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REMITTANCES FROM AFRICAN MIGRANTS AND AFRICA'S ECONOMIC GROWTH

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ABSTRACT

Migrant remittances have received renewed interest in recent years, not only because of the importance of the sums involved, but also because of their potential impact on migrants' countries of origin. In the literature, there are two opposing views on the effects of remittances: While some studies conclude that remittances have a positive impact on economic growth, others believe that they have a negative impact on economic growth. The purpose of this article is to measure the impact of African migrants' remittances on Africa's economic growth. Using Ordinary Least Squares (OLS) applied to panel data, the fixed effects model and the random effects model applied to 53 African countries from 2000 to 2016, we arrived at the result that migrant remittances do not have a significant impact on economic growth across Africa, regardless of the type of model used. However, by sub regional analysis, we found that remittances have a positive and significant impact on economic growth in the East African sub-region both in the fixed effects model and in the random effects model. In the other sub-regions of Africa (West, North, Southern, and Central Africa), this impact is positive but not significant.

KEYWORDS: *Remittances, economic growth, Africa, panel data, Ordinary Least Squares, Fixed effects model, random effects model.*

1.INTRODUCTION

As witnessed at the international conference organized by OECD on the theme: "Migrations, Remittances and Economic Development of Countries of Origin", Migrations and the remittances attached to it have known an increase in interest these last years, not only because of the importance of the sum in place, but also because of the possible impact it has on the country of origin of migrants (OECD, 2005). According to the IMF (2009), remittances are flows of money sent by a migrant from the host country in which he lives to an individual residing in his country of origin. Informal transfers and in-kind transfers are not included in these cash flows. While capital movements and foreign direct investment have fallen dramatically in the 1990s as a result of the recession in high-income countries, migrant remittances have continued to rise (Straubhaar & Vadean, 2005).

Some studies such as those of Docquier & al. (2011), concludes that the impact of transfers on growth is positive. In Eritrea, the works of Kifle (2007) reveals that remittances play an important role in the country's economy. GDP is greatly increased by these remittances and many families in Eritrea depend on them for their livelihood. Empirical works of Iheke (2012) provides evidence that international remittance flows are one of the main macroeconomic factors that significantly promote economic growth in a developing economy like Nigeria. However, other studies conclude that migrant remittances weaken the competitiveness of the receiving country, increase the external deficit and unbalance the balance of payments (Kireyev, 2006; Luth & Ruiz-Arranz, 2007), or that they have an overall negative effect on economic growth because they reduce the labor supply. For Ba (2008), in Senegal, beneficiary households tend to develop a dependency on these transfers resulting in a certain vulnerability. Young people no longer wanting local jobs choose to leave. Even more, Barajas & al. (2009) believe that when remittances are correctly measured, and when growth equations are well specified and instrumented, we cannot find a robust and significant positive impact of remittances on the growth in the long term.

This article is place at the heart of the debate between remittances and Africa's economic growth and tries to shed more light on the effects of remittances from African migrants.

2.OBJECTIVE OF THE STUDY

This study aims to measure the impact of remittances from African migrants on Africa's economic growth.

3.METHODOLOGY

In this section we will first describe the data source and the variables used; then we will present the model that will allow us to capture the effect of the remittances on the economic growth of African countries.

3.1. Data and variables

As part of our study, the data come primarily from the World Bank's World Development Indicators database (WDI), updated in 2017. Since independence, Africa has been marked by great fluctuations. It has known two great periods of growth: the first between 1961 and 1975 and the second between 1995 and 2016 (Zamfir, 2016). The study period was 2000 to 2016 because of the lack of continuous observations for many African countries from 1961 to 2000. Also, the absence of certain observations allowed us to eliminate one country (Mauritania) from the 54 countries in Africa. As a result, we selected 53 countries for our estimations.

To estimate the relationship between remittances and growth, we relied on theoretical and empirical literature that identified a few variables as determinants of growth. The choice of these variables was also motivated by the presence of observational data over the period studied from 2000 to 2016 for the 53 countries.

The dependent variable of this study is current GDP in nominal value, used as a proxy for economic growth. Remittances (Tfm) of migrants in nominal value represent the main variable of interest (explanatory) of this study. Other independent variables include: Education expenditure (Deduc): Measured in the base by education expenditure. Exports (Exp): Measured in the base by the exportation of advanced technology. Imports (Imp): Measured by imported goods. Public expenditure (Dp): Measured by government expenditure. Inflation (Infl): Measured by the GDP deflator.Investment (Inv): Measured by investments in ICT, energy, transport, water and sanitation, and non-financial assets. Public Aid for Development (Adp): Measured by the help received from organizations, foreign states. Foreign Direct Investment (Ide): Measured in the base by Foreign Direct Investment.

3.2.Econometric modeling

Based on the purpose of this study and the nature of the data, the basic model can be written as:

$$\text{Log}PIB_{it} = \beta_{0i} + \beta_1 \log Educ_{1it} + \beta_2 \log Exp_{2it} + \beta_3 \log Imp_{3it} + \beta_4 \log Ide_{4it} + \beta_5 \log Dp_{5it} + \beta_6 \log Adp_{6it} + \beta_7 \log Inv_{7it} + \beta_8 \log Infl_{8it} + \beta_9 \log Tfm_{9it} + \varepsilon_{it} \quad (1)$$

Where i and t stands for country and period, respectively. LogPIB, the natural logarithm of Gross Domestic Product used as a proxy for economic growth. LogDeduc, the log of Education Expenditure, used as a proxy for the stock of human capital; LogExp, the logarithm of Exportations; LogImp, the logarithm of Importations; LogIde, the logarithm of Foreign Direct Investment; LogDp, the log of Public Expenditures; LogInv, the log of Investments; LogInfl, the logarithm of the Inflation rate; LogTfm, the log of migrant remittances; ε_{it}, the residues.

We estimate the model (1) by applying three different techniques. First using the Ordinary Least Squares (OLS) technique applied to panel data. This technique assumes perfect homogeneity of the sample. The second technique is the fixed effects model which assumes that differences between units can be captured by differences in the constant term (Greene, 2005, p.265). The third technique, finally, is that of the random effects model, which assumes that individual specificity is in random form.

Table 1: Descriptive statistics of study variables (cross-sectional dimension).

Variable	N	Mean	Std.Dev.	Min	Max
log_pib	884	22,712	1,674	18,095	27,066
log_deduc	862	19,2	1,99	0	23,905
log_exp	884	20,588	4,009	0	25,7
log_imp	884	22,412	1,643	17,464	26,256
log_ide	884	21,59	4,691	0	34,072
log_dp	884	22,891	1,556	18,368	27,005
log_adp	884	20,546	1,342	14,744	24,233
log_inv	884	11,76	8,869	0	22,711
log_infl	884	1,998	3,157	-6,961	25,155
log_tfm	884	18,611	2,35	9,348	27,72

Source: *Author's calculation from WDI (2017).*

Table 2 provides the correlation matrix of variables for all 53 African countries; growth is positively correlated and significant with all other independent variables. Education expenditure, exportations, importations, Public Aid for Development, public expenditure are strongly correlated with economic growth. But the remittances are weakly correlated with economic growth (0.393).

Table 2: Matrix of correlation of variables, set Africa.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) log_pib	1.000									
(2) log_deduc	0.798	1.000								
	0.000									
(3) log_exp	0.565	0.505	1.000							
	0.000	0.000								
(4) log_imp	0.914	0.773	0.646	1.000						
	0.000	0.000	0.000							
(5) log_ide	0.154	0.053	0.093	0.159	1.000					
	0.000	0.123	0.006	0.000						
(6) log_dp	0.882	0.706	0.462	0.826	0.112	1.000				
	0.000	0.000	0.000	0.000	0.001					
(7) log_adp	0.567	0.470	0.233	0.519	-0.050	0.495	1.000			
	0.000	0.000	0.000	0.000	0.140	0.000				
(8) log_inv	0.378	0.395	0.286	0.379	-0.091	0.355	0.337	1.000		
	0.000	0.000	0.000	0.000	0.007	0.000	0.000			
(9) log_infl	0.119	-0.140	0.067	0.122	0.065	0.161	-0.133	-0.148	1.000	
	0.000	0.000	0.047	0.000	0.052	0.000	0.000	0.000		
(10) log_tfm	**0.393**	**0.348**	**0.251**	**0.376**	**0.153**	**0.383**	**0.369**	**0.154**	**-0.055**	**1.000**
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	

Source: *Author's calculation from WDI (2017).*

4.RESULTS OF THE STUDY

The presentation of the results will be as follows: we will first present the results related to the impact of the remittances on Africa's economic growth, then we will present the same results but according to the different sub-regions of Africa.

4.1. Estimating the Impact of Remittances on Africa's Economic Growth

It appears in Table 3 that migrant remittances do not have a significant impact on economic growth across Africa, regardless of the type of model used. Sander & Barro (2004), Ndione & Lahlou (2005) have shown that remittances in Senegal are used mainly for household consumption and that only a tiny part is reserved for investment. In the same vein, Tchouassi (2016) showed that for the populations left behind, remittances constitute a form of social protection, insurance against uncertainties and precariousness in the countries of origin. The money received allows families and close relations in the country to access essential basic social services such as health, education, water and sanitation services.

Education expenditure and public expenditure, for example have a positive and significant effect on economic growth. For this purpose, when we look at the fixed effects model, we can see that a 10% increase in public spending across Africa is likely to increase economic growth by around 3.2%. These results support theories that education spending and public spending increase growth (Barré, 1991; Keho, 2015).

Imports have a positive and significant effect on growth. When increasing Africa's imports by 10%, economic growth increases by 4.4%.

Table 3: Impact of migrant remittances on Africa's economic growth[1]

Variables	(1) MCO	(2) Effets Fixes	(3) Effets aléatoires
Log_deduc	0,155**	0,0880**	0,0960**
	(2,18)	(2,02)	(2,02)
Log_exp	0,00248	0,00722	0,00700
	(0,18)	(0,38)	(0,38)
Log_imp	0,441***	0,394***	0,413***
	(5,65)	(3,28)	(3.86)
Log_ide	0,0122***	0,00687	0,00546
	(4,12)	(1.36)	(1,08)
Log_dp	0,346***	0,316**	0,336***
	(6,28)	(2,58)	(2,92)
Log_adp	0,115***	-0,00391	0,0116
	(6,46)	(-0,11)	(0,34)
Log_inv	0,00299	-0,000818	0,0000824
	(1,24)	(-0,43)	(0,04)
Log_infl	0,0273***	0,00279	0,00700
	(3,33)	(0,33)	(0,96)
Log_tfm	0,00104	0,0199	0,0169
	(0,11)	(1,05)	(1,05)
Constante	-0,882*	4,373***	3,071***
	(-1,84)	(4,27)	(3,68)
N	862	862	862
Nombre de pays		51	51
R^2-ajusté	0,902	0,651	
R^2-*within*		0,655	0,654
R^2-*between*		0,931	0,933

Source: *Author's calculation from WDI (2017). Note: t-student in brackets; *,**,*** indicate that the coefficients are significant at the threshold of 10%, 5% and 1% respectively.*

4.2. Estimating the Impact of Remittances on Economic Growth in Africa's Sub-Regions

When we focus on analyzing the impact of remittances on Africa's economic growth by sub-region, the results are more interesting.

Table 4 also shows that remittances positively and significantly impact economic growth in the East African subregion (ADE) in both the fixed and the random effects models. Concerning the fixed effects model, the results show that a 100% increase in remittances can increase economic growth in the East African region by 3.6%. We can explain this result by the fact that the countries of East Africa have known wars during several years and need to rebuild themselves and the money sent by the diaspora is actually used for investments, to reboost the growth. In addition, the food crisis facing East African countries could motivate the mobilization of its diaspora in favor of its development. Kifle (2007) has shown that remittances play an important role in the economy of Eritrea. Thanks to these remittances, GDP has increased considerably, and many Eritrean families depend on them for their livelihoods.

On the other hand, in the fixed effects models, the remittances for the sub-regions of North Africa, Central Africa and Southern Africa have a positive but not significant impact on economic growth. Economic growth in sub-regions of Africa is therefore explained here by other variables.

However, in the fixed effects model, public expenditure has a positive and significant impact on economic growth in the North Africa, Central Africa and West Africa subregions. In fact, government expenditure in these different sub-regions helps to increase economic growth. Notably, a 10% increase in public expenditure in the West Africa subregion increases growth by 4.95%.

As for education expenditures, they positively and significantly affect growth in all subregions except West Africa (ADO) in both models. Thus, it could be argued that education spending helps to improve human capital, which according to Romer's (1986) homogenous growth theory stimulates economic growth.

In the Central Africa sub-region (AC), when imports increase by 10%, this leads to a decrease in economic growth of 1.54%. An explanation for this would be that in Central Africa, the trade balance is in deficit. According to Amadeo (2018), when a country has a trade deficit, it has to borrow from other countries to pay for additional imports, which makes it dependent on the political and economic power of other countries. In addition, countries with large imports must increase their foreign exchange reserves. This is how they pay for imports. This can affect the value of the national currency, inflation and interest rates. Also, domestic firms must compete with imports. Small businesses that cannot compete will go bankrupt.

A rather curious result is that of exports in random effects models in the North Africa subregion (ADN). Indeed, an increase in exports of 100% decreases economic growth by 7.92%. Two hypotheses could be put forward: the first would be that North Africa, heavily endowed with oil resources, a sudden increase in exports of hydrocarbon products has pushed up the exchange rate of the currency in this subregion, decreasing the international competitiveness of local products. This may have caused the Dutch disease that could cause significant deindustrialization of the countries of the subregion. A second explanation would be linked to the "Arab Spring",

which led to a fall in the economic growth of the countries of the North Africa subregion.

In the Southern Africa subregion (ADA), inflation has a negative effect on economic growth in fixed-effects models. In the Central African subregion, however, it is positive and significant. These results reflect the fact that there is a threshold of inflation that, when exceeded, has negative effects on economic growth. Khan & Senhadji (2000) also showed that this threshold is between 2% and 3% for the industrialized countries and between 7% and 11% for the developing countries.

Official development assistance is positive and significant only for the Central African subregion in fixed effects models. As it concerns foreign direct investment, it is also positive and significant for the Southern Africa subregion in fixed effects models.

Table 4: Impact of remittances on economic growth by sub-region[2]

	Modèles à effets fixes					Modèles à effets aléatoires				
Variables	(1) ADN	(2) AC	(3) ADE	(4) ADO	(5) ADA	(1) ADN	(2) AC	(3) ADE	(4) ADO	(5) ADA
Log_deduc	0,111***	0,802***	0,482**	0,259	0,344***	0,123***	0,814***	0,337**	0,328**	0,291***
	(13,78)	(13,83)	(3,19)	(1,39)	(4,97)	(13,49)	(16,28)	(2,11)	(2,46)	(3,85)
Log_exp	-0,0584***	0,00976	0,0261	0,00451	-0,00579	-0.0792***	0,0387***	-0,0155	0,0149	0,0122
	(-6,58)	(0,44)	(1,28)	(0,26)	(-0,50)	(-20,47)	(2,75)	(-1,27)	(0,83)	(0,62)
Log_imp	-0,346*	-0,154*	0,342*	0,0512	0,476***	-0,211***	0,0746	0,377**	0,00162	0,503***
	(-2,77)	(-2,09)	(1,95)	(0,72)	(3.68)	(-2,73)	(1,55)	(2,30)	(0,02)	(3,91)
Log_ide	0,0312	0,00691	0,0170	0,00497	0,0211**	-0,00721	0,0111	-0,00281	0,00421	0.0268***
	(0,87)	(0,86)	(1,53)	(0,72)	(2,94)	(-0,18)	(0,97)	(-0,84)	(0,66)	(2,83)
Log_dp	1,147***	0,316**	0,0198	0,495***	0,0167	1,067***	-0,187***	0,167	0,527***	0,0910*
	(7,76)	(2,72)	(0,15)	(5,58)	(0,44)	(15,38)	(-3,90)	(0,88)	(6,18)	(1,77)
Log_adp	-0,237	0,0667*	-0,0956	-0,0177	-0,0205	-0,224	0,171***	0,149**	-0,0283	0,0244
	(-1,55)	(2,08)	(-1,51)	(-0,62)	(-0,71)	(-1,37)	(7,20)	(2,37)	(-0,80)	(1,13)
Log_inv	0,00479	0,00413	-0,00420	0,00624	-0.000145	0,0128	0,00755*	0,000570	0,00730	0,0000231
	(1,05)	(1,52)	(-1,13)	(1,20)	(-0.16)	(1,17)	(1,88)	(0,11)	(1,32)	(0,02)
Log_infl	0,0208***	0,0194*	0,00776	0,00585	-0.0502***	0,00132	0,0384*	0,0101	0,0137	-0,0262***
	(5,63)	(1,98)	(0,33)	(0,48)	(-3,10)	(0,13)	(1,75)	(0,42)	(0,99)	(-2,92)
Log_tfm	-0,0325	-0,0126	0,0364***	0,0598	-0,0141	0,0610	0,0408*	0,0493***	0,0494	-0,0199
	(-0,86)	(-0,69)	(4,42)	(1,64)	(-0,95)	(0,59)	(1,91)	(4,51)	(1,59)	(-1,29)
Constante	8,447*	2,147	5,763***	4,108***	5,277***	6,069**	4,646***	0,248	3,410***	2,625***
	(2,63)	(1,55)	(3,48)	(3,19)	(5,37)	(2,54)	(4,44)	(0,23)	(2,64)	(3,24)
N	85	135	170	254	218	85	135	170	254	218
Nbre de pays	5	8	10	15	13	5	8	10	15	13
R^2-*within*	0,482	0,916	0,843	0,769	0,941	0,454	0,872	0,782	0,769	0,933
R^2-*between*	0,423	0,829	0,868	0,968	0,933	0,998	0,996	0,992	0,969	0,961

Source: *Author's calculation from WDI (2017). Note: t-student in brackets; *,**,*** indicate that the coefficients are significant at the threshold of 10%, 5% and 1% respectively.*

5.CONCLUSION

The objective of this study was to measure the impact of remittances on the economic growth of African countries. With the estimation of three models (OLS, fixed effect models and random effects models), we have achieved the results that migrant remittances do not have a significant impact on economic growth across Africa, whatever model is used.

However, when we do sub regional analysis, we found that remittances positively and significantly impact economic growth in the East African subregion in both the fixed effects model and in the random effects model. In other sub-regions of Africa, this impact is positive but not significant.

As a recommendation of economic policy, we can suggest that African countries should pay particular attention to the remittances, since this source of financing could constitute, looking at the results of the analysis obtained by subregion, an important element of economic growth along the other traditional variables. Also, these governments should put in place transparent governance systems that would facilitate the transfer of funds through formal channels (banks, posts, specialized companies), reduce the rate of transfer fees and consider how these remittances should be oriented to boost the development of their respective states.

REFERENCE

1. *Barajas, A., Chami, R., Fullenkamp, C., Gapen, M., & Montiel, P. (2009). Do Workers' Remittances Promote Economic Growth? IMF Working Paper, n°153, Middle Eastern and Central Asia Department.*
2. *Fisher, S. (1993). "The Role of Macroeconomic Factors in Growth", Journal of Monetary Economics 32(3), 485-511.*
3. *Gubert, F. (2005). L'impact des transferts de fonds sur le développement des pays d'origine : le cas de l'Afrique. Migrations, transferts de fonds et développement, OCDE.*
4. *Iheke, O.R. (2012). "The effect of remittances on the Nigerian Economy", International Journal of Development and Sustainability, 1 (2), 614-621.*
5. *Kifle, T. (2007). Do Remittances Encourage Investment in Education? Evidence from Eritrea.MI: MPublishing, University of Michigan Library, 4 (1).*
6. *OCDE. (2005). Migrations, Transferts de Fonds et Développement. Objectifs Développement, OECD Publishing.*
7. *Tchouassi, G. (2016). Migrations et fuites des cerveaux africains. Ouvrage collectif, Editions Universitaires Européennes.*
8. *World Bank (2016). Migration and Remittances Factbook 2016. Third Edition, World Bank Group.*
9. *Zamfir, I. (2016). La Croissance Economique de l'Afrique : Décollage ou ralentissement ? Service de recherche du Parlement européen.*