THE RELEVANCE OF REMITTANCES IN FOSTERING ECONOMIC GROWTH IN THE WEST BALKAN COUNTRIES

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Abstract. *The remittances of diaspora workers, resulting from international migration, have attracted the attention of academics and policymakers for their role and importance in macroeconomic variables in their countries of origin. The purpose of the paper is to explore the effects of remittances and other variables, such as exports, capital formation, foreign direct investment, and labor force on economic growth in the six former Western Balkan communist countries (Albania, Kosovo, Macedonia, Montenegro, Bosnia and Herzegovina and Serbia). This study utilizes a strongly balanced panel data over the 2005-2015 period for the six Western Balkan countries using the ordinary least squares method (OLS), i.e., the Pooled Regression Model, to evaluate the parameters. According to the regression results, we can conclude that remittances have a positive impact on economic growth in the West Balkan countries, so remittances can foster economic growth in those countries. Also, we find a statistically significant positive relationship between economic growth and other variables included in the model, such as exports, capital formation, and labor. The relationship between economic growth and foreign direct investment has turned out to be statistically insignificant and negatively related.*

Keywords: *Remittances, Export, Foreign direct investment, Capital formation, Labour Force, Economic growth,*

1. Introduction

The remittances of individuals working overseas, which are a result of an international scattering of a people, have attracted the attention of academics and policymakers for their role and importance in the economic development of their countries of origin.

The levels of wages in developed economies are, on average, approximately five times larger than the salaries of employees of the same occupations in developing countries. This is a strong reason for migration and indeed migrants often take personal risks when traveling to the US, Europe, themselves often originating from developed countries. Partly because of this incentive, in 2010, it was estimated that there were about 200 million migrants worldwide (Todaro & Smith 2012).

According to the World Bank's *Migration and Remittances Fact Book 2016* (World Bank 2016a), about 3.4% of the world's population, or more than 250 million people, live outside of their home countries. Although the number of international migrants had

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increased from 175 million in 2000 to more than 247 million in 2013 and was predicted to surpass 251 million in 2015, the share of migrants has remained just above 3 percent (of the world's population) for the last fifteen years. This "Diaspora Nation" is a major economic contributor to both sides; to their home countries and the countries they live and work in, mainly through the transfer of their money back home, known as remittances.

The recent remittance volume is three times higher than the volume of official development assistance and has reached $441 billion USD, representing about 10% of the GDP in 25 developing countries. This money has helped to boost investments in health, education and small businesses in various countries (World Bank 2016a).

Economists have traditionally considered external savings as the key to boosting the country's output rate. Such as factors as Foreign Direct Investment (FDI), Official Development Assistance (ODA), Foreign Market, Technology Transfer and even the recent Migration Money have been included in this analysis (Todaro & Smith 2012).

Remittances are the most visible and tangible benefits of diaspora workers. On the macrolevel, they bring necessary foreign exchange and contribute to the correction of the current account balance in their countries of origin. In many countries, remittances represent a high percentage of the GDP share. Through their direct and multiple effects, they maintain aggregate demand and thus stimulate economic activity and, as a result, create employment (the multiplication effect). On the macroeconomic level, they stimulate economic growth through direct effects and multiplier effects. At the household level, remittances significantly contribute to human resources through their investment in education, health and other spheres of life.

Numerous experiences of migration and sufficient material in this regard point out the concern that migrating abroad could damage the development processes through the loss of skills and educated workers – the so-called "brain drain." The balancing of this concern are the benefits from remittances, which are sent to family members in their home countries. When immigrants are low-skilled and the recipients of the remittances are poor, their potential for development and poverty reduction becomes evident and very clear. Immigrants usually build houses for their relatives and send money for education and better nutrition. Therefore, remittances now provide a safe way to reduce poverty.

Immigration rates from the Western Balkan countries have been very high since the early 1990s, compared to the global migration average of 3.4%. Currently (2015), the number of emigrants from Albania and Bosnia and Herzegovina makes up about 40% of their country's current population; the immigration rates from the former Yugoslav Republic of (FYR) Macedonia is near 20% of country population (Raggl 2017).

If we look at Albania in the period of 1990-1997, after the collapse of the totalitarian socialist regime, around 50 000 Albanian refugees flocked to Italy. In March 1997, another 30 000 refugees went to Italy and 40 000 moved to Greece (Leka 2013).

Although Kosovo has been a source of migration for long periods since the beginning of the twentieth century, the exact number is still unknown. So, according to the UNDP

(2012), the number of Kosovans living abroad is between 220 000 and 500 000 people. The Kosovo Agency of Statistics has reported an approximate number of persons living outside Kosovo who were born in Kosovo, to be about 380 826 persons, representing 21.4% of Kosovo's resident population. This data was collected during the last registration of the population of Kosovo in 2011 (ASK 2014).

The Western Balkans have been always known by facing large emigration rates and hence having a large diaspora of its peoples. At the end of 2013, 5.7 million persons originating from the Western Balkans lived abroad, bringing the emigration rate to 31.2% (World Bank 2016a), which ranges from 18.2% of the total population in Serbia to a rampant 45.3% in Montenegro. Only after the dissolution of Yugoslavia, 3.5 million individuals left the region. Hence, the emigration rate has been at 19.4% and ranged from 9.1% in Serbia to 38.5% in Albania. As a consequence, remittance flows have been sizable: the entire region received $8.6 billion USD in 2015, ranging from 3.1% of the GDP in Macedonia to 16.7% in Kosovo. These figures still considerably exceed the inflows from foreign direct investments and official development assistance, $5 billion and $2.4 billion USD, respectively; hence, these figures reflect the massive dependence of the region's economies on the money the diaspora sends back (World Bank 2017).

According to the analysis in this paper, these refugees, who fled from the Balkan countries and are now living all around the world, are sending remittances that contribute to capital formation and the increase of export, also creating networks to stimulate foreign direct investments in their homeland. The high rates of migration from the Western Balkan countries explain the huge flow of remittances in these countries, especially in Kosovo, Albania and Bosnia and Herzegovina.

TABLE No. 1. **Dynamics of remittances in the Western Balkan countries (as percentages of GDP), 2005–2016**

Years	Country					
	AL	KS	MA	MN	SR	B&H
2005	15.81	18.77	3.62	5.6	8.8	18.15
2006	15.12	18.9	3.88	5.9	8.27	16.7
2007	13.72	19.01	4.14	5.35	9.34	17.03
2008	14.49	18.33	4.1	6.6	7.2	14.23
2009	14.26	18.66	4.05	7.31	10.91	12.08
2010	13.34	17.27	4.12	8.1	10.43	10.62
2011	12.04	14.93	4.14	8.85	8.52	10.51
2012	11.53	14.61	4.04	9.73	8.71	10.73
2013	8.56	14.97	3.48	9.48	8.84	10.79
2014	8.64	14.87	3.23	9.4	8.36	11.38
2015	9.19	15.08	3.05	9.48	9.07	11.14
2016	8.81	14.82	2.67	9.49	8.47	11.06
Country average (2005-2016)	**12.12**	**16.68**	**3.71**	**7.94**	**8.91**	**12.87**
The West Balkan average (2005-2016)	**10.37**					

Source: World Bank Development Indicator 2017, together with the author's calculations.

According to the World Bank (World Bank 2016a), three Western Balkan countries are among the 10 countries that receive the largest remittances (percentage of GDP) for the period 2005-2016, with Kosovo at 16.68%, Bosnia and Herzegovina at 12.87% and Albania at 12.12%.
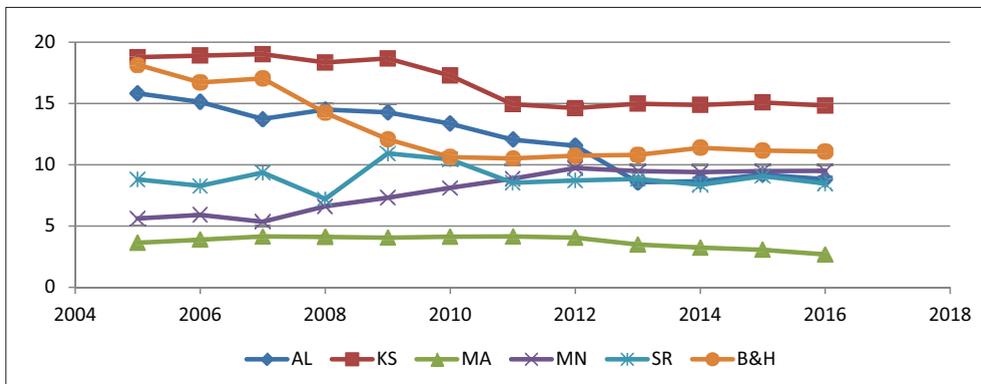

Figure No. 1. **Dynamics of remittances in the Western Balkan countries (as percentages of GDP), 2005-2016**

Source: World Bank Development Indicator 2017, together with the author's calculations.

The theoretical and empirical evidence of remittances argue that even though remittances are affected by the economic cycles of the countries where the individuals work and their home countries as well, they usually affect the growth of foreign currency volumes, boost national income growth and contribute to the decline of the balance of payments deficit.

Although the volume of remittances is lower than the volume of foreign direct investments, remittances are more scattered than foreign direct investments and, in many developing countries, they are the first source of external financing.

TABLE No. 2. **External sources of funding in the West Balkan Countries, 2005-2016 (as percentages of GDP – 11-year average)**

Country	Remittances (% of GDP)	FDI (% of GDP)	Export of goods and services (% of GDP)	Net ODA (% of GNI)
AL	12.12	7.9	30.15	2.91
KS	16.68	6.64	31.06	8.83
MA	3.71	4.19	19.69	2.26
MN	7.94	18.26	43.57	2.27
SR	8.91	7.22	41.32	2.4
B&H	12.87	3.37	36.97	3.17
Average	**10.4**	**7.93**	**33.8**	**3.64**

Source: World Bank Development Indicator 2017, together with the author's calculations.

After export of goods and services, remittances represent the largest external source of financing in the Western Balkan countries. The share of foreign direct investment (7.93%) and the Official Development Assistance (ODA) (3.64%) in the GDP of the Balkan Countries are significantly smaller than remittances (10.4%).

This paper aims to explore whether remittances can contribute to economic growth in the Western Balkan countries.[1] In this context, the magnitude of remittances, their volatility and their relationship to other capital flows are elaborated, as they serve as determinants to the effects of the remittances in the home countries. The analysis has been based on available data from the World Bank database. The comparative analysis of the countries is provided, with the purpose of distinguishing common features and differences in the region with regards to the importance of the remittance inflows.

The paper is structured as follows. Section No. 2 briefly reviews the existing literature on the effect of remittances in economic growth. Section No. 3 elaborates the source of data, variables and the methodology used. Section No. 4 presents the empirical results, while Section No. 5 provides the summary and conclusion.

2. A Brief Review of Literature

There is a large number of research and scientific works about remittances and their effects on economic growth. The vast majority of theoretical and empirical evidence have been used to argue that remittances have positive effects and can foster economic growth; some have found that remittances may also have a negative effect on economic growth. There are also some researches that have not found any significant relationship between remittances and economic growth.

2.1. Positive Effect (Impact)

The literature and debates that highlight the positive effects of remittances and migrants on economic growth provide various arguments that show that remittances contribute to reducing poverty and enhance economic growth in the home countries, reducing the current account deficit, increasing investments in small businesses etc. The impact on development is found mainly in reducing unemployment and supporting new economic activities through financial investments and the transfer of technology and knowledge. Migrants support tourism and consumption in their home country. They can support both trade and investment, as they are better informed about the various economic opportunities and benefits of the network of contacts in their homeland.

It is widely accepted that migrants and their remittances have effects in reducing poverty in their countries of origin. The World Bank researches show that an increase of

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[1] We herewith include in our calculations the following countries: Albania (AL), Bosnia-Herzegovina (B&H), Kosovo (KS), Macedonia (MA), Montenegro (MN) and Serbia (SR).

10% of official remittances per capita impacts in the reduction of 3.5% of poor people of their country of origin. They also impact the receivers in cases of unexpected events, such as illnesses or different flooding (Mohapatra, Ratha, & Silwa 2010). Remittances are associated with an increased investment in education, entrepreneurship and the physical health of their recipients.

Meyer & Shera (2017) have explored the effects of remittances on the economic growth of six countries that receive high remittances (as percentage of GDP). They used panel data for 1999-2013 for the following countries: Albania, Bulgaria, Macedonia, Moldova, Romania and Bosnia and Herzegovina. After employing the different tests, they conducted a fixed effect regression analysis and found that there is an important positive relationship between remittances and economic growth for the countries under study. According to the authors, the productive use of remittances can help the economy of these countries to maintain and improve the economic growth by investing this money into consumption and investments.

In order to test the influence of remittances as an important source of capital on the economic growth of the receiving countries, the Goschin (2014) used balanced panel data for ten former Communist countries that are now EU members – namely Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, the Slovak Republic and Slovenia for the period 1996 to 2011. Through the employed fixed effect model, the author finds a significant positive influence of remittances on both the absolute and relative GDP growth in the selected CEE countries. Although emigration is likely to reduce the potential GDP in sending countries, his results indicate that the overall net effect is positive, the remittances compensating for the work force loss in the CEE countries.

Giuliano & Ruiz-Arranz (2009) have found that, in economies with underdeveloped financial systems, remittances eliminate credit barriers and serve as a substitute for financial developments, improving capital allocation and thus accelerating economic growth.

By using an augmented Solow framework and an ARDL bounds test for cointegration and utilizing annual data for the period 1982-2010, Kumar (2013) explores the short and long run effects of remittances, aid and financial deepening on growth in Guyan. The main results from the analysis show that remittances have a positive and significant effect both in the short and the long run.

Jongwanich (2007) used the generalized methods of movements (GMM) to empirically examine the relationship between remittances and economic growth and poverty. He used the annual data for 17 developing Asia Pacific countries for the period 1993-2003. The author found a positive relationship of remittances and poverty reduction in the country of study.

Azam (2015) has used annual data for four Asian developing countries for the period 1976-2012 to investigate the relationship between remittances and the economic growth

of these countries. Through the linear regression method (OLS), he has found a positive relationship between these variables. In this regard, he has also tested the impact of other variables, such as direct investment, openness to trade and infrastructure, and found that these variables also have a positive effect on the economic growth of the countries under the study.

In a detailed study, Raggl (2017) has used a combined analysis of micro- and macrolevel remittances data for the ten Central and Eastern European countries to show the importance of remittances in these countries. The countries involved in the research were Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Albania, Bosnia and Herzegovina, FYR Macedonia and Serbia. The main conclusion from her research has shown that remittances in the studied countries are still an important source of income for households, even though their growth rate is decreasing.

2.2. Negative Effect (Impact)

Literature and debates that highlight the negative effects of migration and remittances in home countries bring numerous arguments, under which remittances can reduce labor supply and create a culture of dependency that inhibits economic growth.

According to Amuedo-Dorantes (2014), remittances can increase the consumption of no tradable goods, raise their prices, appreciate the real exchange rate and decrease exports, thus damaging the receiving country's competitiveness in world markets. Remittances can be curtailed, along with international migration, by escalating anti-immigrant sentiment and tougher enforcement practices in host countries, including the US and many in Europe and the Gulf region.

Chami, Fullenkamp & Jahjah (2003) included 113 countries in their analysis and have found that remittances have a negative effect on economic growth. According to these authors, as remittances occur in the circumstances of economic uncertainty and asymmetric information, there is a moral hazard problem. Indeed, the study has concluded that remittance revenues enable recipient households to reduce their work and productivity, which reduces the workforce in developing countries.

Another study on the role of remittances on economic growth in Turkey (Karagoz 2009) for the period from 1970 to 2005 has found that remittances have a negative and significant impact on economic growth, despite the fact that Turkey remains one of the countries that receives large remittance money from immigrants. The study argues that in the case of Turkey, remittances do not seem to be an important source of capital for economic growth as it happens in other countries.

Authors like Barajas, Chami, Fullenkamp, Gapen, & Montiel (2009) have found that workers' remittances have no impact on long-run economic growth and pointed out that remittances have poverty-alleviating and consumption-smoothing effects on recipient households.

In another study of the IMF, Chami et al. (2008, p. 89) pointed out that

"Although remittances may constitute a source of financing in the balance of payments, remittances are compensatory in nature and are simply not intended to be used in ways that directly promote economic growth. Furthermore, the compensatory nature of remittances implies that they may alter work and investment incentives, thereby weakening their potential to increase economic growth."

The main message from the literature review and different authors is that remittance flows have the potential to greatly improve the livelihoods of receiving households by smoothing their consumption and enabling investments in human and other capital. At an aggregate level in the receiving country, they facilitate economic stability, improve creditworthiness, and can attract investments to promote economic growth and reduce poverty. The main challenges remain in how best to assess the impacts of remittances and how to design policies that facilitate the transmission and productive use of remittance flows while taking into account the idiosyncrasies of each country. Possible policies range from easing capital controls to reforming immigration policy.

3. Data and Methodology

3.1. Variables and Data

This study focuses on exploring the impact of workers' remittances (REM) and other controlling variables, such as exports of goods and services (EXP), foreign direct investment (FDI), capital formation (C) and labour force (LF), on the economic growth in West Balkan countries. In order to test the impact of these variables in economic growth, we have created and used a strongly balanced panel data (also known as longitudinal or cross-sectional time-series data) for six former Communist countries of the West Balkan region that are still in the transition process. The final sample includes these countries: Albania, Kosovo, Serbia, Macedonia, Montenegro, and Bosnia and Herzegovina. All Western Balkan countries are in the process of meeting standards to integrate into the European Union. From the Western Balkan countries, only Croatia has become a member of the European Union, so we have not included it in the analysis.

In this paper, we have constructed a simple growth model including remittances as a variable of interest and other controlling variables: the export of goods and services, foreign direct investments, alongside traditional production factors, such as labor and capital.

All variables used in the analysis are in natural logarithms of absolute values. Logging series often has an effect very similar to deflating: it straightens out exponential growth patterns and reduces heteroscedasticity (i.e., stabilizes variance). A great advantage of this, for the purpose of analysis, is that small changes in the natural log of a variable are directly interpreted as percentage change to a very close approximation. Table No. 3 describes all the variables in the model that are going to be estimated.

TABLE No. 3. **Variables in the model**

Variable name (Symbols)	Description
ln GDP	GDP (current US$)
ln REM	Personal remittances, received (current US$)
ln EXP	Exports of goods and services (BoP, current US$)
ln FDI	Foreign direct investment, net inflows (BoP, current US$)
ln C	Gross fixed capital formation (current US$), as proxy for Capital
ln LF	Labor force, total (people) as proxy for Labor

The data source is the World Development Indicators of the World Bank (World Bank 2016b) and covers the interval from 2005 to 2015. Data for the Gross Domestic Product (GDP), remittances (REM), export of goods and services (EXP) and Gross Fixed Capital Formation (C) are in current US$, while data for Labor Force (LF) are in people. The data for the Labor Force in Kosovo were obtained by us from the Agency of Statistics of Kosovo, since the World Bank Development indicator does not contain these data. We have made a selection of the time period in accordance with the availability of secondary data.

TABLE No. 4. **Descriptive statistics of Variables (2005-2015)**

Variable	Mean	Std. Dev.	Coefficient of variation (%)	Min	Max
GDP (mill $)	14.600	12.600	86	2,260	49.300
REM (mill $)	1.460	1.240	85	196	4.650
EXP (mill $)	4.900	4.720	96	413	19.200
FDI (mill $)	989	1.050	106	60,9	4.930
C (mill $)	3.270	2.520	77	406	12.300
LF (persons)	1.253,643	950.298	76	243.413	3.265,003

Source: Author's calculations.

Table No. 4 presents the descriptive statistics for the sample of 6 countries covering period of 2005 to 2015. Remittances are much higher than foreign direct investments in the Western Balkan Countries. The minimum value of remittances during the 11 years of study is $196 million USD, observed in Monte Negro in year 2005, while the maximum value of $4 650 million US is observed in Serbia in 2009. From the data, we can see that the volume of exports of goods and services is twice higher than the volume of remittances and foreign direct investments together in the countries under the study. All the variables show high variability. The highest variability is shown in Foreign Direct Investment (106%).

3.1. Research Methodology

For exploring the impact of workers' remittances (REM) and other controlling variables, such as the exports of goods and services (EXP), foreign direct investments (FDI) and the two basic traditional production factors – capital formation (CF) and labor (L) – on the economic growth in the six West Balkan countries, 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 the GLS Model.

The same methodology is used by Goschin (2014), Meyer & Shera (2017).

The Pooled Regression Model has the following expression:

$$Y_{it} = \beta_0 + \Sigma_j \beta_j K_{itj} + \varepsilon_{it} \tag{1}$$

Where: $i = 1,..., 6$ (countries), $t = 2005,..., 2015$, Y_{it} is the dependent variable, in our case – in lnGDP, K_{itj} are the independent variables included in the model, β_j is the parameter that summarize the j factor contribution to the dependent variable, and ε_{it} is error term with zero mean and constant variance.

The major disadvantage with this model is that it does not distinguish between the various countries that we have. In other words, by combining the 6 countries and by pooling (Pooled OLS), we deny the heterogeneity or individuality that exists among the countries.

The Fixed Effect (FE) or the LSDV Model allows for heterogeneity or individuality among the 6 countries, meaning that we have different intercepts for different countries. The term *fixed effect* is due to the fact that although the intercept may differ across the countries, it does not vary over time that is the time invariant. The fixed effects model captures the sources of change within countries. According to Stock & Watson (2015), fixed effect regression is the main tool for regression analysis of panel data as an extension of multiple regression, which exploits panel data to control for the variables that differ across countries but are constant over time.

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

$$Y_{it} = \beta_0 + \gamma_t + \Sigma_j \beta_j K_{itj} + \varepsilon_{it} \tag{2}$$

Where: $i = 1,..., 6$ (countries), $t = 2005,..., 2015$, Y_{it} represents the dependent variable (lnGDP). The terms γ_t are called the entity fixed effects, which, in our case, could be economic growth and crises, a change in migration, policies etc. They control for the omitted variable (unobserved heterogeneity) that varies from country to country but not over time. The parameter β_0 reflects cross-sectional fixed effects (country characteristics that are time-invariant over 2005-2015), β_j is the parameter that summarize the j factor contribution to the dependent variable. Term ε_{it} present an error term with a zero mean and constant variance.

The slope coefficient of the population regression line, β_j, is the same for all states, but the intercept of the population regression line varies from one state to the next; the Random Effects Model (RE) assumes a random variation across countries and is more appropriate if differences among the countries affect the dependent variable. The random effect model or the GLS 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 general specification of the random effects model is as follows:

$$Y_{it} = \beta_0 + \Sigma_j \beta_j K_{itj} + u_i \qquad (3)$$

To decide which model is more suitable to for our panel data set – the Fixed Effect (FE) or Random Effect (RE) – we have applied the Hausman Test. It basically tests whether the unique errors (u_i) are correlated with the regressors. Random Effects is inconsistent, while Fixed Effects is still consistent.

The test statistic is based on the difference of the two estimators. The null hypothesis will be rejected if the difference is large. The hypothesis for *Hausman test* is as follows:

H_0: Random Effect Model is appropriate; H_1: Fixed Effect Model is appropriate.

Also, we will employ the Breusch and Pagan Lagrangian multiplier test for the random effect in order to test which model is more appropriate – the Random Effect or Pooled Regression Model. The hypotheses are as follows:

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

In order to check whether there is a serial correlation in the residual, we used the Durbin Watson (DW) test. The hypothesis for the Durbin Watson test is as follows:

H_0: No first order autocorrelation; H_1: First order correlation exists

We used Breusch-Pagan/Cook-Weisberg test for the heteroskedasticity for groupwise heteroskedasticity in the Pooled Regression Model to check whether there is any heteroskedasticity in the panel data. The hypothesis is as follows:

H_0: Residuals are homoscedastic; H_1: Residuals are heteroscedastic.

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

And finally, to make the results unbiased or to fight heteroscedacity, we add to the robustness.

4. Empirical Results

The results of the regression are presented in Table No. 5. Since the probability value for the Hausman Fixed test is larger (0.1318) than level of significance (0.05), we didn't

reject the Null Hypothesis, meaning that the Random Effect Model is more appropriate for our panel data. After testing with the Breusch and Pagan Lagrangian multiplier test for the Random Effect Model, we decided to accept the null hypothesis that the Pooled Regression Model is more appropriate for our panel data. Probably, in time series data, some econometric problems, such as correlation or multicollinearity, do arise. After employing the least squares method, if the results found that R^2 and adjusted R^2 are greater than the Durbin Watson ratios, then the regression results are considered not spurious and are thus acceptable. The Breusch-Pagan/Cook-Weisberg test for heteroscedasticity has the p-values greater than level of significance, so we can't reject the null hypothesis and conclude that residuals are homoscedastic. However, in order to make the results unbiased, we add robustness to the regression.

We are going to interpret only the results that are derived from the Pooled Regression Model.

TABLE No. 5. **Results from the Pooled Regression Model Robust**

Dependent variable ln GDP	Std. Err. adjusted for 6 clusters in a country			
Variable name	Coefficient	Robust Std.Err.	t	P>| t	
ln REM	0.1922774	0.0200113	9.61	0.000
ln EXP	0.3485298	0.0200113	9.58	0.000
ln FDI	-0.0269235	0.0163196	-1.65	0.104
ln C	0.3213835	0.0835595	3.85	0.000
ln LF	0.1435079	0.0581368	2.47	0.016
Cons_	3.088443	0.7594067	4.07	0.000
Number of observation:	66			
Adjusted R^2 :	0.9852			
F-statistic (5, 60) = 693.52	Prob>F = 0.0000			
Hausman Fixed	Prob > chi2			Pr= 0.1318
Durbin-Watson d-statistic(6, 66) = 0.6556495				
Breusch and Pagan Lagrangian multiplier test for random effects (chibar2 (01)=0.00				Pr =1.000
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity : chi2(1) = 0.00				Prob > chi2 =
Prob > chi2 = 0.9766				0.9766

Source: Author's estimations.

The results are statistically significant, the adjusted R^2 ratios are near to one, the t-ratios are high (p-values are lower), the F-ratios are high as well. Most of the variables have expected signs and are theoretically satisfactory.

Since the *p-value* of F-statistic is less than 0.05, we can conclude that the coefficients in the model are different than zero, which means that they are statistically significant in explaining the variation in economic growth in the West Balkan countries.

The model shows a positive relationship between REM, EXP, C and LF on GDP, while the relationship between FDI and GDP is negative but not statistically significant.

The results suggest 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 increases in average approximately by 0.19%, holding other variables constant. Our results are consistent with the literature and the empirical results that support the positive effect of remittances in economic development (Goschin 2014; Giuliano & Ruiz-Arranz 2006; Meyer & Shera 2017; Azam 2015) etc.

The coefficient of exports of goods and services is also positive and statistically significant, showing that for a given country, as exports increase by 1%, GDP increases on average approximately by 0.35%, holding other variables constant. Our results are consistent with the literature and the empirical results that support the positive effect of export in economic development.

The coefficients of the Gross Fixed Capital Formation (C) and Labor Force (LF) are positive, suggesting that both physical and human capital is important for economic development in the West Balkan Countries.

The coefficient on FDI exerts a negative and not statistically significant influence on economic growth in the West Balkan countries, showing that in a given country, as FDI increases by 1%, GDP decreases by 0.03%, holding other variables constant. The negative relationship of FDI and economic growth show the macroeconomic inefficiency of foreign capital in the West Balkan Countries. The results found in this study about the FDI are consistent with the findings of other studies (Goschin 2014; Mencinger 2003).

5. Summary and Conclusion

The main aim of this study is to examine the impact of remittances (REM) in the process of economic growth in six countries of the Western Balkans by employing the annual panel data for the period of 2005-2015. The selection was based on data availability.

The regression results confirm a significant relationship and positive relation between remittances and economic growth in all the countries under this study. Our research has potential policy implications, as the findings indicate that remittances can provide stable support to macroeconomic growth. The productive use of remittances can help the economy of these countries to be stable and improve the economic growth by investing this money into consumption and investments.

Inflows of migrant remittances increase aggregate expenditures through consumption and investment, which are needed for economic development. Thus, whether remittances are received through formal or informal channels, they represent vital sources of income that may also contribute to the national economic development of migrants' countries of origin through enhanced level of aggregate expenditures.

It is important for the policymakers to implement 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.

Since the remittances from diasporas are a large source of external financing in the West Balkan countries, measures to facilitate their transfer and to reduce the costs of transfer should be a priority. Authorities should therefore direct their attention toward promoting competition for transfers and an increased financial literacy among both the remittance senders and recipients.

The impacts of other variables, such as the export of goods and services (EXP), capital formation (C), labor force (L) show a positive relation and significant impact on economic growth.

The evidence from the statistical analysis suggests that the attraction of remittances, the increase in exports, capital formulation and labor force are important in promoting economic development in the West Balkan countries.

Finally, based on the statistical analysis, the relationship between foreign direct investment (FDI) and economic growth of the West Balkan countries is negative and not statistically significant.

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