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The Effect of Migrants Remittance on Economic Growth in Nigeria

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ABSTRACT
Remittance influx has been increasing significantly in Nigeria over the past decades becoming one of the sources of foreign inflow. Based on this, the study is aimed to examine the impact of migrants' remittance on economic growth in Nigeria. The study adopted econometric analytical method rooted on Autoregressive Distributed Lag (ARDL) technique with time series data spanning from 1986-2022. The empirical results from ARDL revealed that remittance both at the long run and short has a positive impact on the growth of Nigeria economy. Also, foreign direct investment and private investment have significant positive impact on growth, revealing that remittance, FDI and private investment are factors responsible for growth in Nigeria. The study recommended that government and policy makers should enforce effective monetary and fiscal policies to improve the remittance channel, support inflow and foreign direct investment as a growth strategy. Also, government should enhance remittance inflows by improving the banking system. This can be accomplished by plummeting costs associated to remittance inflows and reducing tax rates for transaction and among other recommendations
Keywords: Remittance, migrant, ARDL and Economic Growth

INTRODUCTION

The quest for better well-being often leads to migration. Migration could be either overseas or domestic movement. However, the advantages are often greater for foreign migration than to domestic migration. The primary motivator for every migrant is to seek alternative for an environment that can guarantee his future well-being and safety. Migration are more in less developed economies than in advanced ones due to high levels of poverty, institutional failure, ethno-religious crisis, as well as unemployment (Sabil & Badajo, 2015). The human migration phenomena on the West-African regions have been around for centuries and have been steadily increasing due to the environmental changes. There are many types of migration: foreign movement, migration within continents, migration between continents, provincial migration, and migration within sub-regions. Migration can occur voluntarily, when individuals choose to move to different regions in search of improved economic prospects outside their native countries. Alternatively, migration can be forced, with individuals compelled to leave due to circumstances outside their control, such as warfare, disputes, or ecological catastrophes (Gani, 2020). Migrants always remember their root and thereby remit their excess economic fortune back home. The economic remittance from migrants serves as a significant and expanding means of foreign income in various developing nations. These incoming funds have shown growth in the present period and represent a significant source of external revenue. The World Bank (2021) reported that remittances to developing nations amounted to $334 billion. Remittances refer to the act of foreign migrants sending money to their close relatives in their home country. It serves as a significant channel for cash inflows to emerging economies. Remittance distinguishes itself from other forms of external capital input, such as foreign direct investment, foreign loans, and grants, by virtue of its inherent stability (Anetor, 2019 and Kapur,

2006). Remittance has the capacity to impact GDP expansion and development via both microeconomic and macroeconomic actions (Gisaor, 2020). According to the Migration and Development Brief of 2020 by the World Bank, remittances inflows to Nigeria witnessed a slight decrease. In 2018 the remittance inflow was 24.04 billion U.S dollars but decreased to 23.81billion and 17.21billion U.S dollars in 2019 and 2020 respectively. This was attributed to covid-19 pandemic, low oil prices and several other variables that affected the income of foreign migrants and their capacity to send money back to their family. Remittances are said to serve as a financial catalyst to bridge the financial gap between the migrant nations or family as the case may be.

While it is indeed accurate that Nigeria nation has experienced a significant loss of skilled individuals due to flight or the phenomenon known as the "brain drain," primarily driven by limited economic prospects and conflicts among other factors, it is important to acknowledge that Nigeria has also derived advantages from the remittances sent by the Nigerian Diasporas, that have contributed to their financial growth. According to empirical research, migrant remittances have a favourable influence on economic growth in a number of emerging nations. Additionally, remittances contribute to economic development by directly influencing saving and investing in human and material assets, and also by indirectly affecting spending (Olayingbo & Ahmod 2019; Gisaor, 2020). Ratha (2003) states that remittances from Diasporas contribute to rise in consumption among rural families, this may have significant multiplier effects since these funds are practically utilized for commodities manufactured inside the country.

However, some researchers such as Adigun and Ologunwa (2017) had a contrary perspective on the influence of remittance. They contended that remittances had unfavorable implications on the expansion of the GDP in low-income nations, since they are mostly used for consumption rather than being allocated towards productive expenditures. Hence, the aim of this study is to empirically assess the effect of remittance inflows on Nigerian economy using time series data spanning from 1986 to 2023

LITERATURE REVIEW

The study anchored its theoretical framework from Pure Altruism Theory. The theory states that individuals residing in distant nations send money back to their native nations because they really care about the well-being of their remaining family members (Hagen-Zanker & Siegel, 2007; OECD, 2006). Chami et al. (2003) argue that under this paradigm, the value of foreign residents is determined by the welfare of their family members in their home country. The migrant has a feeling of satisfaction when the welfare of their family in their country of origin increases (OECD, 2006). This implies that the migrant is more likely to remit a larger sum of funds to his family when his financial circumstances in his native country are unfavorable. According to the idea, donations are considered "compensatory transfers" due to their propensity to rise if the migrant's nation of origin has macroeconomic disturbances, such as disasters and economic recessions (Chami et al., 2003). To increase the amount of money that the migrant sends back home, there needs to be macroeconomic disturbances or unfortunate circumstances that are causing a lack of income for the migrant's household. According to the Pure Altruism model, remittances have a compensating aspect, meaning that they rise when there is unfavorable or a decline in economic circumstances. This means that remittances are positive. (Chami et al., 2003). Brown (2006) argues that, according to the Pure Altruism framework, there exists an adverse association among the amounts of transfers and the state of the sender's nation. According to this concept, if the financial circumstances in the nation of origin are good, then there will be a decrease in the amount of money sent back as remittances

Studies conducted by various researchers revealed that remittance has direct relationship on economic growth (Adigun and Ologunwa, 2019; Karikari et at, 2016; Sabil and Badajo, 2015; Adeyi, 2015; and Adarkwa, 2015) For example, Okorie et al (2022) investigated the impact of remittances on Nigerian economic growth. The study used multiple regression model using ordinary least squares techniques in analyzing the data. Tests conducted revealed that all the variables used in the analysis are I(1) and as well co integrated. Other diagnostics tests such as heteroscedasticity, autocorrelation and normality revealed that the results are robust and hence remittances positively and significantly contribute in economic

growth of Nigeria. The study recommends that institutions introduce new savings instruments as well as further opportunities whereby migrants can channel their remittance funds into productive sectors of the economy.

Similarly, Bolarinwa and Akinbobola (2021) examined the correlation among the influx of remittance and economic expansion, the research utilizes a comprehensive and reliable composite indicator for economic development based on the World Bank's four key indicators. The aim is to assess the causal connection among repatriation and GDP growth from 1999 to 2017. The paper provides actual proof of causality using heterogeneous as well as homogeneous frameworks, focusing on the adoption of the four most advanced financial sectors in different areas of Africa. Their findings revealed that there is a causal relationship in several models including the most advanced banking industries in Africa. Therefore, the influx of remittances has stimulated financial growth and positively. Nevertheless, in the homogenous situation, the causal connection merely moves from financial expansion to remittance. Hence, it is advisable for these nations to enhance their banking sectors in order to bring in greater inflows of remittances. In addition, governments are recommended to consider investigating the influx of contributions as a potential policy measure to enhance the development of their financial industries.

Also, Adenike (2021) examined migrants' remittance and economic growth in Nigeria. The study employs annual data obtained from world development and international financial statistics which covers the period of 29 years (1990-2018). Quantitative data collected were evaluated through descriptive statistics; and the hypotheses formulated were tested with the use of multiple linear regressions which includes ANOVA, Correlation, and Coefficient. It was discovered that significant relationship exists between remittance and gross domestic product, exports and imports in Nigeria while inflation has no significant relationship with remittance. The study therefore proffers some recommendations towards utilizing influx of remittance for economic growth in Nigeria.

Furthermore, Gisaor (2020) conducted a study to analyze the implications of money transfers on economic advancement in Nigeria from 1970 to 2019. The study employed the ARDL and other econometric tests to assess the macroeconomic effect of transfers. Throughout the research period, it was found that remittances, foreign direct investment, and venture capital had favorable implications on economic activity in Nigeria. Consequently, it is suggested that the Nigerian government come up with suitable fiscal and monetary strategies with the goal of stabilizing these rates to enhance investment in Nigeria. Additionally, the expansion of the Nigerian economy ought to prioritize industrial operations. All donations received by the nation should be used towards enhancing the industrial sector. Implementing this measure will enhance job opportunities, generate more money, and stimulate the increase in GDP, so fostering the longer-term growth of the nation.

In a study conducted by Gani (2020), the significance of remittances and GDP growth was examined for 54 emerging nations. The work utilized panel data spanning 1970 to 2010. The research calculated the banking industry index of prosperity and used it to assess the significance of money as a conduit for donations to impact economic expansion. The index consolidates data from preexisting metrics that assess the dimensions, complexity, and effectiveness of the financial industry. The use of the Panel GMM revealed a detrimental impact of donations on the financial health of the nations included in the sample.

Equally, Anetor (2019) investigated the correlation among transfers, the expansion of the banking industry and economic expansion in Nigeria from 1981 through 2017. The work utilized the ARDL framework to examine the enduring and immediate link among the parameters. The results of the research indicate that the factors are strongly correlated over an extended period of time. The findings also indicated that donations have a detrimental and substantial impact on GDP, both over an extended period and in the immediate term. The research further found that the expansion of financial services has a detrimental and noteworthy effect on economic progress in the long-term as well as short-term. Additionally, the research verified the presence of a complementary relationship between remittances and the expansion of the banking industry in their impact on the economy. Furthermore, the research showed that price inflation has adverse and substantial implications on economic progress, persisting across both extended and immediate periods. The findings from the research indicate that trade accessibility, public

spending, and population increase has insignificant statistical effect on economic expansion, both in the long-term and short term.

Also, Olayingbo and Ahmod (2019) examined the correlation between remittances, liquidity, and economic expansion in a panel of 20 sub-Saharan African nations from 2000 to 2015. The research included both Pooled Mean Group and Mean Group/ARDL estimates, together with panel unit root test shown that both transfers and financial stability had favorable impacts on GDP, both in the short run and the long term. The comparative analysis revealed that financial progress functioned as a replacement in the link between remittances and economic growth. Ultimately, it was discovered that there are one-way causal connections from GDP to transfers and from the economy to GDP. There was no direct relationship involving donations and GDP growth in the nations of Sub-Saharan Africa (SSA).

In addition, Akindolie (2017) analyzed the influence of remittances on the economic development of Nigeria using yearly secondary data from 1996 to 2015. The data sources used were the Central Bank of Nigeria Statistical Bulletin and the World Development Index data releases. The collected data was analyzed employing Ordinary Least Squares to examine the relationship between the dependent variable Real Gross Domestic Product (GDP) and the independent variables, which were Official Remittance (REM), Gross Fixed Capital Formation (GCF), Official Development Assistance (ODA), Foreign Aid (AID), Foreign Direct Investment (FDI), and Exchange Rate (EXR). It was found that Official Remittance, Gross Fixed Capital Formation, and Exchange Rate all had significant and beneficial effects on the economy's expansion, as measured by Real GDP. On the other hand, Foreign Aid, Official Development Assistance, and Foreign Direct Investment had insignificant effects on economic expansion. The findings of this research indicate that transfer has a substantial beneficial effect on the economic development of Nigeria. Given the well-known substantial relationship between remittance and economic growth, this study suggests that the government should enhance remittance inflows by improving the banking system. This can be achieved by reducing the costs linked to remittance influxes and lowering tax rates for deals. By encouraging individuals to send cash via proper channels, the administration can also gather accurate data on remittances..

Similarly, Oluyemi, et al (2015) examined the actions of Nigerian diasporas in Ghana, focusing on the monetary remittances sent to Nigeria to contribute to its economy's growth. The patterns of migration, remittances, and their consequences for economic development in West Africa are characterized by complexity and dynamism. The research used primary data collected via the application of a questionnaire tool. The total number of participants consisted of 326 participants residing in Ghana. The research, using the combination of a non-parametric (chi-square) and a linear regression estimation, demonstrates that contributions from the Nigerian diasporas in Ghana have a substantial impact on the economic development of Nigeria. Furthermore, the findings indicate that transfers have played a crucial role in bolstering savings and investments in Nigeria, particularly funding grassroots development initiatives and charitable assistance endeavors. Hence, it is imperative to offer enough facilities to draw a greater influx of contributions from immigrants into the country's finances by implementing an improved formal banking system and a high-yield investing program.

Methodology

The work employed the Autoregressive Distribution Lag (ARDL) model developed by Pesaran, Shin and Smith (2001) to analysis the work. Augmented Dickey-Fuller (ADF) unit root test was applied to test for stationarity of the data. Also the bounds test were utilized to determine the presence of long-run relationship among the variables.

Mode Specification

For simplicity the study settled in model used by Wen, et al (2019) and some modification was made to suit the current reality.

RGDP = f (REM, FDI, CPI, EXR, PIN, ITR) ----------(1)

Equation 1 can be stated econometrically to include the stochastic random element as follows:

$RGDP = \beta_0 + \beta_1 REM + \beta_2 FDI + \beta_3 CPI + \beta_4 EXR + \beta_5 PIN + \beta_6 PIN + \mu$---------- (2)

Where

RGDP = Real Gross Domestic Product
REM = Remittances Inflow
FDI = Foreign Direct Investment
CPI = Consumer Price Index
EXR = Official Real Exchange Rate
PIN = Private Investment
ITR = Interest rate
μ = Stochastic Error Term

REM, FDI and PIN are expected to be favorably connected to the RGDP while the CPI, EXR and ITR are all expected to have negative relationship with the RGDP on *a priori* expectation.
In reference to equation (2) the long run ARDL model is specified as:

$$\Delta Ln(GDP)_t = \beta_o + \beta_1 Ln(REM)_{t-1} + \beta_2 Ln(FDI)_{t-1} + \beta_3 Ln(CPI)_{t-1} + \beta_4 (EXR)_{t-1} + \beta_5 (PIN)_{t-1} +$$

$$\beta_6 (ITR)_{t-1} \sum \alpha_1 GDP_{t-i} + \Theta_2 REM_{t-i} + \sum \delta_3 FDI_{t-i} + \sum \delta_3 CPI_{t-i} + \sum \lambda_4 EXR_{t-i} + \sum \lambda_5 PIN_{t-i} +$$

$$\sum \lambda_6 ITR_{t-i} + \mu_t \quad \text{----------(3)}$$

The model of ARDL in the short term is as below:

$$\Delta LGDP = a_0 \sum_{i=1}^{p} a_{1i} \Delta LGDP_{t-1} + \sum_{i=1}^{p} a_{2i} \Delta REM_{t-1} + \sum_{i=1}^{p} a_{2i} \Delta FDI_{t-1} + \sum_{i=1}^{p} a_{3i} \Delta CPI_{t-1}$$
$$+ \sum_{t-1}^{p} a_{4i} \Delta EXR_{t-1} + \sum_{t-1}^{p} a_{5i} \Delta PIN_{t-1} + \sum_{t-1}^{p} a_{6i} \Delta ITR_{t-1} + \lambda ECM + \zeta ----(4)$$

The speed of adjustment variable and ECM represent the residuals derived from equation (4). The coefficient of the lagged error correction term is anticipated to have an unfavorable value and demonstrate statistical significance, so providing further confirmation of the presence of a co-integrating connection among the parameters in the framework.

Where: The null and alternative hypotheses are as follows: H_0: $\lambda_0 = \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5$ Against the alternative hypothesis: H_0: $\lambda_0 \neq \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq \lambda_5$

Estimation Procedure

The study adopted the Auto-regressive distribution lag (ARDL) method to test the existence of co-integration among variables. This technique is recommended over co-integration approaches developed by Engle and Granger 1987 and Johenson 1988 which require a large sample time and all variables to be stationary at first difference that is l(1). The methodology has the advantage of relieving the task of determining the order of integration among variables because variables are presumed to be stationary at level and first difference. Therefore testing for unit roots to determine I(0) and I(1) are not necessary for ARDL technique (Ewetan & Urhie, 2014). But according to Rahman and Islam (2020) it is necessary to conduct unit root test to ensure that no I(2) variable(s) is /are included in the model because it is assume that l(2) variable(s) may cause the system to collapse.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Table 1 Descriptive Statistics

	GDP	REM	FDI	CPI	EXR	PIN	ITR
Mean	18.96222	23.05956	4.764000	1292.98	9.02444	55.24422	2.2983
Median	12.70000	21.23000	5.40000	1243.80	5.30000	21.10000	2.3200
Maximum	72.9000	39.3200	25.0100	1897.00	26.0000	175.0000	6.2400
Minimum	1.60000	12.3400	13.13000	594.000	1.900000	0.60000	0.1200
Std. Dev.	17.01522	8.15513	6.07588	218.831	6.72509	64.3737	1.4522
Skewness	1.61019	0.596152	0.01112	0.23753	1.09603	0.59857	0.3680
Kurtosis	4.654978	3.294896	5.582828	5.017207	3.953905	1.558571	2.607848
Jarque-Bera	3.058102	3.59767	12.50906	8.05277	3.01366	3.582918	1.3045
Probability	0.500005	0.50049	0.70192	0.31783	0.111033	0.237200	0.1208
Sum	853.3000	1037.680	214.3800	58184.3	406.1000	2485.99	103.41
Sum of Sq.Dev.	12738.79	2926.27	1624.318	2107030	1989.98	182334.8	92.800
Observation.	36	36	36	36	36	36	36

Source: Author's computation using Eviews 8.0

The general statistics for the data set utilized in the study are shown in Table 1 above. The table exhibits positive skewness, since every parameter has favorable characteristics, indicating a distribution that is right-skewed. This implies that when the data set was organized in a distribution of frequencies, it was found to be mostly composed of high values or entirely consisted of positive numbers.

However, the Kurtosis analysis revealed that only the REM and EXR variables came close to satisfying the symmetry criteria of having an anticipated value of three (3). The PIN and ITR both exhibited values below three, indicating a flat distribution, also known as platykurtic in statistical terms. Conversely, GDP, FDI, and CPI all exceeded three. This suggests that the distribution is characterized by a high peak or is leptokurtic. Nevertheless, the distribution exhibits positive and reasonably substantial likelihood outcomes for the whole dataset, with every parameter demonstrating statistical significance at a 5% level. This facilitates the straightforward adoption of the inherent premise that the data set is regularly dispersed.

Moreover, there is an intriguing correlation between the average and middle value for all the parameters in the model. The ratio between the mean and median for the whole dataset is close to one. Consequently, when graphed on the conventional normal curve, the median will show no substantial deviation from the distribution's mean value. The degree to which the median and mode approach the mean value directly correlates with the extent to which the distribution adheres to the symmetrical bell-shaped characteristic of the normal distribution. The distribution's frequency range is favorable for every factor in the regression model, supporting the previously mentioned favorable character of its distribution as shown by the skewness. Despite the vast sample size spanning 36 years, the standard variances remained very low.

Stationarity Test

The study used Augmented Dickey- Fuller (ADF) unit root test to test for the stationarity of the data. The results are presented below

Table 2: ADF Unit Root Test

	ADF Test Statistic	0.05 critical value for ADF statistic	Order of Integration
REM D(REM)	-3.517907 -6.675181	-2.929734 -2.933158	I (0) -
FDI D(FDI)	-1.399650 -7.522302	-2.929734 -2.931404	- I (1)
GDP D(GDP)	-1.987004 -11.38896	-2.935001 -2.933158	- 1 (1)
CPI D(CPI)	-2.919755 -8.303582	-2.929734 -2.931404	- I (1)
EXR D(EXR	-0.542793 -8.329979	-2.929734 -2.931404	- I (1)
PIN D(PIN)	0.554317 -6.212967	-2.929734 -2.931404	- I (1)
ITR D(ITR)	-2.158768 -11.33040	-2.931404 -2.931404	- I(1)

Source: Author's computation using Eviews 8.0

The unit root test conducted as shown in Table 2 indicates that the parameters GDP, FDI, CPI, EXR, PIN, and ITR were non-stationary at levels but were stationary at first difference. However, the parameter REM was found to be stationary at levels at 5% level of significance. The mixed order of integration disapproved the use of the Johansen co-integration test. Therefore, the most suitable option is the use of ARDL bound co-integration method to ascertain the presence of a long-term link among the parameters in the framework.

ARDL Bounds Test for Co-integration

To authenticate the existence of a long run relationship among the variables, the study employed bounds test.

Table 3: Bounds Test Co-integration Results

Country	SBCLags	F-statistic	Alpha Level	Critical Bound		Decision
				Lower Bound	Upper Bound	
Model	3	5.7420	5%	2.27	3.28	Co-integrated

Source: Author's computation using MicroFit.

The F-statistic of 5.74 as shown in Table 3 indicated that the upper limit critical value of 3.28 is lower than the F-statistic at a 5% level of confidence; therefore, the null hypothesis of no co-integration is rejected. This indicates that there is a long-term co-integration connection between the parameters.

Table 4 Estimated Long Run ARDL Coefficients (0,0,0,0,1,0,0) selected based on Schwarz Bayesian Criterion

Dependent variable is GDP 36observation used for estimation from 1986 to 2022				
Regressors	Coefficient	Standard error	T-ratio	[Prob]
REM	0.29606	0.19189	1.5429	[0.032]
FDI	0.23470	0.46065	0.5095	[0.614]
EXR	0.50187	0.44724	1.1221	[0.269]
EXR	-0.87671	0.30969	-2.8310	[0.008]*
PIN	0.30558	0.12620	2.4213	[0.021]*
ITR	- 0.69804	0.26913	-2.5937	[0.014]*

Source: Author's computation using MicroFit.

The long-term estimates of the ARDL model in Table 4 indicate that REM, FDI, EXR, and PIN have a positive correlation with GDP, whereas EXR and ITR have a negative relationship with GDP. The analysis indicates that a rise of 1% in REM in Nigeria corresponds to a substantial 29.6% rise in the GDP growth rate of Nigeria. This aligns with the studies conducted by Bolarinwa and Akinbobola (2021) as well as Gisaor (2020), which both established a favorable correlation among Diaspora donations and economic development in their respective research. Nevertheless, only the values of REM, EXR, PIN, and ITR exhibit statistical significance at a 5% level. Therefore, the study reveals that there is a positive yet statistically insignificant correlation between REM and economic development in Nigeria.

Table 5 Error Correction Representation of the ARDL(0,0,0,0,1,0,0) selected based on Schwarz Bayesian Criterion

Dependent variable if dGDP 36 observations used for estimation from 1986to 2022			
Regressors	Coefficient	Standard Error	T-Ratio [Prob]
dREM	0.49606	0.19189	2.5851 [0.012] *
dFDI	-0.23470	0.46065	-0.5095 [0.614]
dEXR	0.50187	0.44724	1.1221 [0.269]
dEXR	-0.39026	0.48009	-0.8128 [0.422]
dPIN	0.30558	0.12620	2.4213 [0.021]*
dITR	- 0.69804	0.26913	- 2.5937 [0.014]*
ECM(-1)	-0.34031	0.07411	-4.6914 [0.002]*
R-Squared	0.59497	R-Bar-Squared	0.52747
S.E. of Regression	0.86224	F-Stat. F(6,36)	8.8137[.000]
DW-statistic	1.8209	Schwarz Bayesian Criterion	-63.9851

Source: Author's computation using MicroFit.

*Note: * denotes that the coefficients are significant at 5%level.*

The result of the short run dynamics associated with the ARDL (0,0,0,0,1,0,0) presented in The table 5 above shows that the coefficient of the lagged error correction term is -0.34031, which is negative and statistically relevant at the 5% level. The presence of a negative and statistically significant coefficient suggests the existence of a co-integrating connection among the variables in the model. The coefficient's size indicates that around 34% of the imbalance generated by a disturbance in the year before returns to the long-term balance in the present year.

The coefficient of multiple determination (R^2) is 0.59497, indicating that approximately 59.50% of the variability in the current value of the GDP can be determined by the variables that explain it in the framework. The adjusted value of 0.52747 suggests that this percentage accounts for the effect of other factors not explicitly included in the framework, whereas the extra 40.50% is attributed to these unaccounted factors. The relationship between the REM and GDP has a favorable trend in the near term and is also highly significant at the five-percent threshold of relevance. This study supports the previous research conducted by Gani (2020), Anetor (2019), and Akindolie (2017), which shown that remittances had a positive and statistically significant impact on economic growth. The variables PIN and ITR are also statistically significant at a 5% level of significance. The Durbin-Watson value of 1.82 indicates the presence of a favorable serial association, since it falls inside the acceptable range of 2.

Table 6 Diagnostic Tests

Test Statistics	**LM Version**	**F Version**
A: Serial Correlation	CHSQ(1) = .42444[.515]	F(1, 29)= .29606[.591]
B: Functional Form	CHSQ(1) = 2.1877[.139]	F(1, 29)= 1.5936[.217]
C: Normality	CHSQ(2) = 1.3630[.506]	Not applicable
D: Heteroscedasticity	CHSQ(1) = 28302[.595]	F (1, 40)= .27137[.605]

Source: Author's computation using MicroFit.

Based on the LM version, the diagnostic procedures conducted on the projected ARDL (0,0,0,0,1,0,0) model indicate that the framework successfully passed the tests for serial relationship, functional structure misspecification, and heteroscedasticity. The likelihoods associated with these examinations were found to be statistically insignificant. This is plainly shown by the significant probabilities produced by the LM version presented in Table 6 above. The substantial likelihoods of the F-statistics are useful for corroborating the outcome of the LM version.

The stability tests, namely Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum Squares of Recursive Residuals (CUSUMSQ), are used. The CUSUM test is effective in identifying consistent deviations in the parameters, which leads to a consistent pattern in the expected error for the first step. On the other hand, the CUSUMSQ test is valuable for identifying random deviations in the coefficients, which do not follow a consistent pattern, but still affect the accuracy of the calculated formula as more findings are included. They are produced from the remnants of the recursive estimate referred to as recursive residues. When the null assumption assumes that the parameters are perfectly stable, the two CUSUM as well as CUSUMSQ averages have values of zero. Since the anticipated value of a disturbance is always zero, it is customary to draw a set of standard error ranges about zero. Any figure that falls beyond these bands is seen as an indication of variable volatility. The plots of CUSUM and CUSUMSQ in figures 1 and 2, accordingly, indicate the two averages remain inside the crucial boundaries. This suggests that all the parameters in the calculated framework for Nigeria are constant throughout time.

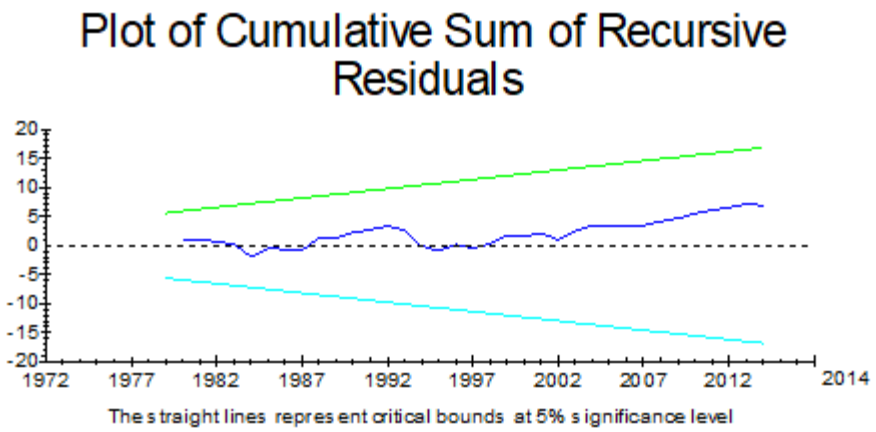

Figure 1: Plot of Cumulative Sum of Recursive Residuals

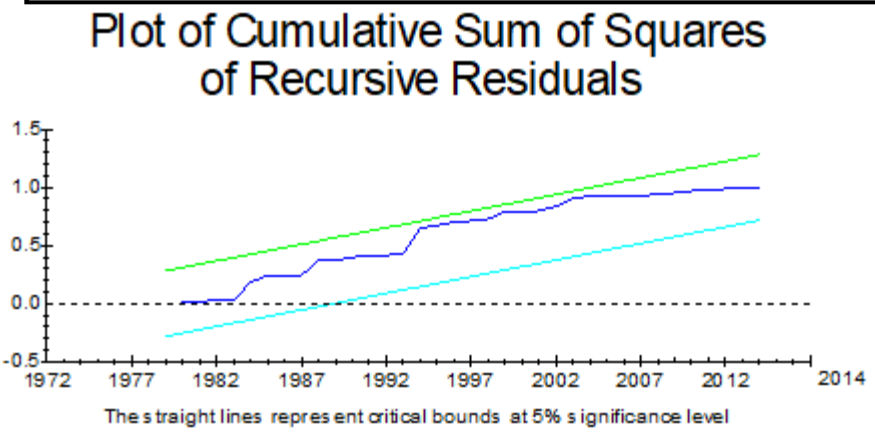

Figure 2: Plot of Cumulative Sum of Squares of Recursive Residual

CONCLUSION

The study explores the correlation among Diaspora remittances and economic development in Nigeria from 1986 to 2022, based on the empirical results and findings using the ARDL analysis. The results shown that, remittance played a significant role in driving the growth of Nigeria's economy. A 1% rise in the REM leads to a rise of 29% in Nigeria's GDP. It may be inferred once again that other macroeconomic variables have similar significance in elucidating the GDP in Nigeria.

RECOMMENDATIONS

Based on the results, the following recommendations are suggested:

i. Given the beneficial impact of cash transfers on Nigeria's economic development, government and policy makers should put into effect monetary and fiscal policies to improve the remittance channel, support inflow and foreign direct investment as a growth strategy.

ii. Government should enhance remittance inflows by improving the banking system. This can be accomplished by plummeting costs associated to remittance inflows and reducing tax rates for transaction.

iii. Developing countries often do not have the necessary financial resources to generate significant and sustained expansion in economic activity at a level that allows for steady growth. Hence, it is essential to allure FDI. Policy reforms should be implemented to bolster a nation's competitiveness as a desirable location for FDI.

iv. Nigerian policymakers ought to adopt appropriate fiscal and monetary policies to stabilize the price level and exchange rate in the nation. One example of such measures is the explicit announcement of adopting targeted inflation. Nigeria feels to be implementing a price target despite making any public declaration of specific aims.

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