

Journal of Applied and Theoretical Social Sciences

JATSS, 2024; 6(1), 74-87

First Submission:27.04.2023 Revised Submission After Review:26.03.2024 Accepted For Publication:30.03.2024 Available Online Since:31.03.2024

Research Article

Effect of Remittance Inflow on the Economic Growth of Nigeria Taiwo Owoeye^a & Oluwatoyin Babatunde Omoniyi^b

Abstract

This study examines the effect of remittance inflows on Nigeria economy as proxy with gross domestic product (GDP). The research specifically focuses on 41 years from 1981 to 2021, analyzing data from the Central Bank of Nigeria's statistical bulletin and the World Development Index. Through correlation analysis, unit root and co-integration tests, as well as error correction model estimation, the study investigates the relationship between remittance inflows and GDP growth. The results demonstrates that, in the short term, remittance inflows had an insignificant negative effect on Nigeria's GDP growth (-0.337970, p > 0.05). However, in the long run, remittance inflows shows a significant positive impact on the GDP growth rate (1.973835, p < 0.05). These findings highlight the importance of channeling remittances into productive activities within the home country. While short-term inflows may not contribute significantly to economic growth, sustained and increasing remittance inflows can play a crucial role in driving Nigeria's economic expansion. The study recommends the implementation of policies, programs, and systemic reforms to encourage the productive utilization of remittances. It emphasizes the need to ensure that remittances are utilized in ways that contribute to longterm economic growth and development. Furthermore, the study calls for the establishment of measures to prevent brain drain, protecting Nigeria's valuable human capital from being solely driven by financial incentives, which may not be evenly distributed for productive purposes in the short and medium term. These measures will help foster a balanced approach to leveraging remittance inflows for sustainable economic progress in Nigeria.

Keywords: remittance, economic growth, inflow, Nigeria

JEL Codes: F24,F22,C01, O47, O15

(Corresponding Author)



^aDr., Ekiti State Üniversity, Faculty of Social Sciences, Department of Economics, Ado Ekiti/Nigeria, taiwo.owoeye@eksu.edu.ng, ORCID ID: https://orcid.org/0000-0001-6630-2050
^bLecturer, BamideleOlumilua Üniversity of Education Science and Technology, School of Social and Management Sciences, Department of Economics, Ikere Ekiti/Nigeria, omoniyi.oluwatoyin@bouesti.edu.ng, ORCID ID: https://orcid.org/0000-0001-9997-4013



Journal of Applied and Theoretical Social Sciences

JATSS, 2024; 6(1), 74-87

İlk Başvuru:27.04.2023 Düzeltilmiş Makalenin Alınışı:26.03.2024 Yayın İçin Kabul Tarihi:30.03.2024 Online Yayın Tarihi:31.03.2024

<u>Araştırma Makalesi</u>

Taiwo Owoeyea & Oluwatoyin Babatunde Omoniyib

Öz

Bu çalışma, nakit girişlerinin Nijerya'nın ekonomik büyümesi üzerindeki etkisini incelemektedir. Calışma, özellikle 1981'den 2021'e uzanan 41 yıllık bir süreve ait Dünya Kalkınma Endeksi ve Nijerya Merkez Bankası istatistik bülteninden elde edilen ikincil zaman serisi verilerini analize odaklanmıştır. Toplanan veriler, korelasyon analizi ve birim kök testi, es bütünlesme testi ve hata düzeltme modeli tahmini ile analiz edilmistir. Sonuc, kısa vadede nakit girişinin Nijerya'nın GSYİH büyümesi üzerinde önemsiz bir negatif etki yarattığını (-0.337970, p > 0.05), uzun vadede ise nakit girişinin GSYİH büyüme oranı üzerinde önemli bir pozitif etki yarattığını (1.973835, p < 0.05) göstermiştir. Bu çalışma, kısa vadede nakit girişinin, anayatandaki alıcıların üretken katılımına kanalize edilmediği takdirde. Nijerva'nın ekonomik büyüme düzeyine zarar verebileceğini ortaya koymuştur. Çalışma, para girişinin verimli kullanımını teşvik etmek için politikaların, programların ve sistemik reformların uygulanmasını tavsiye etmektedir. Para girişlerinin uzun vadeli ekonomik büyümeye ve kalkınmaya katkıda bulunacak şekilde kullanılmasının sağlanması ihtiyacını vurgulamaktadır. Ayrıca çalışma, Nijerya'nın değerli insan sermayesini, kısa ve orta vadede üretken amaçlar için eşit şekilde dağıtılamayabilecek fon akışıyla takas etmemek için beyin göçünü önleyecek tedbirlerin oluşturulması çağrısında bulunmaktadır. Bu önlemler, Nijerya'da sürdürülebilir ekonomik ilerleme için nakit girişlerinden yararlanmaya yönelik dengeli bir yaklaşımın geliştirilmesine yardımcı olacaktır.

Anahtar Kelimeler: para girişi, ekonomik büyüme, nakit girişi, Nijerya

JEL Kodlar: F24,F22,C01, O47, O15

omoniyi.oluwatoyin@bouesti.edu.ng, ORCID ID: https://orcid.org/0000-0001-9997-4013 (Corresponding Author)



^aDr., Ekiti State Üniversity, Faculty of Social Sciences, Department of Economics, Ado Ekiti/Nigeria, taiwo.owoeye@eksu.edu.ng, ORCID ID: https://orcid.org/0000-0001-6630-2050 bLecturer, BamideleOlumilua Üniversity of Education Science and Technology, School of Social and Management Sciences, Department of Economics, Ikere Ekiti/Nigeria,

Introduction

Remittances are widely recognized as a critical component for nations worldwide due to their interconnection and reliance on resources, particularly human resources, which drive migration across international borders. It is a mechanism by which migrants' home countries benefit, particularly in terms of providing financial support to those who live there (Maqsood, Muhammad, & Chaudhary, 2016). Remittances are payments sent back to the place of origin by migrants, and these unreturned transfers generally alleviate poverty for the recipients, who are typically family members (Migration Development Brief, 2017; Zakaria & Normaz, 2020). When compared to revenue generated by exports, foreign aid, foreign direct investment, and other kinds of capital inflows, remittances contribute significantly to a country's foreign exchange earnings (Stanley & Buckley, 2016). Governments frequently create revenue through taxes and fees, and remittances are no exception, as various financial service fees and related taxes are earned at the international level, improving the country's exchange revenues (Iheke, 2012).

Many scholars have long associated remittances with migrant workers. However, with the advent of globalization, remittances are increasingly related not just to earner movement but also to the residential status of both earners and employers. Remittances are reported in the balance of payments of countries around the world, including Nigeria, based on the residency status of workers in the host country. Remittance transactions are classified into two types. The first is worker remittance, which refers to cash transferred to the home country by persons who have relocated to a foreign country that is geographically separate from their home country (Emmanuel & Micheal, 2013). The second type arises when individuals receive money from employers in foreign countries while remaining in their native country. This is known as personal remittance or employee compensation. In this instance, all revenues are remitted totally to the home country. Earnings are partially remitted to the home country based on the preference of the migrated individual. As a result, disaggregating remittance indicators in empirical studies is necessary to acquire a better knowledge of their influence on growth prospects and provide deeper insights into harnessing them for greater economic growth in the country. A more full knowledge of the impact of remittances can be obtained by looking at them from several angles.

Empirical evidence on the impact of remittances on economic results in Nigeria is limited. Various studies' findings give contradictory perspectives. Remittances, for example, have been proven by Anetor (2019), Loto and Alao (2019), and others to have a detrimental influence on economic growth in both the short and long run. Emmanuel and Michael (2013), Iheke (2012), and Ubi and Essien (2018), on the other hand, think that remittances have a beneficial effect on economic growth. These disparities could be due to variances in the growth and remittance indicators used, the data period chosen, and the analytical methodology used. Notably, these studies concentrate on aggregate remittances (remittances as a percentage of GDP) or disaggregated remittances (personal or worker remittances), as well as various indices for measuring economic growth, such as GDP per capita or GDP asymmetry. Furthermore, the sorts of data used in the studies vary, with several of them lacking recent year data. Given these differences in findings, it is critical to thoroughly examine the influence of remittances on Nigerian economic growth.

In addition to the preceding analyzes, this study thoroughly explores the impact of remittance inflows on Nigeria's economic growth in both the short and long ranges

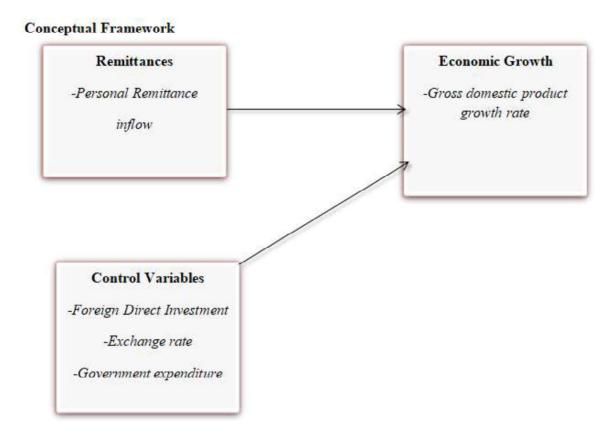
Review of Literature

Inflow of Remittances

Remittances are cash sent home from abroad by migrants in exchange for earnings. Remittances are the monetary and physical resources gained and obtained by migrants while trading abroad and sent to persons or relatives in the home country, according to Tewolde (2005). According to Chami et al. (2008), remittances are individual trades between families across borders rather than market-based exchanges. According to Larsson and Angman (2014), remittances are part of the money earned by workers working abroad and given back to their families in their home country. From a similar standpoint, remittances are household income from other nations acquired primarily from temporary or permanent migration of people to those countries. Remittances are monetary and non-cash things that migrate across borders via formal or informal routes, such as electronics, money, or products (IMF). Remittances are primarily sourced from two balance-of-payments items: income earned by workers in nonresident economies (or from non-resident employers) and transfers from residents of one economy to residents of another. According to this, remittances are divided into two categories: personal remittances and labor remittances. Personal remittance occurs when migrants make money in their country of residence, their employers are also residents, and a portion of their earnings are remitted to their home country; the funds sent are considered personal remittance. Workers/remittances, on the other hand, indicate the amount earned by non-migrants in the country, that is, within the geographical boundary of their home country, but from employers who are not residents of the country.

Economic Growth.

Economic growth is defined as the increase in goods and services produced in a country over the course of a year in comparison to the previous year. It can also be defined as the annual rise in the total value of goods and services produced in a country. Economic growth is a measure of aggregate economic progress at the national level. Economic growth may also be described as a sustained increase in a country's output of goods and services. Economic growth may also be defined as a persistent increase in the output of goods and services by a country. Similarly, Muritala and Taiwo (2011) defined economic growth as a rise in an economy's capacity to provide a wider range of commodities to its population. Economic growth can also be defined as an increase in output that is not accompanied by any institutional or technological improvements (Kindleberger, 1965, cited in Okpe, 2013). Jinghan (2007) defines economic growth as a sustained increase in a country's per capita income, accompanied by an increase in consumption, labor force, and trade volume, among other things. As a result, various measures such as GDP, GDP per capita, and GDP growth rate (whether nominal or real) have been developed and used in empirical research to capture economic growth prospects (Maqsood, Muhammad, & Chaudhary, 2016; Saidu & Salisu, 2020; Akinpelu & Ogunbi, 2013; Nyasha & Odhiambo, 2020; Nahar, Adha, & Azizurrhoman, 2018). The gross domestic product, or GDP, is the value of goods and services produced in a country in a given year, expressed per person, whereas the growth rate shows the rate of change in GDP between two consecutive years.



Note. Authors' Design (2023)

This study recognizes two remittance measures from the literature, workers' remittances and personal remittances, and will attempt to track how it influences economic growth, with the presence of control variables, foreign direct investment (FDI), government expenditure, and exchange rate, as used in many of the previous studies reviewed (e.g. Emmanuel & Obiechi, 2013; Akinpelu & Ogunbi, 2013; Ubi & Esien, 2018).

Theoretical Review

There are several growth theories discussed in literature such as the endogenous growth model, Solow growth model, neoclassical growth model, new Keynesian models, real business cycle models, just to mention a few. However, the Harrod-Domar growth model is reverend in this study due to its relevance to this study and its simplicity.

Harrod-Domar Growth Model

This growth model is rooted in the independent studies conducted by Roy F. Harrod in 1939 and Evsey Domar in 1946, which focused on the growth process. These theorists proposed that the key to economic growth lies in the formation of physical capital through savings and investment. They argued that the rate of output growth is directly related to the savings rate divided by the change in the capital-output ratio. As a result, there is a clear relationship between savings and growth. To summarize the production theory, output is determined by the interaction of capital and labor. However, developing countries frequently confront a capital shortage and rely largely on labor-intensive businesses. This scarcity is due to a lack of savings capacity as well as financial marginalization. As a result, a lack of capital becomes a barrier to output growth. In essence, this idea proposes that economic growth can be achieved by channeling savings into capital investment. Nonetheless, it should be highlighted that this study

is based on a closed economy, which means it does not take into consideration international commerce and transactions. Nonetheless, given the recognition of savings and investment as crucial drivers of growth, remittances can serve as a means of supplementing a country's savings capacity through support from emigrants. This, in turn, can enhance investment and ultimately contribute to the country's growth.

Empirical Review

Many research works has been conducted on the relatioship between remittances and economic growth in the past, like Shahedur's (2015) who examined remittances and growth relationship. Remittances, investment, growth rates, human capital, population growth, foreign direct investment (FDI), trade openness, political stability, inflation, and government spending are all factors considered in the study. Pooled regression analysis was used to evaluate panel data taken from 1981 to 2010. It was found that there is strong and positive association between remittances and growth in lower and upper-middle-income economies. However, it has been argued that the association may differ when other income groups are considered. In Muhammad and Chaudhary (2016), similar examination was conducted in Parkistan using GDPpc, workers' remittances to GDP ratio, export/GDP ratio, domestic investment/GDP ratio, and foreign direct investment/GDP ratio. The study, which was between 1980 and 2010, employed a multivariate regression model in analysing the data. The results showed that worker remittances had a considerable positive effect on GDP. Katsushi, Bilal, and Fabrizio (2017), an Asia study, have a similar evidence was was observed where, on the one hand. Remittances have a favorable impact on growth and on the other hand have a negative implication on poverty. In another study, with the data between 1980 to 2016, Ubi and Essien (2018) studied the effect of remittances on economic development in Nigeria. The variables employed include remittances, human development index, labor force, domestic savings and FDI. After using the ARDL, cointegration and Granger causality test, it was found that positive and substantial effect occurred on the human development index due to remittance inflows. In addition, considering the relationship between growth and remittance in Indonesia using historical data, GDP growth, remittances, foreign aid, short-term indebtedness, and trade openness with 33 year sample data (1983-2016) (Nahar et al., 2018) were employed. It was found that there is a strong positive effect of remittances on growth.

However, in Anetor (2019), a different result was obtained in Nigeria between 1981 and 2017. The study employed remittances ratio to GDP, financial development (M2) to GDP and trade openness. Others include government expenditure to GDP, population and gross capital formation ratio to GDP. The ARDL model's findings revealed that remittances had a negative implication on Nigeria's economy. Also, Nigeria remittance-growth relationship was examined by Loto and Alao (2019) with data between 1980 and 2016. The variables used include real GDPpc, remittances from migrants and workers, gross fixed capital formation and trade openness. Johansen co-integration and causality approaches were used. The outcome of the study showed that there is a long-run positive and significant association between migrants' remittances and growth, while workers' remittances showed a significant negative relationship. Also, there is a one-way relationship between GDPpc and migrant remittances. In another development, investigated remittances, financial development and economic growth in Sub-Saharan Africa were invstigated (Olayungbo & Quadri (2019)). Hence, private sector-to-GDP ratio, trade openness, inflation rate, broad money-to-GDP ratio, population growth and FDI were factors evaluated. From 2000 to 2015, data from twenty Sub-Saharan African nations were collected and used in the investigation. According to the findings, both financial development and remittances moved in the same positive direction with growth in both short-run and longrun. Furthermore, the study found that financial development has a substitution effect on the relationship between remittances and economic growth. In addition, the result revealed a unidirectional causal links between GDP and remittances, as well as, between financial development and growth.

Tu et al. (2019) investigated the relationship between financial inclusion, remittance inflows, and economic development using a worldwide panel data analysis. Data between 2004 and 2017 on the financial inclusion index, personal remittances, industrialization, infrastructure, inflation, literacy, government spending, population growth, population density, unemployment, institutional quality and GDP were collected and evaluated. It was revealed that financial inclusion and remittances had a clear positive impact on economic development, particularly in middle-income nations, according to the research.

Furthermore, Witness, James, and Kunofiwa (2019) investigated the link between remittance inflows and financial and economic development in the Communities of Southern African Development. The variables included in the study were remittance inflows, financial development, exports, exchange rate, inflation and GDP growth rate serving as the dependent variable. Data from fourteen countries within the region were collected and analyzed using GMM dynamic panel techniques, covering the period from 2006 to 2016. The results showed two different scenarios. While there is a positive impact of remittance-growth relationship, a negative relationship existed between remittance and financial development.

Nyasha and Odhiambo (2020) investigated the relationship between remittance inflows and economic growth in South Africa. From 1970 to 2017, the study used data on the real GDP growth rate, financial development, the ratio of cross-border remittance inflows to GDP, trade openness, and domestic savings. . An ARDL co-integration and the Granger causality test were used, and the results demonstrated that there is no causal association between remittance inflows and economic growth. Likewise, Saidu and Salisu (2020) investigated the link between overseas remittances and economic growth in Sub-Saharan African countries. From 1980 to 2017, panel data on GDP, remittance, openness, FDI, and domestic investment were used in the study. The panel co-integration model result demonstrated that remittances had a long-run positive impact on economic growth. The impact of remittances on economic growth in low and middle-income countries was explored in a study undertaken by Zakaria and Normaz (2020). Human capital, population growth, remittances, gross fixed capital formation government final consumption expenditure and GDPpc were estimated from data taken from 2009 to 2017. The results revealed a significant negative relationship between remittances and growth. However, when outliers were considered, the data showed that remittances had an inverse relationship but with small impact on economic growth. Again, Manguzvane and Udimal (2022) investigated the impact of remittances on economic growth in South Africa from 1970 to 2019. Personal remittances, gross domestic savings, domestic bank credit to the private sector, total factor productivity, wide money, population, and capital formation were all employed in the study. The ARDL model was used in the study, and the results showed a significant and negative link between remittances and economic growth, both in the short-run and long-run.

It can be inferred from the literature above that there is no consensus on the growth impact of the remittance inflow. This study however focuses on the Nigerian economy and recent data are employed in examining both the short and the long-run growth impact of remittance inflow.

Methodology

Based on the World Development Index, historical data covering a period of 42 years, from 1980 to 2021 was collected on the GDP growth rate, personal remittance, foreign direct

investment (inflow), exchange rate (Naira per Dollar) and government expenditure in this study. In other to examine the short-run and long-run effects of remittance inflows on economic growth, Johansen Cointegration techniques was employed as the econometric tool of data analysis based on the result of unit root test.

Model Specification

This study builds upon the econometric model of Emmanuel and Obiechina (2013) but introduces modifications to better suit the objectives of this study. In contrast to the original model, this study used the gross domestic product growth rate as the dependent variable and excludes exports from the list of explanatory variables. Additionally, the model for this study incorporates personal remittances and government expenditure as additional predictors. The model for this study is thus specified as:

$$\ln GDPgr_t = b_0 + b_1 \ln PREM_t + b_1 \ln FDI_t + b_1 \ln EXR_t + b_1 \ln GEXP_t + e$$
 (1)

Where used in the equation, GDPgr is the gross domestic product growth rate, PREM is the personal remittance, FDI is the Foreign Direct Investment, EXR is the Exchange rate, GEXP is the government expenditure, and e is the random error term.

Discussion of Results

Table 1 *Correlation Matrix*

	GDPgr	PREM	FDI	EXR	GEXP
GDPgr	1.000				
PREM	0.191	1.000			
FDI	0.056	-0.293	1.000		
EXR	0.154	0.391	-0.332	1.000	
GEXP	0.066	0.326	-0.368	0.361	1.000

Note. Authors' Computation, (2023)

The findings presented in Table 1 demonstrate positive correlations between the explanatory variables and the GDP growth rate in the study. Specifically, the reported correlation coefficients for GDP growth rate and remittances (PREM), GDP growth rate and foreign direct investment (FDI), GDP growth rate and exchange rate (EXR), and GDP growth rate and government expenditure (GEXP) were determined to be 0.1913, 0.056, 0.15404, and 0.06644, respectively. The correlation values for pairs of the explanatory variables were observed to be -0.2931 for remittances and foreign direct investment, 0.39056 for remittances and exchange rate, 0.326168 for remittances and government expenditure, -0.33209 for foreign direct investment and exchange rate, and -0.367517 for foreign direct investment and government expenditure. These results indicate a moderate level of correlation among the explanatory variables, suggesting a low likelihood of significant multicollinearity within the model being estimated

Table 2
Unit Root Test Result

Variables	level	First diff.	1% c.v	5% c.v	Remark
GDPgr	-1.641	-12.404	-2.626	-1.950	I(1)
PREM	-1.648	-6.369	-4.212	-3.530	I(1)
FDI	-2.711	-10.647	-3.610	-2.939	I(1)
EXR	-1.466	-5.683	-4.212	-3.530	I(1)
GEXP	-0.403	-7.970	-4.212	-3.530	I(1)

Note. Authors' Computation, (2023)

The result presented in Table 2 indicates that none of the variables was stationary at their original levels. However, after applying the first differencing, all variables became stationary. In summary, the results revealed that GDP growth rates, personal remittances, foreign direct investment, the exchange rate, and government expenditure are integrated at the order of one I(1). Based on the result of the unit root test obtained, the best estimation technique suggested by Gugarati and Sangeetta (2007) is the Johansen cointegration technique. Therefore, the study employed Johansen cointegration technique to examine the long-run and short run effect of remittance inflow on the economic growth of Nigeria .

 Table 3

 Co-integration test summary

_co integration test summer y					
Rank	Trace stat.	5% c.v	Max-Eigen stat.	5% c.v	
r = 0	81.078***	69.819	34.673**	33.877	
r = 1	46.405*	47.856	22.302	27.584	
r = 2	24.104	29.797	12.725	21.132	
r = 3	11.379	15.495	9.338	14.265	
r = 4	2.041	3.841	2.041	3.841	
ste ste ste	001 44	. 0 0 5 %	. 0 1		

*** p < 0.01; ** p < 0.05; * p < 0.1

Note. Authors' Computation

The analysis conducted in this section, as presented in Table 3 demonstrated conclusive evidence to reject the null hypothesis of no co-integration equation in favour of the existence of a single co-integration equation, as indicated by both the trace and maximum eigenvalue test statistics. This signifies that although there may be no immediate equilibrium relationship between the variables in the short term due to their different levels of integration, there is indeed a long-term equilibrium relationship among them. Importantly, the long-run estimation findings, as depicted in Table 4, further support the presence of this co-integration relationship among the variables.

Table 4 *Long-run estimates*

Long run cs	iimaics		
Variable	Coef.	Std. err.	t-Stat.
PREM	1.974	0.621	3.179***
FDI	-4.744	0.770	-6.161***
EXR	2.458	1.349	1.822
GEXP	-4.919	1.737	-2.832**

*** p < 0.01; ** p < 0.05; * p < 0.1

Note. Authors' Computation

The result presented in Table 4 indicates that, in the long run, there is a positive significant impact of inflow of personal remittances on the GDP growth rate. Specifically, the coefficient for personal remittances is 1.9738, with a standard error that is less than half of the reported coefficient. This implies that holding other factors constant, a one percentage point increase in the inflow of personal remittances is associated with approximately a 1.973% increase in the rate of GDP growth in Nigeria. The coefficient estimates for the others variables are as follows: -4.744 for FDI, 2.4581 for the exchange rate, and -4.9191 for government expenditure. Therefore, remittance inflow has significant long run effect on Nigeria economic growth.

 Table 5

 Short-run estimates

Variables	Coef.	Std. err.	t-Stat.	Prob.	
Constant	0.070	0.284	0.246	0.808	
D(GDPGR(-1))	-0.425	0.157	-2.703	0.011**	
D(PREM)	-0.338	0.309	-1.095	0.282	
D(FDI)	0.455	0.307	1.482	0.149	
D(EXR)	-2.285	0.639	-3.578	0.001***	
D(EXR(-1))	1.613	0.656	2.458	0.020**	
D(GEXP)	1.752	1.051	1.668	0.106	
D(GEXP(-1))	-0.987	0.893	-1.105	0.278	
Ect(-1)	-0.498	0.245	-2.033	0.049**	
$D_{1} = A_{1} = A_{2} = A_{3} = A_{4$					

R2-adj. = 0.620, D.W. = 2.043, RESET = 1.438, JB = 0.618 χ 2 (LM) = 0.036, White = 0.869.

Note. Authors' Computation

The influence of personal remittances on the short-term GDP growth rate is not statistically significant, as indicated by the reported coefficient of -0.337970 (p = 0.2822 > 0.05), according to the succinct error correction model estimation findings presented in Table 5. This means that, if all other variables remain constant, a one percent increase in remittance inflows results in a 0.34% decline in the pace of GDP growth in the short run. Therefore, remittance inflow does not significant influence economic growth of Nigeria in the short run.

The error correction term coefficient, -0.4979, implies that around 49.8% of short-run inconsistencies are *corrected* annually and incorporated into the long-run dynamics. Furthermore, according to the reported R-square, remittance inflows, foreign direct investment, the exchange rate, and government spending account for 69.98% of the systematic fluctuations in GDP growth. The post-estimation diagnostic test findings were reported in the final section of Table 5. The RESET test results demonstrated that the model is appropriately presented. Furthermore, the Jarque-Bera statistic suggests that there is insufficient evidence to reject the null hypothesis that the error component follows a normal distribution. Furthermore, the Breusch-Godfrey serial correlation LM test indicates that there is no indication of serial correlation in the estimated models' error terms. Furthermore, the F-statistic for heteroscedasticity is small, indicating that there is no evidence to reject the null hypothesis of error term constant variance.

^{***} p < 0.01; ** p < 0.05; * p < 0.1

Discussion

The current findings stipulate and confirm that remittance still plays significant roles in economic development. It is affirmed that remittance inflows and economic growth move in positive direction but only significant in the long run, while the impact is not significant in the short-run. Importantly, the study emphasizes that changes in remittance inflows in Nigeria might result in a large boost in the country's GDP growth rate in the long run. It can be deduced that the remittance inflows in Nigeria are put into productive activities that have long term yield. It shows that beneficiaries or recipients are not focus on economic activities that have short term yield. However, there has been a growing recognition of the need of channeling these inflows into productive or investment routes, which eventually leads to a significant positive influence in the long run. These findings are consistent with those of prior studies, such as Saidu and Salisu (2020), which found that remittances had a favorable long-run influence on economic growth. Furthermore, the findings of this study are congruent with those of Nahar, Adha, and Azizurrohman (2018), Katsushi, Bilal, and Fabrizio (2017), Wiseman, James, and Kunofiwa (2019), and other researchers in the field.

Conclusion

According to this study, the influx of personal remittances may have a major positive influence on Nigeria's economic growth in the long run. However, persistent increases in remittance inflows have the potential to greatly boost economic growth in Nigeria when such is put into productive economic activities. As a result, the study suggests that policies, initiatives, and system improvements be implemented to encourage the beneficial use of remittances. Furthermore, it emphasizes the significance of building procedures to manage brain drain, ensuring that precious human capital is not lost only for the sake of money inflows that may not be channeled equitably into productive activities in the short and medium term.

References

- Anetor, Friday Osemenshan (2019). Remittance and economic growth nexus in Nigeria: Does financial sector development play a critical role? *International Journal of Management, Economics and Social Sciences*, 8(2), 116-135
- Biyase, M., Manguzvane, M. & Udimal, T. (2022). Remittances and economic growth in South Africa: applying ARDL bounds testing analysis in the presence of structural breaks. EDWRG Working Paper Series
- Chami, R., Barajas, A., Cosimano, T., Fullenkamp, C., Gapen, M. & Montie, P. (2008). *Macroeconomic consequences of remittance*. Washington, DC, International Monetary Fund
- Emmanuel, U.U. & Obiechina, M.E. (2013). Workers' remittances economic growth nexus: evidence from Nigeria, using an error correction methodology. *International Journal of Humanities and Social Science*, *3*(7), 212-227
- Gujarati, D.N. & Sangeetha (2007). *Basic Econometrics*, New Delhi, Tata McGraw-Hill publishing company 4th Edition
- Iheke, O.R. (2012). The effect of remittances on the Nigerian economy. *International Journal of Development and Sustainability, 1*(2), 614–621
- Jhingan, M. L (2007). *The Economics of Development and Planning*. 39th Edition. Delhi, Vrinda publication Ltd.
- Kindleberger, C. P. (1965). *Europe's Postwar Growth*: The Role of Labor Supply. New York: Oxford University Press.
- Larsson, P. & Angman, J. (2014). Remittances and development: Empirical evidence from 99 developing countries. Retrieved from the Department of Economics database, Uppsala University
- Loto, M.A. and Alao, A.A. (2019). Remittances and the growth of the Nigerian economy. *Eurasian Journal of Business and Economics*, 6(2), 209-232
- Maqsood, A., Muhammad, I. & Chaudhary, A.R. (2016). The impact of workers' remittances on economic development of Pakistan. *Arabian Journal of Business and Management Review*, 6(5), 48-54
- Muritala, T.. & Taiwo, A. (2011). Government expenditure and economic development: empirical evidence from Nigeria, MPRA Paper 37293, University Library of Munich, Germany.
- Nahar, F.H., Adha, M.A. & Azizurrohman (2018). Effects of remittances on economic growth in Indonesia. 9th International Conference on Socio-economic and environmental issues in development, National Economics University, Hanoi, Vietnam
- Nyasha, S. & Odhiambo, N.M. (2020). Does remittance inflow granger-cause economic growth in South Africa? A dynamic multivariate causality test. *The Review of Black Political Economy*, 47(1), 86-103

- Okpe, I. I. (2013). Money market on the Nigerian economic development, *Journal of Economic and Sustainable Development*, 4(5), 5-11
- 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
- Saidu, I. & Salisu, A. (2020). International remittances and economic growth in some selected sub-Saharan African countries: evidence from panel co-integration approach. *Journal of Economics and Development Studies*, 8(2), 63-71
- Stanley, R. L, & Buckley. R. P. (2016). Protecting the West, excluding the rest: the impact of the AML/CTF regime on financial inclusion in the Pacific, and potential responses. Melbourne *Journal of International Law* 17(1).
- Tewolde, R. (2005). Remittances as a tool for development and reconstruction in Eritrea: An economic analysis. *Journal of Middle Eastern Geopolitics*, 1(2): 1-12.
- Tu, C.A., Phi, N.T., Tuan, L.Q., Yoshino, N., Sarker, T. & Taghizadeh-Hesary, F. (2019). Remittance inflows, financial inclusion and economic development: an empirical analysis of the world sample. ADBI Working Paper Series.
- Ubi, P. & Essien, M. (2018). Remittances and economic development in Nigeria: a macroeconomic approach. *International Journal of Economics, Commerce and Management*, 6(6), 26-46
- Witness, N.B., James, Z. & Kunofiwa, T. (2019). Remittances, financial development and economic growth: a case of southern African development community. *Acta Universitatis Danubius Oeconomica*, 15(4), 67-82
- Zakaria, L. and Normaz, W.I. (2020). The Impact of Remittance on Economic Growth in low and Middle Income Countries. International *Journal of Academic Research Economics and Management Sciences*, 9(2), 62-70.

Information About the Article/Makale Hakkında Bilgiler

The Ethical Rules for Research and Publication / Araştırma ve Yayın Etiği

The authors declared that the ethical rules for research and publication followed while preparing the article.

Yazarlar makale hazırlanırken araştırma ve yayın etiğine uyulduğunu beyan etmiştir.

Conflict of Interests/ Çıkar Çatışması

The authors have no conflict of interest to declare.

Yazarlar çıkar çatışması bildirmemiştir.

Grant Support/ Finansal Destek

The authors declared that this study has received no financial support.

Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir.

Author Contributions/ Yazar Katkıları

The draft process of the manuscript/ Taslağın Hazırlanma Süreci T.O./O.B.O., Data Collection/Verilerin Toplanması T.O./O.B.O., Writing The Manuscript/ Makalenin Yazılması T.O./O.B.O., Submit, Revision and Resubmit Process/ Başvuru, Düzeltme ve Yeniden Başvuru Süreci T.O./O.B.O.