MACROECONOMIC IMPACT OF REMITTANCES: EVIDENCE FROM NIGERIA

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ABSTRACT
This study investigated the impact of remittances by Nigerians in the diaspora on economic growth for four decades (1980-2020) using the Error correction model developed by Engel and Granger. The impact of remittances on economic growth in developing countries in the literature has is mixed. This research is focused on the impact of per capita remittances as a source of per capita GDP growth relative to other sources of investment in the economy such as investments in human and physical capital within the production framework. We found that remittances and investment in physical capital had positive and significant impacts on the gross domestic product in Nigeria while investment in human capital development and institutional factor both have negative and significant effects on growth. With deliberate policies put in place to strengthen this outcome, the impact could even be greater in the future. Based on the result, the study recommends introduction of more financial innovation tools and inclusion in the use of such tools to reach remote areas. This will increase the volume of remittances, widen the use of the formal financial system in its use and thus its contribution to economic growth.

Keywords: Remittances, Error Correction model, Institutional quality, Gross Domestic Product.

JEL Classification numbers: F20, F22.

I INTRODUCTION
Economists and decision-makers are increasingly concerned about international migration and the associated transfer of wages from the nations where migrants labor. According to estimates, one in every 35 people worldwide is an immigrant from another country. Globally the population of migrants is put at 281 million, which is about 3.6 percent of the world's population (World Migration Report, 2022). The upsurge in migration trends became enormous towards the beginning of this millennium. In the United States of America for instance, national census figures of 2000 reveal that 47 percent of the foreign population in that country only entered the country in the 1990s. In Europe, the population of migrants rose by 37.2 percent from 15.8 million in 1998 to 23.8 million in 2022, representing 5.3% of the EU population (OECD, 2023). Currently, migrants make up over 95% of the private sector workforce in Qatar and the United Arab Emirates, and an average of 70% of the workforce in the Gulf Cooperation Council (GCC) (Sherman, 2022). The global trend is that more people migrate from developing (poor) countries to developed

countries in search of jobs as migrant labour from low-income countries is often cheaper than indigenous labour.

However, the influx of migrants has raised several socio-economic and security concerns in nearly all developed countries today. More countries now impose anti-migration regulations to check the influx of migrants. In addition to growing security concerns posed by the migrants, civil society organizations (CSOs) and pressure groups in developed countries are increasingly concerned that cheap migrant labour can severely undercut the local workforce and reduce living standards. This is particularly so in countries without a minimum wage (like Singapore), where cheap migrant labour can put pressure on the local workforce to receive far less than what may be considered reasonable.

Although there are perceived drawbacks to the brain drain in Africa, it is hypothesized that talented migrants' remittances could improve the economic well-being of their families back home and help the balance of payments in their countries of origin. Despite global headwinds, the World Bank (2022) claims that remittances to low- and middle-income countries (LMICs) climbed by an anticipated 5% to $626 billion in 2022. Remittances are now routinely higher than official assistance in nations like Lesotho, Mauritius, Swaziland, and Togo than they were in the sub-Saharan African region before the 1990s. The term "new official development assistance" now refers to workers' remittances, which have now overtaken official development aid and are only second to foreign direct investment in terms of external development money for poor nations (World Bank, 2022)

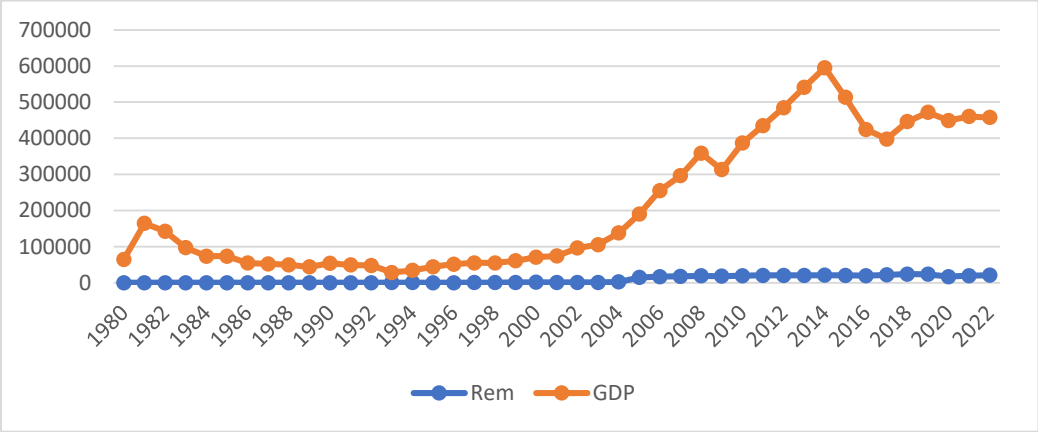
The beneficial effects of remittances need however to be weighed against the losses due to the "brain drain" resulting from the massive migration of skilled manpower in search of better working conditions in developed countries. The debate on whether the emigration of qualified manpower results in the retardation of economic growth in countries of origin, in the long run, has been inconclusive (Aliu & Ogbeide-Osaretin, 2022). The notion of brain drain has been questioned by a series of recent theoretical studies that point out that human capital formation may not be exogenous to movement. Those who argue that emigration causes brain drain are of the view that it reduces capital stock, which lowers productivity and thus causes damage to long-term growth and development. However, proponents of the beneficial effects of emigration argue that the higher returns on developing the additional skills they acquire, interactions, and work experiences are added gains to the monetary value of remittances and that the benefits of emigration far outweigh any losses associated with brain drain.

There has been a dramatic increase in remittance inflow to Nigeria in the past four decades, becoming the 10^{th} largest recipient of remittances in the world in 2022 and receiving about 40% of all remittances to sub-Sahara Africa in 2022 (WDI, 2023) (see Appendix 1). Remittances to Nigeria increased by over 900-fold from about $22 million in 1980 to more than $20 billion in 2022. The United Nations Development Program (UNDP) asserts that remittances increase consumption and investment, which boosts output growth and impacts the macroeconomy. Remittances also raise households' purchasing power, enabling them to invest in things like food, housing, and health that will improve their quality of life and productivity in the long run.

Historically, economic growth has been primarily influenced by factors like capital (remittances), labor, and technology, according to economists, however, as the recent economic and financial disruptions in the world has shown, the situation in both the home and migrants' countries of residence affects the volume of remittances with serious economic effects on the home country. (Konte, 2018; Musa et al., 2022; Clemens & McKenzie, 2018).

In the face of the economic challenges with regard to capital flows around the world, this paper aims to investigate the impact of per capita remittances on economic growth in Nigeria. The choice of per capita data as against the nominal values used by other researchers (Loto & Alao, 2016; Adeseye, 2021) is because it provides a more detailed information for analytical purposes and improves cross-national comparisons of data for the same variables.

Figure 1: Trends in Remittances and economic growth in Nigeria 1980 – 2022



Source: Authors calculation using data from World Bank World Development Indicators database 2023

The mixed evidence in the extant literature regarding the effect of remittances on economic growth and the dearth of studies that have looked at this topic using per capita data for Nigeria were the motivations for the conduct of this study. The rest of the paper in broken into four sections thus: letrature review in section two, methodology in section three, result and discussion of findings in section four and conclusion and recommendations in section five.

2 LITERATURE REVIEW

2.1 Measuring Remittances

The Balance of Payments (BOP) treats remittances as transfers. The fifth version of the BOP Payments Manual (BPM5) defines transfers as balancing entries for tangible resources or monetary goods given by one economy to another without expecting anything in return (Addison, 2004). In other words, a transfer happens when one economy gives something to another economy yet neither economy receives anything in return in the form of actual resources, goods, or services. Remittances are seen as recent transfers that take place between non-residents and other private sectors of the economy, including those that happen between people, non-governmental institutions, organizations, groups, or non-resident government entities. Workers' remittances specifically refer to current transfers made by migrants who are working in foreign economies and are regarded as residents there. The emphasis of this work is on this sort of transfer, which frequently involve close family members.

Remittance inflows into a country are often measured using the estimated balance of payments, household surveys of beneficiaries, and banks or other financial institutions in the origin countries. Here, the BOP measure was applied. The remittance flows that are provided here are specifically based on World Bank BOP estimates. Remittances are conveyed through a variety of channels,

making it challenging to account for the whole amount in the receiving nation's BOP figures, which frequently understate the true volume of remittances. Due to these issues, drawing firm conclusions on the real effects of remittances on the economy is challenging.

2.2 Empirical Literature

Scholarly research on remittances has received a lot of interest in both developed and developing countries with mixed results which are positive, negative, or no effect. The literature also shows that while most studies investigated the direct effect of remittances on economic growth (Cismas, Curea-Pitorac, & Vadasan, 2020; Ekanayake & Moslares, 2020; Onyike, Ekeagwu & Alamba, 2020), others examined the relationship between remittances and economic growth through intermediary variables such as financial sector development (Olayungbo & Quadri, 2019; Peprah et al, 2019), foreign direct investment (Golitsis, Avdiu & Szamosi, 2018), monetary policy (Salisu & Haladu, 2021) and institutional quality (Imad, 2017; Adams & Klobodu, 2016).

To objectively assess the impact of migrant remittances on economic growth in Nigeria, Adeseye (2021) used annual data for 29 years (1990-2018), descriptive statistics, multiple linear regressions, and ANOVA. Remittances and Nigeria's gross domestic product, exports, and imports were found to be significantly correlated. The report suggested that as a growth strategy, policymakers should implement efficient monetary and fiscal policies to enhance the remittance channel, aid flows, and foreign direct investment.

The impact of international remittances on Nigeria's economic growth from 1986 to 2017 was examined by Onyike, Ekeagwu, and Alamba in 2020. The ARDL approach to cointegration and VECM were used to analyze the data to identify the long- and short-term links between economic growth, remittances, gross domestic investment, interest rates, and inflation rates. The study's findings showed that while GDI and interest rates had negative effects on Nigeria's economic growth in the long run, remittances, human capital, and inflation rates had favorable effects. To ensure that remittances are used effectively, the study recommended that the government put in place facilities and incentives that will make sending money abroad through a formal channel more affordable. Additionally, the introduction of new savings instruments and the dissemination of information on investment.

Adesina-Uthman (2019) used a variety of approaches to investigate the impact of remittances on economic growth in Nigeria. The study finds that remittances are important for overall economic growth, but they alone may not be very important for the contribution of the diaspora to economic growth. To improve more formal remittance instruments and decrease informal remittances, it suggests a policy on bilateral remittance corridors between Nigeria and several nations.

Loto and Alao (2016) examined the effects of overseas remittances on economic growth in Nigeria from 1980 to 2016 using the Vector error correction modeling (VECM) technique to analyze the long-run and short-run effects. The researchers discovered that the remittances sent home by migrants show a long-term positive, statistically significant association with economic growth, with a unidirectional causality from remittances sent home by migrants to GDP per capita. To establish a favorable association with economic growth in Nigeria, the study advises that workers' remittances be strategically harnessed by making sure that the money is spent on locally-made items rather than imported ones.

Romania was the focus of Cismas, Curea-Pitorac, and Vadasan's (2020) analysis of the impact of remittance influx on economic activity in CEE nations. Romania did not exhibit any evidence of either a long- or short-term influence or Granger causality, but the hypothesis held for other CEE

nations. The authors identified six nations (Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, and Latvia) for which they could estimate long-run parameters, and two of them, the Czech Republic and Lithuania, also demonstrated a positive short-run influence of remittances on economic growth. According to another empirical investigation by Sutradhar (2020). for Romania, remittances that entered the nation through official channels had no discernible impact on economic growth. According to this study, remittances have a detrimental impact on economic growth in Bangladesh, Pakistan, and Sri Lanka, while on the other hand, it was beneficial for India's economic expansion. This study also shows that remittances and economic growth in four nations have a combined significant and adverse effect.

Using panel data econometrics techniques, Chami, Fullenkamp, and Jahjah (2008) examined the impact of remittances on economic growth for 113 countries from 1970 to 1998. They concluded that remittances hurt gross domestic product per capita and advised that to harness the developmental impact of remittances, they must be converted from compensatory transfers to investments, which calls for a deliberative policy to reform the policy framework for remittances. IMF (2005) found no statistically significant correlation between remittances and growth in per capita or between remittances and other variables like education levels or investment rates in a study of 101 developing nations over a lengthy period (1970–2003). However, it was noted that remittances are helpful in a setting with stable institutions, a good investment climate, sound policies, and well-developed financial systems. It contends that in this situation, a larger proportion of remittances will probably be used to increase physical and human capital, which fosters economic growth.

Ekanayake and Moslares (2020) assessed the economic importance of remittance transfers to 21 Latin American nations using data spanning the years 1980–2018. The results show that in the majority of the countries examined, worker remittances had inconsistent short- and long-term effects on economic growth. They however assert that worker remittances tend to lower poverty rates in Latin America.

Guiliano and Riuz-Arranz (2009) argued however that in economies where the financial system is under-developed, remittances alleviate credit constraints and work as a substitute for financial development, improving the allocation of capital, accelerating economic growth, and promote financial development in an underdeveloped system. In line with this finding, an earlier study by Adams (2006) found that remittance-receiving households in Guatemala tend to spend more considerably on housing, education, and health than non-remittance-receiving households. He explained that expenditures on education and health at the household level contribute to national human capital development which is an important component of national economic growth. It can be inferred from these studies that channeling remittances into productive investments such as education and health, in an economy with sound policies and stable institutions, could lead to economic growth.

2.3 Summary and Gap in Literature Reviewed

In the literature, studies such as IMF (2005), Sutradhar (2020) for Bangladesh, Pakistan and Sri Lanka, and, Chami, Fullenkamp, and Jahjah (2008) argue in favour of the absence of positive effect of remittances on economic growth, while other studies by Guliano and Ruiz – Arranz (2009), Onyike, Ekeagwu, and Alamba (2020), Adams (2006) and Sutradhar (2020) for India, found that remittances positively impact a country's growth potentials. All the studies reviewed in Nigeria made use of nominal values of remittances in the analysis while this study applied per

capita remittance data which provides more detailed information for analytical purposes and improves cross-national comparisons of data for the same variables.

3 METHODOLOGY

3.1 Theoretical Framework and Econometric Model

The study is anchored on endogenous growth theory, which believes that under the assumption of constant returns, the expansion of a nation's production is driven by endogenous inputs of physical capital, human capital, and technical advancement. The model's proponents such as Romer (1990) contend that the endogenous growth model emphasizes factors such as human capital development, total factor productivity, technological diffusion, and physical investments, and these allow for the detection of the remittance-growth effect (Nelson & Phelps, 1996; Udah, 2011). Remittances are a factor in several channels important for effective economic growth, including the investment in physical and human capital, external capital inflows such as ODA, trade openness, and institutional factor.

Therefore, to examine the relationship between remittances and economic growth, this study adopts the model of Nsiah and Fayissa (2013) and Kadozi (2019). The model is specified as:

$$PCY_t = f(REM) \quad 1$$

Other studies have incorporated control variables that affect the relationship between remittances and economic growth including institutional quality, investment, human capital, external capital, and trade (Nsiah & Fayissa, 2013; Ekanayake & Moslares, 2020; Cismas, Curea-Pitorac, & Vadasan's, 2020; Eke et al, 2018). Incorporating these variables into the model, we have:

$$PCY_t = f(REM, GFC, SSE, TOT, FDI, PRI) \quad 2$$

In the model in equation 2 PCY is per capita gross domestic product, REM is worker remittances, GFC is gross fixed capital formation (physical investment), SSE is secondary school enrollment (human capital), TOT is terms of trade, FDI is foreign direct investment and PRI is political freedom index.

To estimate the long-term effect of remittances on economic growth from equation 2, we include the constant and stochastic error terms, which become:

$$PCY_t = \beta_o + \beta_1 REM_t + \beta_2 GFC_t + \beta_3 SSE_t + \beta_4 TOT_t + \beta_5 FDI_t + \beta_6 PRI_t + e_t \quad \mathbf{3}$$

The short-term version of equation 3 can be presented in equation 4 with ECT_{t-1} as the error correction term of the short-run equation which shows the speed of adjustment from the short-run disequilibrium to long-run equilibrium.

$$\Delta PCY_t = \beta_o + \beta_1 \sum_{i=1}^{n} \Delta PCY_{t-1} + \beta_2 \sum_{i=1}^{n} \Delta REM_{t-1} + \beta_3 \sum_{i=1}^{n} \Delta GFC_{t-1} + \beta_4 \sum_{i=1}^{n} \Delta SSE_{t-1} + \beta_5 \sum_{i=1}^{n} \Delta TOT_{t-1} + \beta_6 \sum_{i=1}^{n} \Delta FDI_{t-1} + \beta_7 \sum_{i=1}^{n} \Delta PRI_{t=1} + \vartheta ECT_{t-1} + e_t \quad \mathbf{4}$$

The theoretical a priori expectation is that an increase in per capita remittances will lead to an increase in gross domestic product per capita. This is also expected to apply to secondary school enrollment, gross capital formation, foreign direct investment, terms of trade, and political freedom.

3.2 Data Measurement and Sources

The measurement and sources of variables used in this study are as follows: PCY which is the dependent variable, is gross domestic product per capita measured as gross domestic product in million US dollars as a ratio of total population. This measure had been used by (Guliano & Ruiz – Arranz, 2009; Ekanayake & Moslares, 2020). The independent variables include REM which is workers' remittances per capita measured as remittances in million US dollars as a ratio to the total population. Studies that have used remittances: Mustapha-Jaji and Ganiyat (2023). The lagged values were applied following Ekanayake & Moslares (2020) and we introduced per capita remittances due to the perceived advantage outlined earlier. The PRI is a political rights index used to capture the effect of this institutional factor. In this study, we will use 0 to denote "free" for periods of democratic rule and 1 for "not free" to depict periods of military rule. Fayissa and Nsiah (2008) have argued that freedom (political, economic, social, transparency, and security) is a necessary condition for economic growth and development. FDI is foreign direct investment, used to capture the impact of external sources of capital on growth as used by Adjei et al (2020) and TOT is terms of trade and measures the degree of openness of the economy and the extent to which it supports economic growth. This has been applied in studies on economic growth. SSE is the secondary school enrollment rate which is a measure of human capital development as used by Kadozi (2019) and Adams, Mensah, and Klobodu (2016). All the data except PRI were sourced from the World Development Indicators of the World Bank, 2023.

4 RESULT AND DISCUSSION OF FINDINGS

Employing the Augmented Dickey-Fuller and Philip Peron Dickey-Fuller tests, we first test for the time series properties of the variables. The variables PCY, REM, GCF, TOT, FDI, PRI, and SSE were found to be stationary at level 1(0) in the Augmented Dickey-Fuller unit root test. In the Philip Perron Dickey-Fuller unit root test, PCREM, FDI, GCF, and PRI were stationary at level; while PCY, SSE, and TOT were stationary at first difference. Since the time series of the variables were found to be integrated at level in the Augmented Dickey-Fuller unit root test, a co-integration test was conducted to determine whether a long-run equilibrating relationship exists among the variables.

Table 1
Order of integration of variables

Variable	PCY	PCREM	FDI	GCF	PRI	SSE	TOT
ADFt	1	1	1	1	1	1	1
PPDt	1	0	0	0	0	1	1

Source: Authors computation, 2022

ADFt is Augmented Dickey-Fuller unit root test and PPDt is Philip Perron Dickey-Fuller unit root test.

We used the Johansen co-integration test to investigate the long-run relationships among the variables of interest in our equation given the result of the Augmented Dickey-Fuller test which shows that all variables are stationary at level in the model. Here, we examine the null hypothesis of no co-integration against the alternate of the presence of co-integration in our model.

Table 2
Johansen cointegration test

Test assumption: Linear deterministic trend in the data
Series: PCY REM GCF FDI PRI SSE TOT

Eigen value	Likelihood Ratio	5% CV	1% CV	Hypothesized No. of CE(s)
0.94272	218.572	124.24	133.57	None **
0.73598	115.546	94.15	103.18	At most 1 **
0.56210	67.6033	68.52	76.07	At most 2
0.41786	37.8228	47.21	54.46	At most 3
0.32509	18.3922	29.68	35.65	At most 4
0.11028	4.22876	15.41	20.04	At most 5
0.00736	0.02614	3.76	6.65	At most 6

Source: Authors computation, 2022 CV is critical value

From Table 2, the trace-test statistic of 218.572 is greater than the 5% and 1% critical values of 124.24 and 133.57 respectively, hence we reject the null hypothesis that R=0 in favour of the alternative hypothesis that R=1.The null hypothesis of R≤1 can be rejected at 5% and 1% level of significance since 115.546 is greater than 94.15 and 103.18. From the foregoing, therefore, we deduce that there are more than two integrating vectors among PCY, REM, GCF, FDI, PRI, SSE, and TOT. This confirms the existence of a long-run relationship between the variables in the specified model.

Table 3
Result of the parsimonious model

Variable	**Coefficient**	**Standard error**	**t-statistic**	**Probability**
C	143.3319	66.33532	2.160717	0.0394
D(PCY(-1))	0.149309	0.158504	0.941991	0.3543
D(PCREM)	0.029815	0.187598	-4.158930	0.0158
D(PCREM(-1))	-0.290932	0.271305	-1.072342	0.2927
D(GCF(-1))	0.001498	0.001034	-0.480582	0.0345
D(SSE(-1))	-0.000152	0.000138	-1.101713	0.2800
D(PRI(-1))	-0.051438	201.5884	-3.269304	0.0029
ECM(-1)	-0.030217	49.33800	0.382085	0.0028
R^2 = 0.741				F-Statistic = 92.7844
Adjusted R^2 =0.7230				DW Statistic = 1.91

Source: Authors computation, 2022

It can be deduced from Table 3 that there is a positive and statistically significant relationship between per capita remittances and per capita income in Nigeria. This means that an increase in workers' remittances to the country will positively impact economic growth. The coefficient of REM which is 0.0292 indicates that a 100% increase in workers' remittances results in a 2.92 percent growth in GDP per capita in the current year and this relationship is statistically significant ($p = 0.015$). This is consistent with our a priori expectation and supports the findings of similar studies which found that remittances could help relieve the credit constraints faced by developing countries and hence engender economic growth. This finding is consistent with studies by Sutradhar (2020) for India, Adams (2006), and Onyike, Ekeagwu and Alamba (2020) for Nigeria, which discovered a positive effect of remittances on economic growth but is contrary to the findings by IMF (2005) and Chami et al (2008).

The positive impact of remittances in Nigeria may not be unconnected to the increased volume of remittances which has increased over 900-fold from about $22 million in 1980 to more than $20 billion in 2022, accounting for over 40% of total remittances to sub-Saharan Africa. The introduction and increased utilization of financial innovation tools such as internet banking and point of sale for business transactions may have led to increased remittances to Nigeria. These tools may have served as incentives for increased use of the formal financial system for remittance transactions which may have eased credit constraint and contributed positively to economic growth in the country.

Other variables with signs that conform to our a priori expectations are one year lag of GCF and one year lag of the institutional factor measured by the political rights index (PRI). We found that the previous year's investment in physical capital (GCF) as measured by Gross Fixed Capital formation has a positive and significant effect ($p = 0.034$) on GDP per capita. We observe that a 100% increase in investment in physical capital in the previous year will result in a 0.14 percent increase in GDP per capita. The negative and statistically significant relationship between the institutional factor (PRI) and GDP per capita shows that poor governance constitutes a bottleneck to economic growth in Nigeria. The finding agrees with that of Iyoboyi (2020) which found a negative effect of political terror on economic growth in the country.

Our result also indicates that there is a negative but insignificant relationship between investment in human capital measured by secondary school enrolment (SSE) and per capita growth. A 100 percent increase in investment in human capital would result in a 0.015 reduction in per capita GDP. This means that investment in human capital at the secondary school level retards growth as people who leave school at that level do not necessarily acquire the required capabilities which make them productive but rather have reduced work effects which retards per capita GDP. Remittances and other variables of interest account for a 72% percentage change in per capita income (PCY) and this is indicative of a good fit between the regressors and per capita income. The joint test of significance of all the parameter estimates conducted using the F statistic shows that it is significant at both the 5% and 1% levels. From our regression result the F*statistic (calculated which is 92.78) is greater than F-ratio (tabulated) which are 2.69 and 4.02 at 5% and 1% level respectively. This means that the R^2 is statistically significant and that the populations from which the samples are drawn do differ.

5 CONCLUSION AND RECOMMENDATIONS

This study examined the impact of remittances on economic growth in Nigeria for the period 1980 to 2022 using the Johansen co-integration test in the context of an error correction mechanism. The study used secondary data which were sources from the World Development Indicators (WDI). Per capita remittances (REM) in the current year was found to be a positive and significant factor in enhancing economic growth in Nigeria. It also found that poor governance constitutes a major bottleneck to economic growth in Nigeria. Hence, the study recommends introduction of more financial innovation tools and inclusion in the use of such tools to reach remote areas. This will increase the volume of remittances, widen the use of the formal financial system in its use and thus its contribution to economic growth. Also, promoting better governance mechanisms through rights and economic freedom will serve as a motivation for migrants to increase remittances, promote investments and enhance economic growth.

References

Adams, R. H. (2006). Migration, Remittance and Development: The Critical Nexus in the Middle East and North Africa. United Nations expert group meeting on International Migration and Development in Arab region, Saudi Arabia, March 2-8.

Adams, S. and Klobodu E. K. M. (2016). Remittances, regime durability and economic growth in Sub-Saharan Africa (SSA). *Economic Analysis and Policy,* 50, 1-8 https://doi.org/10.1016/j.eap.2016.01.002.

Adeseye, A. (2021). The Effect of Migrants Remittance on Economy Growth in Nigeria: An Empirical Study. *Open Journal of Political Science*, 11 (1), 99-122. https://doi.org/10.4236/ojps.2021.111007

Addison, E. K. Y. (2004). The Macroeconomic impact of Remittances in Ghana in Takyiwaa Manuh, ed. At home in the world, International Migration and Development in Contemporary Ghana and West Africa, Accra, Ghana. Sub-Saharan Publishers, Legon. 118-138.

Adjei, M., Bo, Y., Nketiah, E., Adu-Gyamfi, G. and Obuobi, B. (2020). The Effects of Remittances on Economic Growth in West Africa. *Journal of Human Resource and Sustainability Studies*, 8 (3), 312-329. doi: 10.4236/jhrss.2020.83018.

African Development Bank (2022). Development Without Borders: Leveraging the African Diaspora for Inclusive Growth and Sustainable Development in Africa. www.afdb.org

Aliu, T. I. and Ogbeide-Osaretin E. N. (2022). Migration and Remittance: Implication for Economic Development. *Africa. Journal of Economics and Allied Research*, 7 (2), 131-145

Chami, R., Fullenkamp, C. and Jahjah, S. (2008). Are immigrants Remittance Flows a source of capital for development? International Monetary Fund Working papers, 189, 2-15.

Cismaș, L., Curea-Pitorac, R. and Vădăsan, L. (2020). The impact of remittances on the receiving country: some evidence from Romania in European context. *Economic Research-Ekonomska Istraživanja,* 33 (1), 1073-1094. DOI: 10.1080/1331677X.2019.1629328

Clemens, M. and McKenzie, D. (2018). Why Don't Remittances Appear to Affect Growth? *Economic Journal* 128 (612), F179–F209, DOI.org/10.1111/ecoj.12463

Ekanayake, E. M. and Moslares, C. (2020). Do Remittances Promote Economic Growth and Reduce Poverty? Evidence from Latin American Countries. *Economies, 8* (35), 1-26. https://doi.org/10.3390/economies8020035

Eke, F. A., Okoi, O. B. and Eke, I. C. (2018). Institutional Quality, Energy Consumption Mix and Industrial Sustainability in Nigeria. *African Journal of Applied and Theoretical Economics.* 4 (1), 73-94

Fayissa, B. and Nsiah, C. (2008). The impact of Remittances on Economic growth in Africa. Middle Tennesse State University Department of Economics and Finance Working Paper series. 1, 1-20

Golitsis, P., Avdiu, K., and Szamosi, L. T. (2018). Remittances and FDI effects on economic growth: A VECM and GIRFs for the case of Albania. *Journal of East-West Business*, 24 (3), 188–211.

Giuliano, P. and Ruiz-Arranz, M. (2009). Remittances, financial development, and growth. *Journal of Development Economics*, 90 (1), 144-152. DOI.org/10.1016/j.jdeveco.2008.10.005

Imad, E. H. (2017). Do political institutions improve the effect of remittances on economic growth? Evidence South-Mediterranean countries. *Economics Bulletin,* 37 (3), 2133-2148. https://econpapers.repec.org/article/eblecbull/default4.htm

International Monetary Fund (2005). World Economic Outlook. Globalisation and External imbalance. Chapter 3 Washington DC. Retrieved from https://www.imf.org/-/media/Websites/IMF/imported-flagship-issues/external/pubs/ft/weo/2005/01/pdf/_chapter3pdf.ashx

Iyoboyi M. (2020). Assessing the Long-Run Impact of Institutions on Economic Growth: The Nigerian Experience. *Journal of Economics and Allied Research*, 4 (3), 140 - 151

Kadozi, E. (2019). Remittance Inflows and Economic Growth in Rwanda. *Research in Globalization, 1.* https://doi.org/10.1016/j.resglo.2019.100005

Konte, M. (2018). Do remittances not promote growth? A finite mixture-of-regressions approach. *Empirical Economics*, 54 (2), 747-782. DOI.org/10.1007/s00181-016-1224-z

Loto, M. A. and Alao, A. A. (2016). Remittances and the Growth of the Nigerian Economy. *Ethiopian Journal of Business and Economics,* 6 (2), 209 – 232.

Meyer, D. and Shera, A. (2017) The Impact of Remittances on Economic Growth: An Econometric Model. *Economia* 18 (2), 147-155. https://doi.org/10.1016/j.econ.2016.06.001

Musa , O., Njoku U., AjeniwenI, P. , Aliyu, M. , Onyibo, O. and Adejoh, M. (2022). The Capital Market and Economic Growth in Nigeria. *Journal of Economics and Allied Research*, 7 (4), 124 – 149

Mustapha-Jaji, O. and Ganiyat, A. (2023). Do Migrants' Remittances Drive Financial Inclusion in Nigeria? *Journal of Economics and Allied Research*, 8 (1), 1 – 12.

Nelson, R. R., and Phelps, E. S. (1996). Investment in Humans, Technological Diffusion, and Economic Growth," American Economic Association Papers and Proceedings, May, 56, 69 (75).

Nsiah, C., and Fayissa, B. (2013). Remittances and economic growth in Africa, Asia, and Latin American Caribbean countries: a panel unit root and panel cointegration analysis. *Journal of Economics and Finance,* 37 (3), 424-441. DOI.org/10.1007/s12197-011-9195-6

Onyike, S. C., Ekeagwu. I. C. and Alamba, C. S. (2020) International Remittances and Economic Growth of Nigeria. Ae-Funai Journal of Accounting, Business and Finance, 6 (1), 152-166 Downloaded at www.fujabf.org

Olayungbo, D.O. and Quadri, A. (2019) Remittances, financial development and economic growth in sub-Saharan African countries: evidence from a PMG-ARDL approach. *Financial Innovation* 5 (9), 1-25. https://doi.org/10.1186/s40854-019-0122-8

Organisation for Economic Co-operation and Development (2023). International Migrant Remittances and their role in development. International Migration Outlook, 3-18.

Peprah, J., Ofori, I. K., Asomani, M. (2019) Financial development, remittances and economic growth: A threshold analysis. *Cogent Economics and Finance,* 7 (1), 1-20 https://doi.org/10.1080/23322039.2019.1625107

Salisu, A. and Haladu, A. (2022) Analysis of the Relationship between Remittances and Monetary Policy on Economic Growth in Nigeria. *Journal of Economics and Allied Research* 7 (4), 211 - 224

Sherman, B. (2022). Changing the tide of Gulf's Migrant Workers. Wilson Centre Insight and Analysis. Downloaded from https://www.wilsoncenter.org/article/changing-tide-gulfs-migrant-workers

Sutradhar, S.R. (2020). The impact of remittances on economic growth in Bangladesh, India, Pakistan and Sri Lanka. *International Journal of Economic Policy Studies,* 14, 275–295. https://doi.org/10.1007/s42495-020-00034-1

Udah, E. B. (2011). Remittances, human capital and economic performance in Nigeria. International Journal of Human Development and Sustainability, 4 (1), 103 -117

World Development Indicators (2023) Database of World Bank

World Bank (2022). The World Bank Press Release. Downloaded from https://www.worldbank.org/en/news/press-release/2022/11/30/remittances-grow-5-percent-2022

World Bank (2022). Remittances are a critical economic stabilizer. World Bank Blog by Malpass, David. Downloaded from https://blogs.worldbank.org/voices/remittances-are-critical-economic-stabilizer

World Bank (2006). Global Economic Prospects; Economic Implications of Remittances and Migration. Washington DC. www.worldbank.org/prospects/migrationandremittance.

Appendix 1: Remittance flows to top 5 African countries as at 2022 (US$ millions)

Year	Nigeria	Ghana	Kenya	Senegal	Zimbabwe	Africa Eastern & Southern	Africa Western & Central	Sub-Saharan Africa	Middle East & North Africa
1980	21.95	0.9	27.72	77.05	16.89	878.79	518.92	1,397.70	6,532.63
1985	10.07	4.2	66	79.42	0.62	1,093.02	409.89	1,502.91	6,427.41
1990	10.01	6	139.26	142.07	0.85	1,651.90	711.1	2,362.99	10,484.48
1995	250.04	17.21	87.5	146.03	n.a	2,018.40	1,033.89	3,052.29	12,084.97
2000	1,391.83	32.4	537.9	234.07	n.a	2,604.07	2,197.26	4,801.33	11,572.04
2005	14,640.08	99.18	424.99	789.14	n.a	3,400.27	16,722.66	20,122.94	22,482.13
2010	19,744.76	135.85	685.76	1,479.12	1,413.25	7,855.16	23,801.90	31,657.06	37,038.92
2015	20,626.05	4,982.44	1,569.27	1,757.75	2,046.58	10,991.48	31,217.37	42,208.85	50,172.27
2020	17,207.55	4,291.96	3,107.93	2,587.75	1,832.04	13,764.89	29,206.55	42,971.44	58,229.46
2022	20,945.00	4,664.28	4,091.00	2,710.65	2,047.41	18,452.76	33,988.47	52,441.23	65,837.29