The Impact of Remittances on Albanian GDP and Houshold Income Level

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Abstract *After the fall of communist regime or from the beginning of the 1990's, Albania is one of the countries with the large number of emigrants, and it is one of the country that mostly receives remittances which are funds received from migrants working abroad. The aim of this paper is to show the impact of remittances on the Albanian economy and the effect that it has in the GDP and the economic growth. Also, this paper is going to analyze the impact of remittances on poverty level in Albania. Studies show that remittances have a significant impact on the reduction of poverty in the country by directly raising household income and consumption .It is going to be used the regression analysis with the data received from INSTAT and World Bank in order to have a more clear information about the impact of the remittances in Albania economy and on the household income level of people. At the end of the analysis it is going to be discussed the conclusions the importance of remittances, if they play a key role in economy.*

Key words*: Remittances, Albanian GDP, economic growth, migration.*

Introduction

In the recent decades, following the fall of the communist regime, Albania has observed to intense migratory flows.From the end of 1990 till 2009 more than 25 per cent of Albanian population were esitmated to be living abroad(UNECE, 2009).From the beginning of the transition from a centralized to a open market economy Albania has been characterized by rapid increase in the volume of migration with a particular peak in 1997-1998 following the Pyramid Scheme collapse (Azarri and Carletto, 2009) and in 2000. According to Korvoilas in 2005, from 1994 to 2003 Albanin economy has expericned the faster rise in real GDP.

Choosing remittances as a topic, becouse remittances represent the benefit to emigrant's families and to the economy.The scope is to find the remittance flow in Albania and what is its impact in the Albanian GDP and economic growth. The most important part of the paper is to measure the size of the remittances in the Albanian economy and what role does it play in our economy.

Albania is ranking among the top ten destination countries in terms of value of formal remittance transfero. Remittances flows have had a very important impact on individual households, as well as Albanian society as a whole. The remittance transfer is performed throug informal and formal channels.According to Bank of Albania , more than half of remittances are send through informal channels.

Remittance flows to developing countries are now predicted to be twice as much as the development aid these countries receive. In Albania, they enough exceed Foreign Direct Investment. Government of Albania nowadays is playing more attention in their development strategies to remittance flows as an important financial source to boost economic development. Since the beginning of the transition, the volume of remittances to Albania has grown rapidly. Remittance flows are giving important relative to other foreign exchange-earning activities, expressing around 14 percent of GDP, 70 percent of exports, and 33 percent of imports(BOA 2006) . Italy is one of the major migration destination countries for Albanians. On the other hand, Albania is the number one recipient country in terms of remittance flows from Italy, Greece and to other countries. A survey from the BoA (4 March 2006) has shown that remittances have had positive impact across all Albanian regions. Remittances have become an important source of income for households, reaching 33 % of disposable income of an average family recipient and almost 40 % in rural areas. Remittances recipients are from all social groups, including middle income class (60 %) as well as the low income class (27 %).The level of poverty are significantly reduced among those households receiving remittances.

Refering to the BoA Report (2002), remittances represent about 13 per cent of GDP, which are almost twice as much as income from exports and about 4.5 times bigger than FDI. Every year remittances are greater than foreign aid granted to Albania.Data from CBA show that Albanians working abroad sent money home to help their families continued to decline in 2010. Remittances in 2010 drop by 11 per cent to €690 million, down from €781 million in 2009.This is one of the most decline recorded in a deacde.According to financial crisese most of Albanian immigrant in Greece and Italy face in finding stable emloyment.These two countries, which have presented extensive rigorism measures to tackle debt crises, are home to roughly a million Albanian immigrants whose remittances are considered a lifeline for poor economy

of Albania. According to an previus study by the Albanian Central Bank, the unemployment rate in Greece and Italy directly affects the flow of remittances in Albania. Remittances have been one of the mover of the Albanian economy since the fall of communism, reaching a peak of $1,495 million in 2008. They constitute more than 10 per cent of the GDP of the country and are used to finance the imports of the country, real estate investments or s capital for small enterprises.

1. Literature Review

Remittances are examined from both micro and macro perspectives. Treating remittances as a household issue the microeconomic.While macroeconomic studies on the other hand concentrate on macro effects in recipient countries including economic growth, financial development, and reduction on poverty.

At a macroeconomic level, from Chami et al., (2005) using cross country data find a negative impact of remittances on growth and productivity. This occurs because migration deprives the economy of the most productive workers or because remittances has adverse effect on those staying behing, or both.On the other side, Aggarwal and Spatafora (2005)find no effect of remittances on economic performance. Giuliano and Ruiz Arranz (2006) show that remittances promote growth in countries with shallow financial systems but have no impact in countries with well developed financial systems. At microeconomic level, most of the evidence advise that remittance transfers between migrant workers and their family in the migrant's home country have been applied to increase consumption or stimulate investment in economies with liquidity constraints. Various of the studies that find a positive relationship between remittances and different types of household investments are Taylor (1992), Glytsos (1993), Brown (1994. Different studies argue that remittances are absorbed into immediate consumption so they don't finance productive investments. (Lipton, 1980; Reichert, 1981; Ahlburg, 1991; Russell, 1992;1999; Thomas – Hope, 1999; Glytsos, 2002.) Gedeshi (2002), uses surveys to examine emigrants role of emigration in the Albanian economy and their motivations for sending remittances back home. In a survey using data from Algeria, Morocco, Portugal, Tunisia, Turkey, and Yugoslavia, Elbadawi and Rocha (1992) found the main determinants of remittance inflows to be the level of income in the host country, the black market exchange rate premium, the domestic inflation rate, and the length of stay abroad. The authors did not discover any proof to support claims that levels of income in the country of origin or interest rate differentials affect remittance inflows.

In a panel study of remittances from Arab emigrants, El-Sakka (1998) found that remittances were positively related to economic growth in the host countries and inflation in the home country. It was also found that exchange rate differentials between official and black markets have a negative impact on the inflow of remittances through official channels.Gyan P,.et al (2008) find also a positive effect of workers remittances on economic growth by applying fixed effect approaches.Their finding is that the impact of remittances on growth is not so much large in size and the coeffiecient of the remittance in explaining the economic growth is significant only in two regression out of four. Fayissa and Nsiah (2008) argue that remittance flow have positive effect on economic growth in countries,where the financial system are less developed.They find that 10% raise in remittances would lead to 0.3% increase in GDP per capita, in fact is conside as a very small impact.

2. Albanian application

2.1 Real GDP growth and remmittnce inflows.

Albania ranks among countries with high rates of labore that works of living abroad.This workforce has payed a very imporatn role in supplying counrty with foreign currency and in the stimulation of Albania economy through remittanes cash to help their family.The beneficial effect of remittances on the economy of Albania during the diffiult years of transiton are widely known. In 2004, BoA estimated that the flow of remittances recorded a figure of 13.5% of the GDP of Albania,three times more than net foreign direct investment and two time more than official development assistance received by Albania. Remittances,a significant cataylst for economic growth in the past, has expericed a dercease over the last few years after pealing in 2008.BoA estimates that remittances decrease by 6% i 2009 compared to 2008, and their share of GDP fall to 9% in 2009.The decrease continued during the first quarters of 2010 throug on a smaller scale.

Remittances try to improve the standards of living for the receiving households and if the migrants are from poor households remittances contribute to poverty alleviation.Remittances in Albania have been growing steadly since 1992-2001, from 10 to 22% of the country's GDP. They exceeded the amount of FDI in the country, exports as the amount of aid received from international institutions(BoA, 2008) In the year 2001, according to an assessment by the Bank of

Albania remittances amounted to about 699 millions US dollars, or about 15.1 per cent of GDP, from 152 millions of US dollars or about 22 % of GDP in the year 1992.Figure 2 will show the trend of remittances from the year 1992-2010.

Effects of financial crises in Albania has decrease the remittances.The global crisis started to transmit the negative effects in the Albanian economy. IMF continues to decrease the predictions for the economy growth, by saying that the global economy in the year 2009 can be in the lowest level in 60 years. This disadvntage of the global economy will cause a bigger decrease of the economy growth of Albania.EBRD declares that the economy growth in Albania is expected to reach 6.1% in the year 2008, from 6% in the year 2007. The fall of the incomes from the emigrants and the decline of exports are some of the first effects that Albania is being faced with. The level of transports is considered to be negative.The devaluation of lek is a fact that Albanians are facing the world crisis and somehow the incautious politics of the Albanian government. Other proof that clearly identifies that the crisis is sat cross-legged is the emigrants' remittances. The remittances during the third three-months period have a clear drop by falling down with a figure of 28.2% compared with the same period of the last year. The remittances had drop of 13%, in this way by creating chaos in its data, because some hours before it had declared the figure of 23%.(.BoA, 2008)

2.2 The impact of remittances on household income.

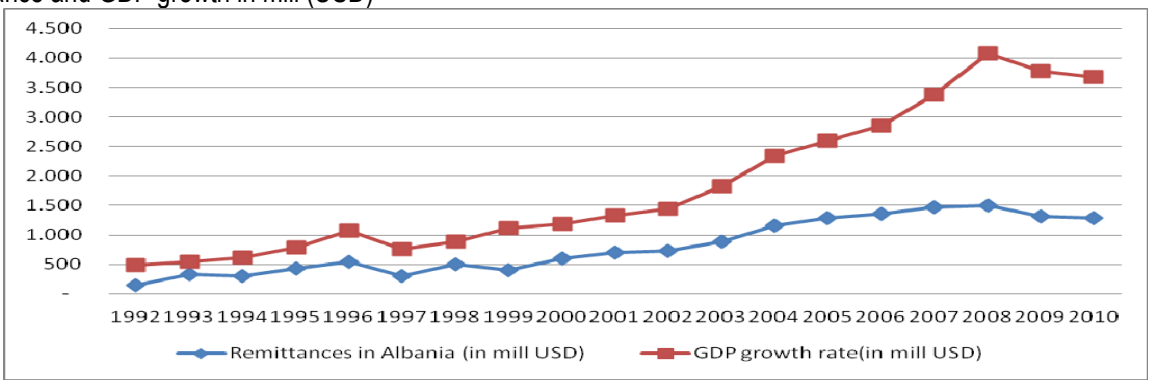
According to a Wold Bank report, the Household final consumption expenditure per capita growth (annual %) in Albania was reported 0.87 in 2010.The Household final consumption expenditure per capita growth (annual %) in Albania was -1.53 in 2009,(,(World Bank , 2010). The household final consumption expenditure per capita growth (annual %) in Albania was reported at 10.89 in 2008. Household final consumption expenditure (private consumption) is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of house but includes imputed rent for owner-occupied house. It also includes payments and fees to governments to obtain permits and licenses. Albania remains one of the poorest countries in Europe despite strong growth rates in recent years. Albania's main industries are food processing, textiles and clothing; lumber, oil, cement, chemicals, mining, basic metals and hydropower. The economy relies heavily on remittances since 25% of the labor force works abroad, mostly in Greece and Italy**.**

The remittances have become an important issue in the international financial literature over a decade because of their volume and their potential to reduce poverty. Remittance flows have continued to increase hand-in-hand with rise in the number of migrants around the world and will likely continue to do so in the coming years.Studies by the World Bank, IMF and INSTAT show a positive relationship between remittances received from migrant workers and poverty.
The purchasing power of money is slightly higher in poor rural areas and that an increase in poor household income has a larger wealthimproving effect on the margin than an equal increase in non-poor household.

3. Data and methology

According to the BoA report for the year 1992 we see that remittances represent about 10-22.3% of GDP (Figure 1).From 1993-2010 period immigrant remittances have continually increased and they represent in 2005, about14 % of GDP.The importance of remittance is the weigh more than other economic indicator in the country. Every year in Albania remittances are consider greater than foreign aid. On the other side, emigrants' remittances help the country economy in financing the external deficit, increasing the living standards in particular of benefiting families, and poverty reduction.

Remittance and GDP growth in mill (USD)



Source : World Bank http://api.worldbank.org/datafiles/ALB_Country_MetaData_en_EXCEL.xls

This paper uses the regression analysis model in order to analyze the relationship between Albanian remittances, GDP growth rate and household final cosumption.The linear regression equation is as follows.

Table 1. Data base for regression analysis

Year	*Remittances in Albania (in mill USD)*	*GDP growth |(in mill USD)*	*Household final consumption expenditure (current US$)*
1992	152	482	1079
1993	332	547	1468
1994	307	614	1903
1995	427	789	2191
1996	551	1.065	1972
1997	300	752	2042
1998	504	882	2146
1999	407	1.115	2354
2000	598	1.185	2410
2001	699	1.321	2910
2002	734	1.438	3074
2003	889	1.833	4214
2004	1.161	2.338	6618
2005	1.290	2.597	7530
2006	1.359	2.849	8166
2007	1.468	3.376	9357
2008	1.495	4.077	11045
2009	1.317	3.771	10581
2010	1.285	3.677	10368

Source. WorldBank

The Regression Equation is:

$$Y = \alpha + \beta X + e$$

Where:
Y- is the depended variable, what is being predicted or explained= GDP growth rate
α - is the expected intersept parameter, equals the value of Y when the value of X=0
β - is the expected slope, how much Y changes for each one-unit change in X.
X- is the independend or epxlanatory variable= remittances in Albania(USD
The equation gained by running the regression analysis
According to the regression result;
X Variable coefficient = 2,5538
Intercept coefficient = -226,424
R Square =0,9230758
Standard Error=346,3739
t Statistics =14,2827
So, estimated regression equation is as follows:

Y_t=-226,42+ 2,55* X_t

t statistic is the significance test for an estimated parameter in regression using the t distribution. This is called the t statistic, or t ratio. The higher this calculated t ratio is, the more confident . In that case,

Y_t=-226,42+ 2,55* X_t

t statistic (14,28)

F statistic (203,99)

In order to conduct significance test for estimated parameter, it must be compared the calculated t ratio to the critical value of the t distribution with n-k=19-2=17 df given by Table of t distribution. This t test of the statistical significance of the estimated coefficent is performed at the 5 percent level of significance. Thus, at 0.05 level of significance in Table of t distribution and at 17 df, it is founded that critical vaule of **t=2.11** for this two-tailed t test.

In that case, calculated value of **t=14.28** exceeds the tabular value of **t=2.11** for the 5 percent level of significance with 17 df, the null hypothesis is rejected that there is no relationship between X (value of remittances in Albania in mill USD) and Y (GDP growth in mill USD) and the alternative hypothesis is accepted that there is in fact a significant relationship between X and Y. The overall explanatory power of the entire regression can be tested with the **analysis of variance**. This uses the value of the **F statistic**, or F ratio. Specifically, the F statistic is used to test the hypothesis that the variation in the independent variables explains a significant proportion of the variation in the dependent variable.

Using the values of **R^2 = 0,923075**, **n=19**, and **k=2** for that case, it is optianed **F= 203,99.** To conduct the F test or analysis of variance, it is compared the calculated or regression value of the F statistic with a critical value from the table of F distribution. The F distribution is defined in terms of 2 df. There are k-1 for the numerator and n-k for the denominator. Thus, in that case, the degrees of freedom are k-1=2-1=1 (the number of independent variables in the regression) for the numerator and n-k=19-2=17 for the denominator. To determine the critical value of F that it is founded in the table for the 5 percent level of significance is **4.45.** Since the calculated value of the F statistic of 203.99 exceeds the critical value of 4.45 for the F distribution with 1 and 17 df, the null hypothesis is rejected that there is no relationship between X ((value of remittances in Albania in mill USD) and Y (GDP growth in mill USD) and the alternative hypothesis is accepted that there is in fact a significant relationship between X and Y.

Regresion 2:

The Regression Equation is:

$$Y = \alpha + \beta X + e$$

Where:

Y- is the depended variable, what is being predicted or explained= Household income Consumption

α - is the expected intersept parameter, equals the value of Y when the value of X=0

β - is the expected slope, how much Y changes for each one-unit change in X.

X- is the independend or epxlanatory variable= remittances in Albania(USD)

The equation gained by running the regression analysis

According to the regression result;

X Variable coefficient = 7,4306

Intercept coefficient =-1161,811

R Square =0,91016

Standard Error=1096,824

t Statistics =13,1239879

So, estimated regression equation is as follows:

Y_t= -1161,811+ 7,430* X_t

t statistic is the significance test for an estimated parameter in regression using the t distribution. This is called the t statistic, or t ratio. The higher this calculated t ratio is, the more confident . In that case,

t statistic (13,123)

F statistic (172,239)

In order to conduct significance test for estimated parameter, it must be compared the calculated t ratio to the critical value of the t distribution with n-k=19-2=17 df given by Table of t distribution. This t test of the statistical significance of the estimated coefficent is performed at the 5 percent level of significance. Thus, at 0.05 level of significance in Table of t distribution and at 17 df, it is founded that critical vaule of **t=2.11** for this two-tailed t test.
In that case, calculated value of **t=13.123** exceeds the tabular value of **t=2.11** for the 5 percent level of significance with 17 df, the null hypothesis is rejected that there is no relationship between X (value of remittances in Albania in mill USD) and Y (Household final consumption expenditure) and the alternative hypothesis is accepted that there is in fact a significant relationship between X and Y. The overall explanatory power of the entire regression can be tested with the **analysis of variance**. This uses the value of the **F statistic**, or F ratio. Specifically, the F statistic is used to test the hypothesis that the variation in the independent variables explains a significant proportion of the variation in the dependent variable.

Using the values of $\mathbf{R^2}$ **= 0,91016**, **n=19**, and **k=2** for that case, it is optianed **F= 172,239.** To conduct the F test or analysis of variance, it is compared the calculated or regression value of the F statistic with a critical value from the table of F distribution. The F distribution is defined in terms of 2 df. There are k-1 for the numerator and n-k for the denominator. Thus, in that case, the degrees of freedom are k-1=2-1=1 (the number of independent variables in the regression) for the numerator and n-k=19-2=17 for the denominator. To determine the critical value of F that it is founded in the table for the 5 percent level of significance is **4.45.** Since the calculated value of the F statistic of 172,239 exceeds the critical value of 4.45 for the F distribution with 1 and 17 df, the null hypothesis is rejected that there is no relationship between X ((value of remittances in Albania in mill USD) and Y (Household final consumption expenditure) and the alternative hypothesis is accepted that there is in fact a significant relationship between X and Y.

4.Conclusion

According to the regression results the Albanian GDP growth rate is an important determinant on remittances flow. The coefficient of determination explains important relation between macroeconomic performance and remittances flow. As a result, it can be shown that the Albanian remittances flows determine an important role in the determination of macroeconomic performance of Albanian economic growth.
GDP of Albania has been increasing from 1992 to 1996 according to the large number of emigrants working abroad, but during the year 1997 as the collapse of the pyramid schemes the remittances flow decrease and as decrease and as the result the growth of Albanian economy has decline.
But after the year 1997 to 2011 the GDP growth start again to increase, but during the financial crises the remittances have been decreasing and this had its negative effect in our economy.
As a result, remittances play a key important role in our household income and in whole economy

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Appendix:
Annex 1:

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	**0,960768**
R Square	**0,923076**
Adjusted R Square	**0,918551**
Standard Error	**346,3739**
Observations	**19**

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	*1*	*24474500*	*24474500*	*203,9969*	*6,72E-11*
Residual	*17*	*2039573*	*119974,9*		
Total	*18*	*26514074*			

	Coefficients	***Standard Error***	***t Stat***	***P-value***	***Lower 95%***	***Upper 95%***	***Lower 95,0%***	***Upper 95,0%***
Intercept	-226,425	164,2525	-1,37852	0,185916	-572,967	120,1177	-572,967	120,1177
X Variable 1	2,553808	0,178804	14,28275	6,72E-11	2,176565	2,931051	2,176565	2,931051

Annex 2:

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0,954026487
R Square	0,910166538
Adjusted R Square	0,904882216
Standard Error	1096,824456
Observations	19

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	207207703,9	207207703,9	172,2390602	2,52793E-10
Residual	17	20451406,09	1203023,888		
Total	18	227659110			

	Coefficients	***Standard Error***	***t Stat***	***P-value***	***Lower 95%***	***Upper 95%***	***Lower 95,0%***	***Upper 95,0%***
Intercept	-1161,81	520,1041	-2,23381	0,03922	-2259,14	-64,4879	-2259,14	-64,4879
X Variable 1	7,4306	0,566185	13,12399	2,53E-10	6,236055	8,625146	6,236055	8,625146