

THE IMPACT OF REMITTANCE IN ECONOMIC GROWTH: EMPIRICAL EVIDENCE FROM THE WESTERN BALKAN COUNTRIES

Besmir Collaku, University of Pristina
Safet Merovci, University of Prishtina

ABSTRACT

The objective of this paper is to study the impact of remittances upon the origin country of emigrants. To achieve our purpose, we have performed a quantitative analysis by using the ordinary least squares method (OLS), i.e., the Pooled Regression. The empirical research focused on the influence of remittances on the economic activity in WB countries, with emphasis on Kosovo. Our results are in accordance with the recent studies in the field and conclude that the effect of remittances on economic growth is statistically significant. We found that, for each 1% increase in remittance of Western Balkan countries, the GDP will increase on average by 0.12%, holding the other variables constant. The productive use of remittances has a direct impact on economic activity in the country of origin.

Keywords: Remittance, Migration, Growth, Kosovo.

JEL classification codes: F22, F24, J22.

INTRODUCTION

The migration phenomenon still appears to be one of the most important issues of the global agenda, since it generates enormous economic, social, and security effects. Over one billion people in the world are migrants (International Organization of Migrants, 2015). Over the three recent decades, remittances have been attracting increasing attention because of their rising volume, as well as their possible effect on economic activity for the country of origin. The remittances received by developing countries in 2019 reached \$554 billion, or about 77.6% of global remittances. In terms of remittances to GDP ratio, the presence of remittances to GDP can go up to 27% (World Bank, 2020). Alongside developing countries, remittances have to be considered as the most stable type of foreign capital inflow, surpassing foreign direct investment, export revenue, and foreign aid (Cismas, 2019; Abduvaliev & Bustillo, 2019).

Despite the increasing importance of remittances in total international capital flows, the relationship between remittances and growth, especially in Western Balkan countries, has not been adequately studied. This study is the first to measure the impact of remittances on economic growth in five selected forms of post-socialist countries.

We will refer to the traditional sources of economic growth, using estimation methods that are based on random-effects models which allow us to account for the heterogeneity of Western Balkan economies and the differences in the traditional sectors' contributions to the economic growth of Western Balkan economies.

Our empirical results show that remittances have a statistically significant contribution to both the current level of gross domestic product and the economic growth rate of Western Balkan countries. Remittances play a role in the economic growth of Western Balkan economies by augmenting the dwindling external sources of capital in the form of foreign aid, foreign direct investment, and private investment to Western Balkan.

The rest of the paper is structured as follows. Section II provides a short review of selected literature. In Section III, we describe the research methodology used. Section IV presents the main findings of the study. The last section summarizes the results, draws conclusions, and makes some policy recommendations for promoting remittances as a growth and development strategy.

LITERATURE BACKGROUND

The constant increase of remittances to developing countries has attracted the attention of researchers due to the numerous ways through which remittances might affect economic growth. Many economists and analysts have realized several immense empirical studies on the different aspects of remittances' impact, such as motivation of remittances senders, economic growth influence, and cost of remittance. There is a diverse opinion about the economic growth impact of remittances.

The remittance influences the economy directly or indirectly through the balance of payments, trade balance, exchange rates, and inflation rate (Bugamelli & Paterno, 2011). Direct influence refers to the fact that remittances are part of the national accounts, and the indirect effect has to do with the impact on macro behaviors reflected on the exchange rate and inflation rate.

There is empirical evidence that remittance has an altruistic motive to support the family members left behind or diversify the portfolio through investment in different projects in the country of origin (Goschin, 2014). Both instances should trigger an economic impact, either by increasing consumption (aggregate demand side) or production (aggregate supply side) and consequently boosting economic development in the receiving country (OECD, 2006).

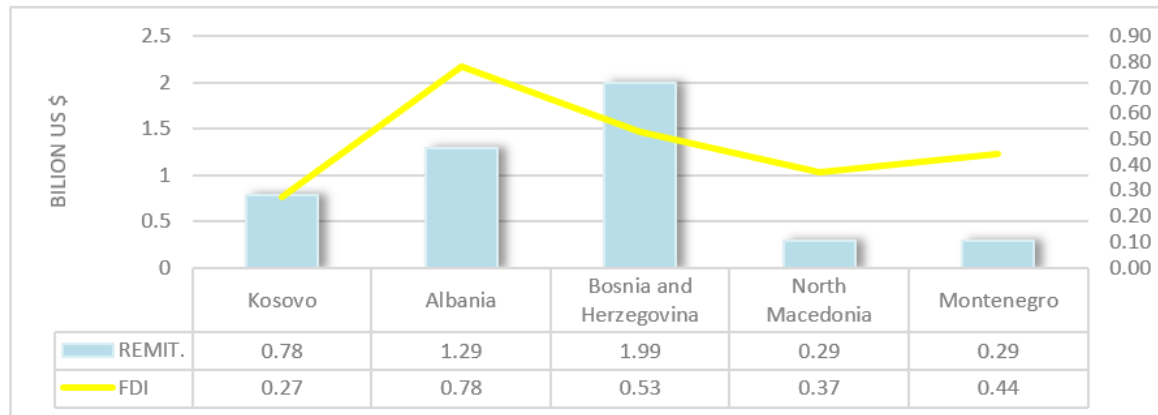
Remittances can have a more positive influence on the balance of payments than other forms of capital inflow (such as foreign direct investment, loans, or other forms of financing), in the context that the way of using remittance is not conditional on a particular project and is not obliged to return the principal or interest (Kadozi, 2019).

The positive development effects of remittances focus on the multiplier effects of consumption, savings, and business investment (Meyera & Shera, 2017). Arapi-Gjini and Mollers (2020) emphasize in their study the role of remittance in combating poverty and rising well-being for the poor. Also, remittances present a reliable source of foreign earnings and a cushion for household income during bad times (World Bank, 2016; Islamai & Jousef, 2015).

Conversely, some studies emphasize that remittances are ineffective in stimulating economic activity or have an inverse effect. The inflow of remittances in large amounts towards small economies, where the share of remittances in GDP is significant, can lead to currency appreciation, limitation of export potential, a potential restriction of production, and increased unemployment rate (Kadozi, 2019; Jadotte, 2009). Biller (2007) found that remittances deteriorate the balance of trade by stimulating the increase of imports. Jahjah et al. (2005) has argued that in some instances, instead of promoting hard work and productivity, remittances encourage laziness in the recipient households since people know that they can finance their consumption through remittances. Similarly, a study by the International Monetary Fund (2005), covering 101 countries over 1970-2003, found no significant relationship between remittances and economic activity or between remittances and variables such as education or investment rates. The same conclusions came from Clemens and Ogden (2014), arguing that remittances could reduce total factor productivity by eroding the governance quality.

Trend of remittances in Western Balkan

The remittances have grown exponentially within two decades, from \$74 billion in 2000 to \$554 billion in 2019. Regarding the Western Balkan countries, remittance inflows also increased significantly, from \$2.9 billion in 2000 to \$14.7 billion in 2019 (World Bank, 2020).



Source World Bank database (<http://www.worldbank.org/>)

Figure 1
REMITTANCE AND FOREIGN DIRECT INVESTMENTS IN A BILLION USD IN WESTERN BALKAN COUNTRIES IN THE PERIOD 2000-2019 (THE AVERAGE VALUE: TOTAL/20 YEARS)

Figure 1 presents the trend of remittances compared with other sources of foreign capital inflows to Western Balkan countries over the last two decades. The remittance inflows vary from \$1.9 billion (BIH) to \$290 million (MNE and MKD). The Rep of Kosovo receives on average \$780 million remittances per year. Regarding FDI, the highest average is \$780 million (ALB), and the lowest one is \$270 million (KOS) (World Bank, 2020).

The Republic of Kosovo is a unique opportunity in analyzing the impact of remittances on economic activity. The country is known for a long history of population migration, mainly due to poverty, unemployment, and limited opportunities (Arapi-Gjini & Herzfelh, 2020). Kosovo ranks just 4th out of the 10 countries with the highest dependency on remittances in Europe and Asia, and where the GDP per capita is the lowest in Europe, with only \$4,465.

To contribute to the development of the literature for the Western Balkan countries, we formulate the hypothesis:

H₁: The inflow of remittances has a significant influence on the economic activity of the WB countries.

H₂: The inflow of FDI has a significant influence on the economic activity of the WB countries.

H₃: The exports of goods and services influence the economic activity in WB countries.

H₄: The gross capital formation influences the economic activity of the WB countries.

Research Methodology

To study the impact of remittances on economic activity, we employed an econometric analysis using quarterly time-series data for a time span of 8 years (2012-2020). This paper uses secondary data that countries individually reported to the World Bank, Eurostat, Central Bank, and statistics agencies of the respective country for indicators such as gross domestic production (GDP), workers' remittance (REM), foreign direct investment (FDI), gross capital formation (GCF) and exports (EXP).

To test the impact of these variables on economic growth, we have created and used strongly balanced panel data (also known as longitudinal or cross-sectional time-series data) for five forms of communist countries in the Western Balkan region. And, our final sample includes countries: Albania, Kosovo, Bosnia & Herzegovina, North Macedonia, and Montenegro.

Remittances present a variable of interest, and other indicators serve as controlling variables: the export of goods and services, foreign direct investment alongside traditional product factors, and gross capital formation.

All variables employed in the analysis are in the natural logarithm of absolute values. Logging series often affects very similar to deflating and helps to reduce heteroscedasticity (Topxhiu & Krasniqi, 2017). A considerable advantage of this is that small changes in the natural log of the variables present a percentage change to a very close approximation. Based on previous studies, we expect that variables will have parameters as in Table 1.

Variables	Descriptions	Sign
GDP	Gross Domestic Production on €	N/A
Remittance	Remittances on €	+
FDI	Foreign Direct Investment on €	+
Investment rate	Gross Capital Formation on €	+
Exports	Exports	+

Methods

To study the impact of remittances and other controlling variables, we have used three models that are appropriate for panel data: Pooled OLS Regression, the Fixed Effect or LSDV model, and the Random Effect Model or GLS Model. We have used the same methodology as (Topxhiu & Krasniqi, 2017; Kadozi, 2019; Cismas et al., 2019).

The Polled Regression Model has the following expression:

$$Y_{it} = \beta_0 + \sum_j \beta_j K_{itj} + \epsilon_{it} \quad (1)$$

Where: $I = 1, \dots, 6$ (countries), $t=2012q1, \dots, 2020q2$, Y_{it} is the dependent variable in our case – \ln_GDP , K_{itj} are the independent variables included in the model, β_j is the parameter that summarizes the j -factor contribution to the dependent variable, ϵ_{it} is the error term with zero mean and constant variance.

The main disadvantage of this model is that the model does not distinguish between the various countries that we have. Or, in other words, by combining the six countries by pooling, we deny the heterogeneity or individuality that exists among the countries in the sample.

The Fixed Effect (FE) allows for heterogeneity, meaning that we have different intercepts for different countries. The term fixed effect is because although the intercept may differ across countries, it does not vary over time-invariant.

The fixed-effect model that is addressed in this paper is:

$$Y_{it} = \beta_0 + Y_t \sum_j \beta_j K_{itj} + \epsilon_{it} \quad (2)$$

Where: $I = 1, \dots, 6$ (countries), $t=2012q1, \dots, 2020q2$, Y_{it} is the dependent variable in our case – \ln_GDP . The terms Y_t are called the entity fixed effects, which in our case, could be business cycles during the studied period. The parameter β_0 reflects a cross-sectional fixed effect (country characteristics that are time-invariant over 2012q1-2020q2), β_j is the parameter

that summarizes the j-factor contribution to the included in the model. The Term ϵ_{it} presents an error term with zero mean and constant variance. The slope coefficient of the population regression line, β_j , is the same as in all states, but the intercept of the population regression line varies from one state to the next.

The Random Effect Model (RE) assumes a random variation across countries and is more appropriate if differences among the countries affect the dependent variables. The random effect model assumes that the constant is a random variable and the individual intercepts β_0 are random deviations from the average constant β_0 .

The specifications of the random effect model are as follows:

$$Y_{it} = \beta_0 + Y_t \sum_j \beta_j K_{itj} + \epsilon_{it} \tag{3}$$

To determine which model is more appropriate for our panel data set - The Fixed Effects or Random Effect - we have applied the Housman test. It basically tests whether the unique errors (μ_i) are correlated with the regressors. Random effects are inconsistent, while the Fixed Effect is still consistent. The hypothesis for the Housman test is as follows: H_0 : Random Effect Model is appropriate; H_1 : Fix Effect Model is appropriate. The null hypothesis will be rejected if the differences are large or more than 5% of the level of significance.

Also, we employ the Breusch and Pagan Lagrangian multiple tests for the random effect to test which model is more appropriate – the Random Effect of Pooled Regression Model. The hypothesis is as follows:

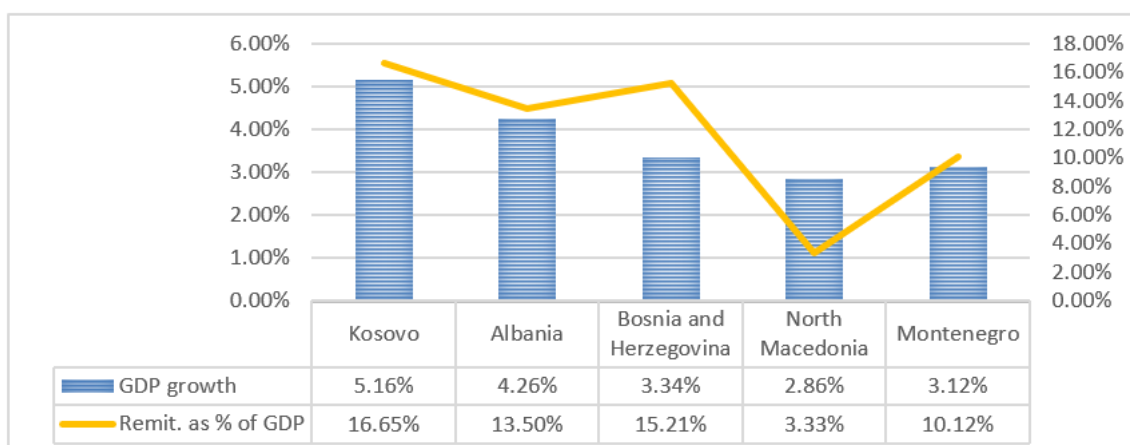
H_0 : Pooled Regression Model is appropriate; H_1 : Random Effect Model is appropriate.

According to Stock & Watson (2015), the standard tests for stationary are mostly applicable for large sample sizes and, as that sample size in the country study is not so large, so we have not employed any test for stationary.

EMPIRICAL RESULTS

Descriptive Statistics

To ensure a high degree of comparability from the economic development prism, we have focused the empirical analysis on the Western Balkan countries.



Source: World Bank database (<http://www.worldbank.org/>)

Figure 2
GDP GROWTH AND PRESENCE OF REMITTANCE ON GDP FOR WESTERN BALKAN COUNTRIES IN THE PERIOD 2000-2019 (THE AVERAGE VALUE: TOTAL/20 YEARS)

Data series regarding the inflow of remittances (as a percent of GDP) presented in figure 2 showed that the average value for the period 2000-2019 varied from 16.65 % of GDP (KOS) to 3.3 % of GDP (MNE). In the first three places, Kosovo (16.65 % of GDP), Bosnia & Herzegovina (15.21 % of GDP), and Albania (13.5 % of GDP), and in the last place was North Macedonia (3.3 % of GDP). The average GDP growth varied from 5.16 % (KOS) to 2.86 % (MNE). The three first places are Kosovo (5.16%), Albania (4.26%), and Bosnia and Herzegovina (3.34%) in Table 2.

Country	Variable (in mil. €)	Observes		Mean	Stan. dev.	Mini	Max
		Valid	Missing				
KOS	GDP	34	0	1503,62	236,89	969,50	1967,40
	REM	34	0	173,95	32,95	108,74	247,20
	FDI	34	0	63,09	26,82	-3,61	106,77
	EXP	34	0	356,16	210,84	168,10	938,50
	GCF	34	0	418,14	97,30	251,30	632,10
ALB	GDP	34	0	2775,53	399,47	2145,60	3626,80
	REM	34	0	156,50	19,85	118,00	197,00
	FDI	34	0	229,59	48,40	125,00	298,00
	EXP	34	0	812,79	197,77	487,80	1345,80
	GCF	34	0	670,79	144,54	460,30	1000,40
BIH	GDP	34	0	3837,34	464,41	2974,20	4819,80
	REM	34	0	334,33	45,85	251,72	427,81
	FDI	34	0	41,29	86,78	-189,53	278,77
	EXP	34	0	1418,15	300,15	925,40	2020,10
	GCF	34	0	723,68	103,53	495,80	933,00
MKD	GDP	34	0	2359,41	331,56	1690,70	3047,30
	REM	34	0	50,31	6,83	41,07	81,43
	FDI	34	0	71,79	76,31	-68,36	308,06
	EXP	34	0	1237,51	320,91	759,90	1853,50
	GCF	34	0	735,53	203,45	343,60	1319,00
MNE	GDP	34	0	979,24	249,77	601,40	1630,60
	REM	34	0	52,30	5,92	41,77	64,49
	FDI	34	0	106,01	62,40	-82,00	348,01
	EXP	34	0	403,39	267,48	150,20	1048,20
	GCF	34	0	238,71	81,48	136,80	387,50

Source: Own computations by author

The quarterly average value of remittances at WB countries is €153 million; it varied from €50.31 million (MKD) to €334.33 million (MKD). The quarterly average value for FDI is €102 million, with a minimum of €41.29 million (BIH) and a maximum of €229.59 million (ALB).

The gross capital formation recorded a quarterly average of €557.37 million when the lowest average was €238.71 million (MNE), and the highest was €670.79 billion (ALB). The quarterly value of export varied among countries from €356.16 million (KOS) to €1.42 Billion (BIH), with an average of €845.60 million. And the last one, the quarterly GDP for Western Balkan countries, was €2.29 billion; it varied from €979.24 million (MNE) to €3.84 billion (BIH). The quarterly GDP for Kosovo is €1.5 billion.

Results

After the descriptive analyses, we will present the correlation matrix for the variables included in the study in Table 3.

		(1)	(2)	(3)	(4)	(5)
(1)	GDP	1				
(2)	Remittance	0.702** (0.000)	1			
(3)	FDI	-0.16 (0.834)	-0.175** (0.023)	1		
(4)	Exports	0.845*** (0.000)	0.367*** (0.000)	-0.112 (0.097)	1	
(5)	Capital Formation	0.815*** (0.000)	0.356*** (0.000)	0.088*** (0.253)	-0.491*** (0.000)	1

Note: ***, ** and * represent 1%, 5%, and 10% significance level.

Source: Own computation by author

Based on the results from Table 3, the Pearson correlation of remittances and GDP has a strong positive relationship when the correlation coefficient is 0.702 and the level of significance is below 5%. The relation of remittances to exports and gross capital formation has a strong correlation, where the Pearson coefficient is 0.845, respectively, 0.815. It is important to note that the Pearson correlation between remittances and foreign direct investment is -0.17.

After we analyzed the descriptive statistics and correlation, we have done some pretests to decide which model is more appropriate for our panel data. Since the probability value for the Housman Fixed test is below five percent of the significance level (0.000), we reject the null hypothesis, meaning that the most appropriate is the Fixed Effect Model for our panel data. After testing with Breusch and Pagan Lagrangian multiplier test for the Random Effect Model, we accept the null hypothesis that the more appropriate is the Pooled Regression Model. The Durbin Watson Ratio is 1.851, which means that the model has no multicollinearity, and we can say that the regression results are considered not spurious and are thus acceptable. The Breusch-Pagan/Cook-Weisberg test for heteroscedasticity has a p-value more than the significance level, so we can't reject the null hypothesis and conclude that the residuals are homoscedastic. We will interpret only the results obtained from the Pooled Regression Model in Table 4.

Fixed-Effect Model, Number of observations 170				
Sample:	Kosovo, Albania, Bosnia & Hercegovina, North Macedonia and Montenegro			
Dependent variables	ln_GDP			
Variables name	Coefficient	Stf.Err.	t	P> t
ln_REM	.1194579	.0427214	2.76	0.006***
ln_FDI	-.0018943	.0107358	-0.18	0.860
ln_EXP	.2542915	.0168798	15.06	0.000***
ln_GCF	.2772506	.0265796	10.43	0.000***
cons.	3.986146	0.368456	10.82	0.000***
ALB	.2606967	.0244661	10.66	0.000***
BIH	0.3276691	0.0345566	9.48	0.000***
MKD	0.1057214	0.0661424	1.60	0.110
MNE	-.01581699	0.0524509	-3.02	0.003***
Adjusted R2:	0.98			
F-Statistic (8,161)=1083.36				Prob>F = 0.0000
Housman Fixed ,Prob>Chi2				Pr = 0.0000
Durbin-Watson				1.851
Breusch and Pagan Lagrangian multiple tests for random effects (chibar2) (01)=0.00				Pr=1.000

Breusch-Pagan/Cook-Weber test for heteroscedasticity: Chi2(1)=0.59	Prob>Chi2=0.44
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Notes: *** and ** represent 1% and 5% significance level.

Source: Own computations by author.

The results are statistically significant, where the adjusted R2 ratios are near to one, the t-ratio is high (p-value is small), and the F ratio is high as well. Most of the variables have expected signs and are theoretically satisfactory. Since the p-value and F-statistics are less than 0.05, we can conclude that the coefficients in the model are different from zero, which means that they are statistically significant in explaining the variation in the economic growth for countries of WB included in our study.

DISCUSSIONS

The regression results indicate that variables such as REM, EXP, and GCF have a positive and significant impact on GDP, and only FDI has a negative impact on GDP but not statistically significant.

The results reflect that the coefficient of our variable of interest remittances to GDP is positive and statistically significant and shows that for a given country, as remittances increase by 1%, the GDP increase on average approximately by 0.12%, holding the other variables constant. Our results are consistent with the literature and empirical results that support the positive effect of remittances in economic development (Topxhiu & Krasniqi, 2017; Meyera & Shera, 2017; Goschin, 2014).

The coefficient of export of goods and services (EXP) is also positive and statistically significant, showing that for a given country, as exports increases by 1%, GDP increases on average approximately by 0.25%, holding other variables constant. In addition, the impact of gross fixed capital formation on GDP is positive and statistically significant. Remittances can influence economic growth if they are used to increasing capital resources.

The foreign direct investment coefficient exerts a negative but not statistically significant influence on the GDP of Western Balkan countries, showing that in a given country, as FDI increased by 1%, GDP decreased by 0.001%, holding other variables constant. The negative coefficient of FDI is not a logic of economic results, but most WB countries have inefficiency in foreign capital.

CONCLUSIONS

The main goal of this paper is to assess the effect of remittances on economic growth for Western Balkan countries. In order to achieve our purpose, we have performed a quality analysis by using contemporaneous correlations and econometric models to validate our hypothesis.

We validated the first hypothesis, that remittances can provide stable support to economic growth. The positive impact of remittances on economic growth can be traced through effects in consumption, savings, and investing in the business in the country of origin. Moreover, the impact of remittances on economic growth is more effective than other forms of capital inflow (such as foreign direct investment, loans, or other forms of financing), in the context that the way remittances are used is not conditional on a particular project and is not obliged to return the principal or interest.

The second hypothesis was not validated, the results showed that the relationship between foreign direct investment and economic growth in Western Balkan countries is inverse and not statistically significant. Western Balkan countries are not known for the large inflow of FDI, and the results reflect not a significant impact.

The two other hypotheses, regarding the impact of export and gross capital formation in economic growth, are validated and are statistically significant. We can conclude that productive usage of remittances indirectly contributes to economic growth through promoting exports and the formation of capital.

Since remittances from the diaspora are a large source of external financing in Western Balkan countries, it is important for the policymakers to implement the right policies, through which remittances can be made to be more productive and their benefits maximized for both the migrants and their country of origin.

Some limitations of this article were identified: the biggest one is related to the fact that we have excluded some countries from the sample due to data missing. Moreover, in the literature, other methods could be used to study the influence of remittances on economic activity, like dynamic panel data analyses, similar to Cismas et al. (2009), instead of time series analysis.

As a future research direction, we suggest a study that identified which economic indicators influenced the remittances and what people do with the money they received? Did they consume, save, or invest; and how has it impacted the economy? Furthermore, the study can be extended to other countries.

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