation-corrected currencies will also ensure that time-specific effects do not have an impact on the final results of the models. The data considers the time period between 1996 and 2020 with some lacking data availability in the case of Kosovo.

Table 2. Summary statistics of variables.

	LGDP	LGFCF	LEE	LFDI	SE
Mean	25,7	24,21	20,17	20,08	31,59
Median	26,51	24,9	19,86	20,09	26,99
Maximum	29,23	27,88	21,78	22,38	66,51
Minimum	21,83	20,23	17,99	15,86	12
Standard deviation	2,29	2,26	1,07	1,22	15,08
Skewness	–0,38	–0,34	–0,05	–0,64	1,2
Kurtosis	1,93	1,87	1,76	3,98	3,07

It can be determined that, within the panel, the discrepancies are most significant in terms of the self-employment rate. While Albania has, on average, the highest self-employment rate, the value of this variable is comparatively low across the other observed Southeast European economies (data from World Bank).

RESULTS AND DISCUSSION

In order to ensure the statistical validity of the results, it was first necessary to conduct the panel unit root tests to ensure that all variables were either $I(0)$ or $I(1)$. This is verified and shown in Table 3.

Table 3. Panel unit root test results.

	Levin, Lin and Chu t in $I(0)$	Im, Pesaran and Shin W-stat in $I(0)$	Levin, Lin and Chu t in $I(1)$	Im, Pesaran and Shin W-stat in $I(1)$
LGDP	–4,31** (0,000)	–0,87 (0,19)	–3,52** (0,000)	–4,87** (0,000)
SE	–0,27 (0,39)	1,21 (0,89)	–5,67** (0,000)	–6,48** (0,000)
LFDI	–3,41** (0,003)	–4,27** (0,000)	/	/
LGFCF	–9,25** (0,000)	–4,51** (0,0000)	/	/
LEE	–0,79 (0,21)	0,76 (0,75)	–6,46** (0,000)	–5,82** (0,000)
LRI	–2,74** (0,003)	–1,82* (0,034)	/	/

*relevant at 0,05 level of statistical significance
**relevant at 0,01 levels of statistical significance

As can be seen from Table 3, all of the models are either I(0) or I(1). Unit root tests were not conducted for the $I(1)$ forms of the variables in case the variables exhibited stationarity in their level forms based on the results of both of the relevant tests. It is clear from the conducted panel unit tests that both of the dependent variables of the ARDL models as well as LEE are $I(1)$ while LFDI, LRI and LFGCF are $I(0)$. This enables us to conduct the panel ARDL PMG estimation and the results of the first model are shown in Table 4.

Table 4. Panel ARDL model for economic growth.

	Coefficient	t-statistic
Long-run equation		
LFDI	–0,018** (0,0000)	–12,27
LRI	1,02** (0,0000)	223,86
LGFCF	1,27** (0,000)	273,77
Short-run equation		
D(LGDP(-1))	–0,26 (0,23)	–0,91
D(LFDI)	–0,026 (0,36)	–1,05
D(LFDI(-1))	–0,029 (0,297)	–1,05
D(LRI)	0,004 (0,87)	0,16
D(LRI(-1))	0,083 (0,12)	1,54
D(LGFCF)	0,19* (0,019)	2,38
D(LGFCF(-1))	0,034 (0,31)	1,03

*relevant at 0,05 level of statistical significance
**relevant at 0,01 levels of statistical significance

As can be seen from Table 4, remittance inflows do not have a statistically significant link in the short-term. On the other hand, in the long-term, remittance inflows are one of the key determinants to ensuring sustainable economic growth. These arguments are mostly consistent with several existing articles that have considered other areas around the globe including [7]. It can be argued, similarly to as was considered in [8], that accounting for different types of both domestic and foreign capital flows is essential to determining the statistical relationship between remittance inflows and economic growth. The only variable omitted from the article that was also considered in [8] were foreign aid inflows that are not as significant in Southeast Europe compared to the panel of countries the authors considered and there was limited data concerning total foreign aid inflows in the World Bank (2022) database. It can be argued that remittance inflows alleviate poverty and assist those individuals who receive remittances to stimulate private consumption. While this is a long-term process, this article does find evidence of a long-run positive relationship between remittance inflows and economic growth that is also consistent with the findings in [19]. The article also considers the impact of remittances on the self-employment rate as shown in Table 5.

Table 5. Panel ARDL model for the self-employment rate.

	Coefficient	t-statistic
Long-run equation		
LFDI	−8,44** (0,0059)	−2,86
LEE	−0,059 (0,991)	−0,01
LRI	13,42 (0,107)	1,64
Short-run equation		
D(LSE(-1))	0,03 (0,11)	0,23
D(LFDI)	0,14 (0,76)	0,33
D(LRI)	−0,79* (0,04)	−2,12
D(LEE)	−0,78 (0,44)	−0,77

*relevant at 0,05 level of statistical significance
**relevant at 0,01 levels of statistical significance

While [10] believed that remittance inflows significantly increase the self-employment rate, this is not a finding that this article could empirically verify. Rather, it seems that while remittance inflows do have an impact in stimulating long-term economic growth, remittance inflows actually have a short-term negative relationship with the self-employment rate. This finding can be explained when contextualized with other factors in the existing literature such as [6]. As explained in [6] it is often the case that remittance inflows can lead to labour shortages and for people needing to work less as a result of receiving remittance inflows and thus requiring less funds for personal consumption. It is similarly plausible that as a result of individuals receiving higher remittance inflows, they are no longer required to work as microbusinesses or engage in rural family farming. In the long-run the relationship between remittance inflows and the self-employment rate is statistically insignificant and this has not changed through multiple different estimates of the panel ARDL model. It is important to note that finding in [10] was based on surveys and that different datasets could lead to different findings. This is an area where further research is needed to resolve the

inconsistency in the existing literature with the different theoretical assumptions as proposed by [10] compared to [6] and [24].

The findings of the article are also consistent with [32] that also employed a panel data analysis approach to viewing the impact of R&D. In comparison to [32], this article also determines that the impact of foreign forms of capital and increased innovation are likely factors contributing to economic growth. The main findings are also consistent with [33] where the authors have utilized a panel approach to determine the impact of non-economic determinants of FDI, such as quality of institutions, in the example of Croatia. The arguments of the article are also consistent with the views of [34] about the unclear impact of neoclassical growth theory.

CONCLUSION

This article provides additional insight into the short-term and long-term impact of remittance inflows on a panel of Southeast European economies. The goal of the article was to establish how certain foreign capital inflows, primarily remittances, impacted the economic growth of the observed countries. The main reason for doing so was the inconsistency of the existing articles in establishing this relationship including [1, 5, 6, 15, 17]. In order to ensure the validity of the ARDL models that were the primary empirical method of establishing the relationship, a number of other independent variables that are determinants of GDP have also been included. The article also examined the impact that a set of selected independent variables had on the self-employment rate as some articles hypothesized that remittances led to higher rates of self-employment.

The article has determined that there is a long-run statistically significant relationship between remittance inflows and economic growth which is mainly consistent with the other findings [7, 19]. The article finds that as individuals receive additional inflows of capital through remittances, this has a poverty alleviating impact as individuals are then able to use more disposable income and thus encourage economic growth through personal consumption. While such findings are partially consistent with other articles such as [8] and [10], some of the findings of the article differ significantly from [10].

The second set of panel ARDL models established that there is no statistically relevant relationship between remittance inflows and the self-employment rate. In fact, due to the increase in disposable income, some are less stimulated to work due to having additional income as a result of remittances as explained in [6]. For this reason, remittance inflows in the short-term actually decrease the self-employment rate.

The article has also found that, in the observed dataset, FDI actually tends to increase the self-employment rate. This may be a cause of correlated events as the growth of FDI has tended to increase larger companies operating in SEE economies and thus has led to a lower need for people to operate microbusinesses. Regardless, it does indicate a valid managerial implication to all operating small or micro businesses that may find it difficult to stabilize their position on the market.

This article emphasizes that the fact that remittance inflows do not cause an increase in the self-employment rate does not mean that these inflows do not generate entrepreneurial activity. The article specifically examined the self-employment rate to complement the work [10] on an entirely different geographic area and using a different methodological approach, but the complex relationship between remittance inflows and investment is an area that warrants further research. It should also be noted that, as specified by [17], significant levels of remittance inflows are informal. These are some of the limitations of the article, but the very

inability to fully capture the remittance inflows is one of the main methodological shortcomings of the article. Another limitation may be the selected determinants of economic growth or the self-employment ratio. While these were based on previous articles, other viable indicators could also be utilized.

Future articles may also wish to analyse the impact on a micro, rather than on a macro level and gain access to empirical data through surveys. Monitoring and stimulating individuals to effectively utilize remittance inflows should be a priority for governments of Southeast Europe that have significant levels of remittance inflows. Educating individuals about financial opportunities and encouraging self-employment training could be beneficial to further boosting the impact of remittance inflows. As noted by [9], the quality of institutions and policy development is essential to maximizing the investment value of remittance flows.

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