Do remittances spur economic growth in Africa?

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Abstract

Remittance flows to developing countries are now triple official development assistance and larger than foreign direct investment. The surge in remittances now occupies important position in development equation as remittances are seen as cheap resources for development. African governments are no exception among developing nations chasing remittances. Policymakers are making efforts to attract remittances to provide needed resources for economic transformation. In this study, an attempt is made to explore the impact of remittance flows on economic growth in Africa, considering efforts at attracting remittances. The impact of remittances is estimated using static and dynamic panel methods with data spanning 1975 to 2015. The study finds that remittances do not have an impact on economic growth in Africa. This conclusion is hinged on measurement issues, internal conditions, labour market implications, and the effect of remittances on tradable sectors.

Keywords: Migration, Remittances, Economic growth, Panel data, Africa

JEL Classification: C33, F22, F43

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1. Introduction

Remittances could be a source of financing development in developing countries apart from foreign direct investment (FDI) and official development assistance (ODA). It has both micro (household level), and macro impact on economies of developing countries as many of these economies are high migrants sending countries. They receive huge remittances annually. According to World Bank (2018), remittance flows to low- and middle-income countries (LMICs) are substantially three times larger than ODA, more stable than private capital flows, and are becoming significantly larger than FDI. Workers' remittances to developing countries have grown substantially since the 1980s. Estimates put the figure at US$ 335 billion for 2010 from US$47 billion in 1980. The projection is that the figure will cross US$500 billion in 2022. This amount is substantially large and could be a significant resource needed to push forward the development agenda in developing countries. World Bank (2006) argues that remittances could stimulate economic growth, especially where the financial development is still in its infancy.

The effect of remittances on economic growth in developing countries is not very clear. Clemens and McKenzie (2018, p. F181) posit that:

> Countries in which remittances are a large share of GDP have not experienced notably higher growth over a 20-year period than countries which receive much less in the way of remittances. ... [T]here is essentially no correlation between the growth in real remittances *per capita* in a country between 1990 and 2010, and its growth in *per capita* income over the same period. Countries such as Nigeria, Sierra Leone and Bolivia saw per capita remittances rise over 8,000% but saw no higher growth in real GDP than countries with little or no increase in remittances.

Of course, this is the situation in many developing countries, and many reasons can be adduced to this. High migrant-sending countries are poor, and many are in crisis situations. The top ten international migrant-sending countries in 2017 are all ranked on the failed state index under elevated warning to very high alert. These countries with their millions of migrants in parentheses are India (16.4), Mexico (11.9), Russian Federation (11.0), China (10.1), Bangladesh (7.8), Syria (7.8), Pakistan (6.1), Ukraine (6.0), Philippines (6.0), and Afghanistan (5.1). Additionally, countries usually see a surge in remittances after crisis situations. Besides, remittances are not different from resource wealth; they tend to destroy tradable sectors in many countries.

Many African countries exhibit some of the issues raised above, and there are many high migrant-sending nations in Africa. Thus, African economies are major receivers of huge remittances. In fact, two African countries, Egypt, a country grouped among the Middle East and North Africa (MENA) countries and Nigeria, a sub-Saharan African (SSA) country, feature on the top ten remittance-receiving countries in 2020. While

Egypt received US$30 billion in remittances, Nigeria got US$ 17 billion, according to World Bank's (2021) estimates. The figures for the regions of the world with their growth rates are in Table 1A and 1B below. Egypt and Nigeria only got US$ 5.9 billion and US$ 2.4 billion in FDI, respectively. The experience of Egypt and Nigeria with respect to remittances and FDI is like many other African countries.

Table 1A: Estimates and projections of remittances to low- and middle-income regions (US$ billion)

Region	2009	2015	2016	2017	2018	2019	2020e	2021f	2022f
LMICs	302	446	441	478	524	548	540	553	565
East Asia & Pacific	80	128	128	134	143	148	136	139	142
Europe & Central Asia	33	42	43	52	59	62	56	54	50
Latin America & Caribbean	55	68	73	81	89	96	103	108	112
Middle East & North Africa	31	50	49	52	53	55	56	57	59
South Asia	75	118	111	117	132	140	147	152	158
Sub-Saharan Africa	28	41	37	41	49	48	42	43	44
World	433	602	597	640	694	719	702	713	726

Notes: LMICs means Low- and Middle-Income Countries. Note also that e = estimates, while f = forecast. Source: Migration and development brief 34 (World Bank, 2021, p.3).

Table 1B: Estimates and projections of remittances to low- and middle-income regions (growth rate, %)

Region	2009	2015	2016	2017	2018	2019	2020e	2021f	2022f
LMICs	-4.8	0.5	-1.3	8.4	9.8	4.6	-1.6	2.6	2.2
East Asia & Pacific	-4.8	3.7	-0.5	5.1	6.8	3.0	-7.9	2.1	2.1
Europe & Central Asia	-11.3	-15.3	2.1	21.0	12.9	4.6	-9.7	-3.2	-6.9
Latin America & Caribbean	-12.3	6.5	7.4	11.1	9.9	8.3	6.5	4.9	4.0
Middle East & North Africa	-6.0	-6.4	-1.2	5.3	2.3	3.4	2.3	2.6	3.1
South Asia	4.5	1.6	-5.9	6.0	12.3	6.1	5.2	3.5	4.0
Sub-Saharan Africa	-2.1	6.6	-8.3	10.8	17.4	-0.4	-12.5	2.6	1.6
World	-5.0	-1.3	-0.8	7.1	8.5	3.7	-2.4	1.5	1.8

Notes: LMICs means Low- and Middle-Income Countries. Note also that e = estimates, while f = forecast. Source: Migration and development brief 34 (World Bank, 2021, p.3).

Though Africa, which comprises all the countries of SSA, and some MENA countries, receives huge remittances, it costs more to send remittances to Africa, especially SSA, than other regions of the world. It cost almost twice the cost of sending $200 to any South Asia destination to send the same amount to any country of SSA; the average cost of remittance to many African countries is far above the global average by 2.4 percent (World Bank, 2018). Notwithstanding, when we add the remittance flows to six countries of Africa in the MENA group (Algeria, Djibouti, Egypt, Libya, Morocco, and Tunisia) to that of SSA, it will be evident that remittance flows to Africa are substantially large. Besides, Egypt's figure is quite huge. Given

its US$ 30 billion for 2020, one can easily conclude that Egypt's figure is a large proportion of the MENA estimate. Although enormous resources from remittance flow to Africa, many African countries are not growing and are in a state of underdevelopment. This picture pushes one to ask: why have these large remittances not propelled these countries to grow?

Literature on the impact of remittance flows on economic growth is still emerging. Studies have turned up results with the positive impact of remittances on growth (Pradhan, Upadhyay, & Upadhyay, 2008; Mundaca, 2009; Nyamongo et al., 20012; Nsiah & Fayissa, 2013; Lartey, 2013; Nwaogu & Ryan, 2015; Matuzeviciute & Butkus, 2016; Eggoh, Bangake, & Semedo, 2020), while many other studies have concluded that remittances do not cause growth. At best, some have argued that the impact of remittance flows on growth is conditional on some other developmental conditions. These studies include Chami, Fullenkamp, and Jahjah (2005), Barajas *et al*. (2009), Rao and Hassan (2011), Bettin and Zazzaro (2012), Fenny, Iamsiraroj, and McGillvray (2014), Lim and Simmons (2015), and Bird and Choi (2020). Barajas *et al*. (2009, p. 16-17) made a convincingly salient argument on the impact of remittances on growth:

> [W]e cannot find a robust and significant positive impact of remittances on long-term growth, and often find a negative relationship between remittances and growth. Perhaps the most persuasive evidence in support of this finding is the lack of a single example of a remittances success story: a country in which remittances-led growth contributed significantly to its development. Given that some countries' remittance receipts exceeded 10% of GDP for long periods of time, we should expect to find at least one example of this phenomenon during the past four decades. But no nation can credibly claim that remittances have funded or catalyzed significant economic development.

World Bank (2006) observed that the impact of remittances on the growth and employment of developing countries are somewhat ambiguous. This assertion with the conclusion of Barajas et al. (2009) has necessitated the need to examine the impact of remittance flows on economic growth in Africa, given that African governments now make attracting remittances a top priority. Our study contributes to the remittance-growth literature that remittances have no impact on economic growth in Africa. Clemens and McKenzie (2018) advance some reasons, including the methodological approach, why it could be hard to detect the effect of remittances on growth or get a wrong result. This study takes care of some of these issues; for instance, we do not control for investment in our regressions (See Clemens & McKenzie, 2018, p. F184 for detailed explanation). Our results differ markedly from previous studies that focus specifically on African countries. We have more samples (44) than previous studies, which makes our results less prone to biasedness that afflicts studies with fewer samples in panel studies. As shown by the sign of the

coefficient of remittance in our results, it would have had a statistically significant negative effect on economic growth. The results support the views of Barajas et al. (2009) and Clemens and McKenzie (2018).

The results from our studies can be hinged on perennial crises in some African countries, which continue to attract remittance flows to these countries besides the destruction of tradable sectors. Moreover, African countries lose relatively skilled workers trained on the continent to more stable and developed countries. Notable among them are medical personnel trained on the continent. For instance, medical personnel's remittances cannot cover what African countries lose to other stable countries in health expenditures. In other words, no matter the size of their remittances, it cannot push these economies on the growth path. The rest of this paper is organised as follows: the literature review is addressed in section two. Section three focuses on methodology and data. In section four, we deal with empirical analysis. The study is concluded in section five.

2. Literature review

Literature is replete with the impact of migrant workers' remittances at the household level. Remittances improve the standard of living of those who receive remittances from family members abroad (Yang, 2004; Jongwanich, 2007; Ajaero *et al.*, 2018). It helps the recipients to smoothen consumption, meeting their debt payments, and afford basic needs. The effect of remittances at the macro level, especially on economic growth, is highly contested. Much of the money remitted to top remittance-receiving nations are spent on consumption. The consumption expenditure may have a positive effect on economic growth through their multiplier effect (Stahl & Arnold, 1986), provided they are spent on locally produced goods (Clemens & McKenzie, 2018). A summary of studies on the effect of remittance on economic growth is provided in Table 2.

Table 2: Summary of studies on remittances–growth relationship

Author	Period	Country	Methodology	Result
Chami, Fullenkamp, & Jahjah (2005)	1970-1998	113 developing countries	Panel method	Significantly negative effect of remittances on growth
Jongwanich (2007)	1993-2003	17 developing Asia and pacific countries	GMM	Remittances have a marginal effect on growth

Pradhan, Upadhyay, & Upadhyay (2008)	1980-2004	39 developing countries	FE & RE	Significantly positive effect of remittances on economic growth
Barajas et al. (2009)	1970-2004	84 emerging countries	OLS & FE-IV	Insignificant effect of remittances on economic growth
Giuliano & Ruiz-Arranz (2009)	1975-2002	100 developing countries	OLS & SysGMM	Remittances have significantly positive effect on economic growth; promote growth in financially LDCs
Mundaca (2009)	1970-2002	25 LACs	GMM	Significantly positive effect of remittances on growth
Catrinescu at al. (2009)	1970-2003	162 countries	Cross-sectional regression	Remittances boost long-run growth in countries with higher political and institutional quality
Fayissa & Nsiah (2010)	1980-2004	37 African countries	RE, FE, & GMM	The economic growth effect of remittances is conditional on financial development.
Rao & Hassan (2011)	1974-2006	40 developing countries	Panel estimation	Insignificant effect of remittances on growth
Rao & Hassan (2012)	1970-2006	40 countries	FE, IV/2SLS, & SysGMM	Mixed results
Bettin & Zazzaro (2012)	1970-2005	66 developing countries	OLS & SysGMM	The effect of economic growth is conditional on banking development.
Hassan, Shakur, & Bhuyan (2012)	1974-2006	Bangladesh	OLS, IV/2SLS, & GMM	Remittances have significant nonlinear effect on economic growth
Nyamongo at al. (2012)	1980-2009	36 African countries	Panel method	Significantly positive effect of remittances on economic growth
Cooray (2012)	1970-2008	6 countries	OLS, FE & SysGMM	Significantly positive effect of remittances on growth
Nsiah and Fayissa (2013)	1985-2004	40 developing countries	Panel FMOLS	Significantly positive effect of remittances on growth

Lartey (2013)	1990-2008	36 SSA countries	SysGMM	Significantly positive effect of remittances on growth
Sanbeta (2013)	1970-2004	50 countries	OLS, FE, FE-IV, & SysGMM	Mixed results
Fenny, Iamsiraroj, & McGillvray (2014)	1971-2010	136 developing countries, including 25 SIDS	OLS & GMM	Remittances have no effect on growth in developing countries, but significantly positive effects in SIDS
Nwaogu & Ryan (2015)	1970-2009	53 African countries and 34 LACs countries	Dynamic spatial-lag model	Significantly positive effect of remittances on growth
Lim & Simmons (2015)	1990-2012	13 CARICOM countries	Panel cointegration test	Remittances have no effect on economic growth
Kratou & Gazdar (2016)	1984-2011	12 MENA countries	PMG, MG, DFE, & IV	Positive effect in the long run, but negative in short run
Matuzeviciute & Butkus (2016)	1990-2014	116 countries	OLS, OLS with FD, & FE	Remittances have positive effect on economic growth
Eggoh, Bangake, & Semedo (2019)	2001-2013	49 developing countries	PSTR, FDGMM & SysGMM	Significantly positive effect of remittances on growth
Bird & Choi (2020)	1976-2015	51 countries	FE & SysGMM	Significantly negative effect of remittances on growth

Notes: LACs refers to Latin American and Caribbean Countries, CARICOM is Caribbean Community and Common Market, LDCs means Less Developed Countries, SIDS means Small Island Developing States, OLS means Ordinary Least Squares, OLS with FD refers to OLS with first difference transformation, GMM implies Generalised Method of Moment, FE is Fixed Effects, RE is Random Effects, SysGMM refers to System Generalised Method of Moment, IV/2SLS is Instrumental Variables/2Two-Stage Least Squares, FMOLS refers to Fully Modified Ordinary Least Squares, FE-IV means Fixed Effects Instrumental Variables, PMG means Pooled Mean Group, MG refers to Mean Group, DFE means Dynamic Fixed Effects, FDGMM implies First Difference Generalised Method of Moment, and IV means Instrumental Variables. Source: Eggoh, Bangake, and Semedo (2019) with additions from the Author.

3. Methodology and data

Growth studies have looked beyond the traditional sources of economic growth of the neoclassical tradition to explain the causes of growth and development. The focus has shifted from technological advancement, physical capital, surplus labour to institutional changes, financial development, and other factors. In this study, we examine the impact of remittance flows on the economic growth of African economies. To do this, we follow Caselli *et al.* (1996) general specification as follows:

$$ln(Y_{i,t}) - ln(Y_{i,t}) = \beta ln(Y_{i,t-\tau}) + X_{i,t-\tau}\delta + \alpha_i + \phi_t + \epsilon_{i,t} \quad (1)$$

where $Y_{i,t}$ is the per capita gross domestic product (GDP) in country i in a particular period, say t, $X_{i,t}$ is a row vector of the determinants of economic growth. The country-specific effect is captured by α_i. The time-specific effect is captured with ϕ_t, while $\epsilon_{i,t}$ is the model error term. When the lagged variable on the right-hand side of the equation, GDP per capita is negative, and statistically significant, it implies convergence according to the neoclassical postulation of the growth model. In other words, a slowdown is expected for countries to converge to their steady-state output level.

In this study, equation (1) is estimated using OLS, FE, RE, Hausman Taylor (HT), and SysGMM. Estimation of growth equation using the OLS poses a challenge. The problem of autocorrelation and endogeneity may bias the results of the OLS estimates. While both RE and FE offer some improvement over OLS, they are not efficient in estimating dynamic panel data because the lagged variable and the unit-specific effects are correlated. While FE controls for each country-specific effect which could have resulted in omitted variable bias, RE is more efficient in using information from both within and between variances of the data. The Hausman-Taylor (HT) estimator (Hausman & Taylor, 1981) offers some improvement over both RE and FE. This estimator takes care of the shortcomings of both the FE, which automatically drops time-invariant variables from its estimation procedures and RE, which makes a strong assumption that the independent variables are not correlated with unobserved effects. Because of endogeneity concerns, the study also implements SysGMM (Arelllano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998).

Table 3: Summary statistics

Variable	N	Mean	Std. Dev.	Min	Max
GDP per capita growth rate	359	0.01	0.03	-0.10	0.32
Log GDP per capita (LGDPPC)	359	7.01	0.96	5.18	9.82
M2/GDP	389	28.84	19.67	3.42	116.05
Consumption	355	85.60	17.43	16.71	171.43
Inflation	345	37.79	359.15	-4.25	6517.11
Education	386	12.03	1.70	7.67	16.21
Credit	392	17.32	15.09	0	99.15
Globalisation	419	39.45	10.78	15.63	71.73
Democracy	407	2.40	3.12	0	10
Remittance	337	4.83	18.09	0	194.80

Notes: The data is sourced from World Bank Development Indicators (WDI), KOF globalization index of the Swiss Economic Institute (Gygli et al., 2019), and Polity IV project. M2/GDP refers to broad money as a percentage of GDP. Consumption refers final consumption expenditure as a percentage of GDP. Source: Author's computation.

Table 3 is the summary statistics of the variables included in our model's econometric estimation. The data for this study spans the year 1975 to the year 2015. Of the 54 African countries, ten countries are excluded due to missing data. The data for the variables in our model is collapsed into 5-year averages to lessen the effects of the business cycle on the growth data because growth data are naturally autocorrelated. Notwithstanding the averaging of the data, econometric tests, both White's test and Modified Wald statistic for groupwise heteroskedasticity test (Green, 2018) reject the null of homoskedasticity at a 1 percent level of significance. Additionally, the Wooldridge test (Wooldridge, 2010) for autocorrelation in panel data rejects the null of no serial correlation at a 1 percent level of significance. All these are taking care of in our estimation strategy by clustering the standard errors at the country level.

The GDP per capita growth is generated from the GDP per capita after logging and subtracting its lagged value from the variable. The *Log GDP per capita* is the lagged value of the log of GDP per capita. *M2/GDP* is the broad money as a percentage of GDP, while *Credit* is the domestic credit to the private sector by banks as a percentage of GDP. These two variables are particularly relevant for the level of financial development in a country. *Inflation* is the annual consumer price index. *Consumption* is the final consumption expenditure as a percentage of GDP. It represents the private final consumption expenditure and government final consumption expenditure in the national economy. Consumption and inflation are important macroeconomic indicators. *Education* represents human capital in the model. The variable is the log of secondary education, general pupils. *Globalisation* is captured with the KOF index of globalisation (Gygli et al., 2019). Globalisation is an important determinant of migration. The level of globalisation may affect the migrant-sending countries. *Democracy* represents the institutional factor in development. *Remittance* is the personal remittance received as a percentage of GDP. For this variable to positively impact on economic growth, it must have a positive sign and must be statistically significant. All the data is sourced from World Bank Development Indicators (WDI), Polity IV project for data on Democracy, while KOF for Globalisation data.

4. Results and discussion

We present the results of our econometric estimation of equation (1) in this section. The results are presented in Table 4 below. The results show that there is a conditional convergence for the African economies across all methods of estimation. All models except the model in column 1 control for *Remittance*. The *Log GDP per capita* has a coefficient of -0.015 in column 1. It implies a rate of conditional convergence of 1.5% per year. It would take any of these economies about 46 years halfway towards the steady-state output level. With a smaller *Log GDP per capita* coefficient in other models, it implies that the

time towards steady-state output level would be shorter. While the assumptions of the models differ, the results that these models generate appear to be similar. The variables *M2/GDP* and *Democracy* are not statistically significant across all models. Consumption is negatively signed across all models; it is statistically significant under FE, RE, HT, and SysGMM. One plausible explanation for this is that if the people grow tastes favouring foreign goods as against locally manufactured goods, consumption will not drive economic growth. Many African countries depend on goods and services from foreign sources, which may be speaking to this situation.

Table 2: The impact of remittances on economic growth in Africa

Variable	(1)	(2)	(3)	(4)	(5)	(6)
LGDPPC	-0.01474**	-0.01543**	-0.06481***	-0.02826***	-0.05013***	-0.04048***
	(0.00592)	(0.00657)	(0.01907)	(0.00936)	(0.01425)	(0.01050)
M2/GDP	0.00027	0.00022	-0.00035	-0.00011	-0.00034	0.00051
	(0.00017)	(0.00017)	(0.00028)	(0.00023)	(0.00025)	(0.00077)
Consumption	-0.00051	-0.00061	-0.00084*	-0.00092*	-0.00096*	-0.00126**
	(0.00035)	(0.00045)	(0.00047)	(0.00056)	(0.00052)	(0.00053)
Education	-0.00568**	-0.00569**	-0.00468	-0.00811**	-0.00808**	-0.00456
	(0.00258)	(0.00260)	(0.00455)	(0.00370)	(0.00335)	(0.00565)
Bank credit	-0.00027	-0.00015	0.00070**	0.00024	0.00058**	-0.00052
	(0.00020)	(0.00024)	(0.00030)	(0.00029)	(0.00029)	(0.00074)
Inflation	-0.00001***	-0.00002	-0.00004***	-0.00004***	-0.00004***	-0.00007
	(0.00000)	(0.00002)	(0.00001)	(0.00001)	(0.00001)	(0.00004)
Globalisation	0.00143***	0.00124***	0.00153**	0.00159***	0.00176***	0.00179**
	(0.00040)	(0.00038)	(0.00057)	(0.00046)	(0.00055)	(0.00076)
Democracy	-0.00013	-0.00005	-0.00026	0.00009	-0.00007	-0.00381
	(0.00063)	(0.00072)	(0.00077)	(0.00066)	(0.00070)	(0.00230)
Remittance		0.00021	-0.00013	0.00013	-0.00003	-0.00002
		(0.00024)	(0.00011)	(0.00018)	(0.00011)	(0.00102)
R^2	0.36	0.32	0.49	0.17		
Rho			0.90	0.45	0.87	
Hausman			45.24***			
AR1p						0.01
AR2p						0.60
Sarganp					0.39	
Hansenp						0.58
Instruments						29
N	247	235	235	235	235	235
T. Dummies	Yes	Yes	Yes	Yes	Yes	No
R. Dummies	Yes	Yes	No	Yes	Yes	Yes
Method	OLS	OLS	FE	RE	HT	SysGMM

Notes: Significance levels: *: 10%, **: 5%, ***: 1%. Robust standard errors are in parentheses. The dependent variable is the GDP per capita growth rate. LGDPPC is log gross domestic product (GDP) per capita lagged by one period. M2/GDP refers to broad money (M2) as a percentage of GDP. Consumption refers final consumption expenditure as a percentage of GDP. Sarganp refers to the Sargan-Hansen statistic p-value, while Hausman refers chi-square statistic of Hausman specification test. T. Dummies means time dummies, while R. Dummies refers to regional dummies. All models have 44 clusters. Source: Author's computation.

Education represents human capital. It should drive growth. However, the variable is negatively signed in our results. Where education is lacking in content, this may be the outcome of the situation. If the education provided does not give the requisite skills to support the economy, its impact would be negative. *Bank credit* is positively signed where it is statistically significant. Finance oils the wheel of economic growth. *Inflation* has the appropriate sign. It has a negative sign indicating that inflation has negative macroeconomic implications. Exposure to trade and cooperation with other countries is quite good. *Globalisation* has made it possible for nations to trade and cooperate at an unimaginable level. *Globalisation* appears to be yielding good results for African countries. It is positive and statistically significant across all models. Besides, the magnitude of the coefficient of this variable is relatively close for all models.

The RE and FE results are pretty similar, except for the magnitude of *Log GDP per capita* coefficients. The FE has a larger coefficient. This estimator takes care of the country-specific effects. The two results are compared using the Hausman specification test. The result of the test indicates that we fail to accept the null hypothesis that the difference in coefficients is not systematic at a 1 percent level of significance. The RE result would be efficient only under the null hypothesis, while the FE will be efficient under both the null and alternative hypotheses. The result of the specification test indicates that only the FE is efficient. The Sargan-Hansen statistic obtained from the xtoverid test (Schaffer & Stillman, 2010) is used to determine the consistency of the HT estimator. This test is used to determine whether the instruments for this model are exogenous; that is, the regressors are not correlated with the idiosyncratic error term, and the specified endogenous variables are not correlated with individual-specific effects. With a p-value of 0.39, we cannot reject the null that the regressors are not correlated with the error term.

The coefficient of *Log GDP per capita* under the SysGMM, including the HT, lies in between the coefficients of OLS and FE. This implies that our model is estimated correctly. *Rho*, a measure of inter-class correlation, is large for both FE and HT. It means that over 87% of the variance is due to differences across the panel for both FE and HT. Despite having passed their evaluation criteria, the coefficient of *Remittance* is not statistically significant under these models (FE, HT, and SysGMM), even when we control for interactions between remittances and financial development variables (result not shown here). If the variable had been statistically significant, it would have indicated that *Remittance* flows have a negative impact on economic growth. Our plausible explanation for this is that many high migrant-sending countries are poor and in crisis situations. Of the top ten countries listed as high remittance-receiving countries, no one among them is listed as a stable and sustainable country under the failed state index. They are categorised under elevated warning to very high alert. This situation could be driving remittances. Furthermore, there is a measurement problem in remittances. The actual remittance flows are difficult to ascertain for many countries. The

remittances that flow through the informal channels are rarely captured. Thus, the actual impact of remittances on the recipient countries may be challenging to ascertain.

Besides, except remittances are spent on locally produced goods, it might not improve the macroeconomic situations of the remittance-receiving countries (Clemens & McKenzie, 2018). Moreover, the offsetting effect of migration could be damaging to the home country. Many African countries lose medical and other skilled personnel to developed and emerging countries. These migrant workers send money to their countries. However, the countries lose more because many households must embark on treatments abroad as those that could have given them the needed medical treatments are working outside the countries. In effect, they tend to spend more than they receive in foreign currencies, which harms their economies. Of course, the effect of remittances here would be harmful, or at best, have a neutral impact. Still, on the labour issue, many able body women whose husbands are working abroad tend to withdraw from formal employment (Barajas *et al.*, 2009). Those who continue to work move into informal trading that may not be captured in national accounts. Additionally, remittances are like resource wealth; they have destructive effects on the tradable sectors of the recipient countries (Amuedo-Dorantes & Pozo, 2004). This conclusion supports Chami, Fullenkamp, and Jahjah (2005), Barajas et al. (2009), Rao and Hassan (2011), Bettin & Zazzaro (2012), Fenny, Iamsiraroj, and McGillvray (2014), Lim and Simmons (2015), Clemens and McKenzie (2018), and Bird and Choi (2020).

5. Conclusion

This study looks at the impact of remittances on economic growth in Africa. The study is motivated by literature on remittance flows to developing countries and efforts at the policy level by governments of developing countries to attract more remittance inflows. Governments in developing countries now develop policies to attract remittances as they are seen as needed financial resources to improve their economies. Quite interestingly, data shows that remittance flows to developing countries are now triple the ODA and larger than FDI. These figures are interesting enough to attract the policy attention of governments of developing countries, especially developing countries of Africa. For instance, Nigeria is one of the largest recipients of remittances globally. The colossal figure has motivated the government to pay attention to the Nigerian diaspora communities. However, the impact on the national economy is almost non-existent. Do remittances matter for economic growth, especially in Africa?

Though we establish conditional convergence for African economies, our results show that remittances do not affect economic growth. These results remain the same even when we control for interactions between remittance flows and financial development variables. Our results support the existing studies (Barajas et

al., 2009; Lim & Simmons, 2015; Clemens & McKenzie, 2018) that argue that remittances do not matter for economic growth. There are many reasons for this. One, there is a measurement issue in remittance data; official data does not actually reflect what happens in the real world as remittances flow through informal channels that are not captured in national accounts. Besides, remittances have labour market effects in the recipient countries as many women whose husbands are working abroad withdraw from formal employments. Additionally, remittances are not different from resource wealth; they hurt the currencies of the recipient nations and destroy the tradable sectors. Most high remittance-receiving nations are not stable and sustainable nations according to the failed state index. This situation may be attracting remittances to them, but what can they achieve in an unstable environment? The net effect of remittances would be harmful if at all it exists. "Even if remittances positively affect growth, the net effect of remittances-caused-by-migration need not be positive for many real-world migration corridors", according to Clemens and McKenzie (2018).

While developing countries' governments should continue to romance their diaspora communities, they must do more by looking inward to unlock growth and development in their countries. Many developing countries, especially African countries, are not resource poor. African countries have the necessary natural and material resources to become stable and growing nations. Thus, the potential for economic growth lies with the way resources are managed at home. African governments must strive to retain skilled personnel trained with hard-earned state resources rather than losing them to emerging and developed countries. These people could drive growth in their home countries if the condition at home is stable. Chasing remittances is not necessarily bad; the conditions that give rise to dependence on high remittance from outside rather than from resources within a nation need to be reviewed. If the home country is conducive, many migrants will not leave the comfort of their homes and families to live in foreign lands.

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