IMPACT OF REMITTANCE ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

The world is autarky people travel from one country to another in search of greener pasture hence no country is a highland. It's the contributable tools and viable tools that promote economic activities among nations. This study examined the impact of remittances on economic growth in Nigeria on time series data sourced from Central Bank of Nigeria Statistical Bulletins spanning from 1990 to 2022. And examine *the impact of remittances on economic growth in Nigeria, evaluate the effect of foreign exchange rate on economic growth in Nigeria and assess the impact of foreign direct investment on economic growth in Nigeria. Applying descriptive statistics on the data, the result revealed that the data were normally distributed. Augmented Dickey Fuller (ADF) shows that all variables were stationary at first difference except remittance which was stationary at level. Furthermore, ARDL Bound test revealed that a long-run relationship exists among the studied variables. The study recommended that government should provide proactive policy such as scholarship grants that could help boost the citizens settling and schooling abroad thereby encouraging more remittances to Nigerian economy. Government should implement the policy of economy diversification for higher productivity in Nigeria so as to minimize high exchange rate fluctuations in the country. Therefore, the economy should equally improve their purchasing power in making the exchange rate more favorable and making the interest rate low for smooth economic.*

Keywords: economic growth, remittance, foreign direct investment, exchange rate

INTRODUCTION

Remittances have become one of the major sources of capital inflows into many economies of the world. It plays vital role in reviving and strengthening domestic economic activities. Many economists have asserted open economy that can attract remittances than closed economy in the present age. According to World Bank (2016) estimates on migration and development Brief, 2016 reported that remittances to developing countries grew marginally in 2015, as weak oil prices and other factors strained the earnings of international migrants and their ability to send money home to their families. Furthermore, remittances to developing countries amounted to $430 billion in 2014 and to $431.6 billion in 2015.

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However, there is no consensus to what degree remittances contribute to economic growth and employment creation. (United Nations, 2019). Therefore, it is not surprising that human mobility becomes more and more important and inevitable, because it affects the socio-economic life of the sending and receiving nations. Remittances transferredby migrant workers, represent a huge percentage of countries' foreign exchange earnings and GDP growth, contribute significantly to the economic improvement of migrant families (Muhammad *etal.,* 2019).

International Monetary Funds (2018) stressed that remittances represent the income of migrants' households in overseas which occur primarily from the temporary or permanent movement of men and women to these nations. For instance, remittances include cash and non-cash items that were transferred through formal channels, such as transfer from financial institution or informal channels through friends or items transported throughout borders.

Moreover, World Bank (2019) has estimated that nearly $160 billion is transferred annually through official channels, which in some countries is almost an equivalent amount of money received through developmental aid or foreign direct investment. The amount of cash transferred by migrants to emerging economies is nearly thrice than foreign development aids, which is crucial in development of economic and human well-being in beneficiary countries.

On the record of the World Bank, it estimated that international remittances grew by 10% to $689 billion in 2018 up from $633 billion in 2017. It is developing nations which acquired 77% or $528 billion in whole inflows into various economies. These nations include Philippines, China, Egypt, India and Mexico are amongst the largest recipients of remittances in the world and together represent around 36% of the total inflow. Egypt and Nigeria received the greatest remittance inflows to Africa in 2018. In 2017, Nigeria led the continent in phases of remittance revenue, however dropped to 2nd region in behind Egypt in 2018. There are two fundamental motives behind this growth. The first was global economy growth, specifically in OECD countries with high-income. The World Bank Migration and Development Report attribute multiplied international remittances to the growth of Russia economy, United States, and the Europe (OECD, 2020).

Secondly, there has been an increase in price of oil, which has improved the economy of oil-producing countries around the world. In April 2020, Ratha etal (2020) projected a decline in remittance flows to low and middle-income countries (LMICs) by about 20 per cent because of the economic crisis caused by corona virus pandemic which negatively affected wages and employment for migrant workers. By October 2020, it adjusted their projections to a decline in remittance flows of 7.2% to USD 508 billion. Latest data show that remittance flows fell by only 1.6% to USD 540 billion, defying projected declines that would have been the sharpest in recent history (World Bank, 2021).

According to the world bank (2020) stated that the decline in recorded remittance flows in 2020 was smaller than the one during the 2009 global financial crisis (4.8%). Remittance flows also surpassed the sum of Foreign Direct Investments FDI (USD 259 billion) and overseas development assistance (USD) 179 billion.

Apart from the above, Nigerian economy has been experiencing fluctuations in foreign remittance into the country. In view of this, remittance inflows into the country in 1986 was meagre amount of $253.50 US Dollar millions. However, its growth was steady to 1995 when it hit $1.256billion US Dollar and

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thereafter increased to $5.67billion US dollar in 2005 due bank recapitalization policy of Central Bank of Nigeria.

In addition, remittance has been a major source of foreign earnings in Nigerian economy compared to foreign earnings from Crude oil exportation in the recent years (CBN, 2017). It amounted to $25 Billion Us Dollar in 2014 and slightly declined to $17 billion in 2016. In 2017, it has picked up to $28 billion that flowed into the country. Due to disruption of global pandemic of COVID-19 in 2020, Nigerian economy becomes second behind Egypt in remittances beneficiaries in the continent of Africa. However, the remittances have started demonstrated high growth in the recent years but its impact was still minimal in the country.

Foreign Direct Investment policy (CBN, 2016), Economic growth recovery policy (CBN, 2017) and the most recent policy of Five Naira per US dollar remittance policy (CBN, 2020). In addition, these policies geared toward improvement in foreign remittances into Nigeria. However, the level at which Nigerian naira have been affected by US dollar in recent time, does not portrayed Nigeria as high recipient of remittance in Africa. Moreover, foreign direct investment has decline in these recent years despite high remittances received in Nigeria. In fact, even standard of living among average Nigerian is poor compared to country like Egypt, Sychelle, Algeria, South Africa and Rwanda.

A study by Williams, Omokanmi and Onayemi (2020) examined theimpact of remittances on economic growth and financial development in Nigeria and submit positive impact exists. Ebenezer and Gbenga (2019) asserted negative impact of remittances on economic growth in Nigeria. However, whether the impact of remittances on economic growth is positive or negative, it remains empirical equation to be evaluated in the course of this study.

This phenomenon may be attributed to poor policy formulation and implementation by the Nigeria government or loss of jobs opportunities by Nigerians in foreign countries. It can be caused by high rate of corruption in Nigeria or other factors that would be uncover in the course of this study, hence there is need to empirically examine the impact of remittances on economic growth in Nigeria.

Research questions

The following research questions were formulated to guides this study as:

i. What is the impact of remittance on economic growth in Nigeria?
ii. What are the effects of foreign exchange rate on Nigerian economy?
iii. To what extent has foreign direct investment influence economic growth Nigeria in?

Objectives of the study

The broad objective of this study is to examine the impact of remittance on economic growth in Nigeria. While the specific objectives include to:

i. examine the impact of remittances on economic growth in Nigeria,
ii. evaluate the effect of foreign exchange rate on economic growth in Nigeria and
iii. assess the impact of foreign direct investment on economic growth in Nigeria

Statement of research hypothesis

This study formulated the following hypotheses to examine the impact of remittance on economic growth in Nigeria as:

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Ho_1: Remittances have not significant impact on economic growth in Nigeria;
Ho_2: Foreign exchange rate has no significant effect on economic growth in Nigeria
Ho_3: Foreign Direct Investment does not have significant influence on economic growth in Nigeria.

LITERATURE REVIEW

Conceptual Clarifications

Remittance

Remittance is a non-commercial transfer of money by a foreign worker. Remittance is a payment of money that is transferred to another party. Remittances play an increasingly large role in the economies; they also play an important role in disaster relief, often exceeding official development Assistance (ODA). They help raise the standard of living for people in low-income nations to help combat global poverty.

In addition, many of diaspora were able to provide a more reliable source of development and income to their home countries. Hence, mobilizing and exploring the potentials of those oversea migrants are of crucial interest for developing countries which Nigeria is included (UN, 2017).

For instance, remittances may include the following: regularly send money to your family back home when you're working abroad, help your family with an emergency experience, pay a contractor in your home country for work they did while you were away and directly pay a service provider for work they did while you were away.

Foreign Direct Investment (FDI)

According to IMF (2018), foreign direct investment occurs when an individual or business owns at least 10% of capital in a foreign company. When investor own less than 10%, the IMF sees it as part of a stock portfolio. Whereas a 10% ownership in a company doesn't give an individual investor a controlling interest in foreign country.

Aside that, Foreign directs investment can foster and maintain economic growth, both in the recipient country and the country making the investment. Developing countries have encouraged FDI as a means of financing the construction of new infrastructure and the creation of jobs for their local workers. And also, Multi Company benefited from FDI as a means of expanding their foot prints into international market.

Foreign exchange rate

According to Osigwe *et al* (2016), It is the ratio of the price level abroad and the domestic price level, where the foreign price level is converted into domestic currency units via the current nominal exchange rate. Exchange rate has become one of the major determinants of the survival of a country's economy (CBN, 2019). This implies exchange rate plays a critical role in guiding the allocation of production and spending in the domestic economy between foreign and domestic goods and services.

Economic growth

Economic growth can be seen as the increase or improvement in the inflation-adjusted market value of the goods and services produced by an economy over time (National Bureau of Statistics, 2017). Central Bank of Nigeria (2020) viewed economic growth as monetary values of goods and services produce in the economy by residents irrespective of their nations at particular time.

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Broadly speaking, there are two main sources of economic growth: growth in the size of the workforce and growth in the productivity (output per hour worked) of that workforce. Productivity growth allows people to achieve a higher material standard of living while spending fewer hours in the paid labour force.

Theoretical framework

Pure altruism theory

Altruism has been used to explain the motivating factor of remittances for past decades by different scholars (Becker, 1981; Stark, 1995; Rapoport & Docquier, 2006; Carling, 2008). Generally, altruistic principles claim that migrantsact to improve the well-being of each member of their family and this now does not mean that migrants are no longer involved to care for themselves; however they purposively react to the needs of their families. In general, self-sacrifice to individuals at home is identified as an essential drive to transferred remittance (Johnson & Whitelaw, 1974; Lucas & Stark, 1985). Altruistic behaviuor model allows the migrant's self-sacrifice moves to the degree of welfare or consumption of the homeland (Becker, 21974). Pure altruism is giving without reference to the reward or benefits of recognition and desire. Remittances are transferred out of affection and responsibility towards the household, the neighborhood or the country. The main reason why people migrate to other countries has been mentioned in the literature on poverty due to deficiency in homeland. According to the altruistic model, sending remittances produces delight for migrants due to the fact that it represents an aid for the social well-being of the family, the community or the homeland (Becker, 1981). This idea believes that the migrant feels obligated to transfer remittances from his destination to his home because of his attachment and love for his family. It is possible that this is due to the reality that the migrant started his journey from the prevalence of poverty in his country and, therefore, tries to alleviate poverty by supporting family consumption and expenditure.

Empirical review of the related literature

Several studies have been abounded on remittances and economic growth across the world. These studies reported different results and there was no consensus among the outcomes of their empirical evidences.

However, in Nigerian economy there are few and scanty studies on remittances and economic growth in Nigeria. For instance, Adeseye (2021) examined migrants' remittance and economic growth in Nigeria for the periods of 1990-2018. It applied ordinary least squares (OLS) and submit that a significant relationship exists between remittance and gross domestic product, exports and imports in Nigeria.

Furthermore, Ebenezer and Gbenga (2019) studied the effectiveness of remittance income on food importation in Nigeria using time-series data for the period 1977 to 2019. The outcome from the findings indicated that remittance income has a negative impact on food importation into Nigeria.

Astudy by Williams, Omokanmi and Onayemi (2020) analyzed the structural linkages between remittances and financial sector development. It revealed a positive long-run relationship between remittances and financial development with a significant (positive) short-run relationship. Hence, it's important to adopt migrants transfer which can have both long and short run significant advantage on the economic development in Nigeria..

More to that, Rahmouni and Debbiche (2017) examined the impact of remittances on economic growth in Saudi Arabia from 1970 to 2014. Using ARDL as method of data analysis and revealed that remittances outflows have no significant impact on GDP for both short run and long run.

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More or less, Ahemen, Ominyi and Ijirsha (2020) evaluated the dynamics of remittances on economic growth in Nigeria using ECM and VAR modelling approaches. They revealed that remittances positively drive forward economic growth in Nigeria.

On the other hand, Bayar and Gavriletea (2018) used panel data analysis to examine relationships between FDI inflows and financial sector growth in Central and Eastern European Union countries between 1996 and 2015. According to the results, there is no cointegration relationship between FDI inflows, foreign portfolio investments and financial sector growth, but there is a one-way causality from financial sector development to FDI inflows in the short run.

In line with the above, Fromentin (2017) investigated the long-run and short-run impact of remittances on financial sector development in developing countries. The findings showed a long-run positive relationship between remittances and financial growth in the studied countries.

Apart from that, Sulemana*etal*(2018) investigated the international remittances influence on household food security for more than 48,000 individuals with focus on 32 Sub-Saharan African countries. The main thrust from the analysis suggests that the regularity of international remittances is paramount in the determinant of food security in Sub-Saharan Africa.

More so, Meyer & Shera (2017) examine the impacts of remittances on economic growth in Nigeria. using a panel data set of six receiving remittances countries including Albania, Bulgaria, Macedonia, Moldava, Romania and Bosnia Herzegovina. The results demonstrated that remittances positively affect growth. In the same vein, Mabrouk and Mekni (2018) examined the link between international remittances and food security for African countries using panel data from 1990 to 2013. The study found out that the channel through which remittances impacts on food security include access positive impacts; utilization and stability also showed a positive relationship, but availability indicated an inverse linkage across the countries.

Meanwhile, Garba*etal*(2020) analyzed the possible role of the financial sector in the nexus between foreign remittances and economic growth in Nigeria for the period of 1981 to 2015. It employed the two-stage least squares (2SLS) technique and revealed that substitutability between foreign remittances and financial development enhance economic growth in Nigeria. The study validated the substitutability hypothesis in favor of its qualitative measure for both migrant workers and their beneficiaries should be encouraged to make use of banks so that foreign remittances inflow into Nigeria can enhanced.

More so, Friday (2019) examine the short- and long-term relationship between remittances, development of financial sector and economic growth of Nigeria from 1981 to 2017. Using Autoregressive distributed lag (ARDL). The findings show remittances have a significant effect on economic growth in both short and long term and the financial development sector has a significant negative effect on economic growth.

More so, Hussaini*etal*(2019) investigated the impact of remittances on financial sector development in Nigeria using time series data for the period 1986-2019. The study used ARDL and shows that remittances positively influence domestic credit to private sector in Nigeria.

However, Manuel & Mariellen (2019) evaluate the effect of money sent by migrant for investment and their impact on youth in rural areas. It indicates that the money sent by migrant has positively contributed to the lowest economic development of youth in their countries of origin.

Methodology

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This study adopted *ex-post facto* research design to examine the impact of remittances on economic growth in Nigeria for a period of 1990-2022. Its sourced data on remittances, RGDP, foreign direct investment (FDI) and exchange rate. The study relies on secondary data obtained from World Bank development indicators and Central Bank of Nigeria statistical bulletins, 2022.

Model specification

The model for this study was derived from the models of (Lucas & Stark, 1985) and Wu (2018) with modifications thus: lnFDIi,t = α0 + α1lnMigi,t + α2lnGDPi,t + ϵi,t ……. (3.0)

This study specified the functional model as:

RGDP = F(REM) ……………………………………..……………………………………(3.1)

RGDP = (REM, EXR, FDI) ……………………………………………………..………...…. (3.2)

The equation (3.2) can be transformed into empirical model as:

$RGDP = \beta_0 + \beta_1 REM + \beta_2 EXR + \beta_3 FDI + \varepsilon_t$………………………………..................…...… (3.3)

Where:

RGDP = Real Gross domestic product

REM = Remittances received by Nigerian economy

EXR= Exchange Rate

FDI = Foreign Direct Investment

β_0 is the intercept, β_1, β_2 and β_3 are the coefficients or parameters of the model. While, ε_t is the error term or stochastic term in the equation (3.3).

A priori expectation are $\beta_1 > 0$, $\beta_2 < 0$ and $\beta_3 > 0$. These are the expectations based on economic theory in this study.

Method of data analysis

This study adopted four simple methods for its analysis. Firstly, it used descriptive statistics to check the characteristics and behaviour of the data involved in the model. Secondly, Augmented Dickey Fuller was used to test for stationarity of data and its properties. Thirdly, cointegration test was employed to ascertain relationship that exists among the studied variables. Finally, ARDL was used to examine the short-run and long-run impact of remittances on economic growth in Nigeria.

General format for ARDL model is denoted as:

$\Delta ln RGDP = \delta_0 + \delta_1 ln RGDP_{t-1} + \delta_2 ln REM_{t-1} + \delta_3 FDI_{t-1} + \delta_4 ln ERX_{t-1} + \Sigma\pi_1 \Delta ln RGDP_{t-i}$
$+ \Sigma\vartheta_j \Delta\ REM_{t-j} q_i{=}0\ P_{i-j} + \Sigma\rho m \Delta FDI t - mqi{=}0 + \Sigma\theta z \Delta ln ERX t - z - ʎ ECT_{t-i} + \varepsilon_{t-1\ qi}{=}0$…………………… (3.5)

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Data presentation and Analysis of Results

Table 1. Descriptive statistics

	RGDP	REM	EXR	FDI
Mean	42853.90	1.06E+10	154.0226	3.08E+09
Median	38777.01	1.46E+10	129.4000	2.01E+09
Maximum	72094.09	2.43E+10	450.0000	8.84E+09
Minimum	21680.20	10008540	9.900000	3.00E+08
Std. Dev.	19385.76	9.86E+09	127.9859	2.65E+09
Skewness	0.303961	0.022815	0.973835	0.863591
Kurtosis	1.468396	1.123893	2.873374	2.486250
Jarque-Bera	3.507368	4.549070	4.920542	4.194164
Probability	0.173135	0.102845	0.085412	0.122814
Sum	1328471.	3.29E+11	4774.700	9.54E+10
Sum Sq. Dev.	1.13E+10	2.92E+21	491411.6	2.10E+20
Observations	32	32	32	32

Source: computed by Author using Eview Version 10.0, 2022

In the Table 1, the average value of real gross domestic product from 1990-2022 is 42853.90 and the average data of remittances for the aforementioned years is 1.06E+10 in Nigeria. In the same vein, exchange rate data from the period of this study is 154.0226 while, foreign direct investment data is in average of 3.08E+09 all for this study period. Apart from that, the median value of the variables are; RGDP 38777.01, remittances is 146E+10, exchange rate is 129.4000 while foreign direct investment is 2.01E+09. Moreover, the highest or maximum values during this study on each of the variables were RGDP 72094.09, REM 2.43E+10, FDI 450.0000 and EXR 8.84E+09 respectively. Meanwhile, the minimum value of the variable includes RGDP 21680.20, REM 10008540, EXR 450.0000 and FDI 3.00E+08 respectively. This implied that there is a low dispersion of the data from the mean because the standard deviation is lower than the mean in the outcome. Similarly, the value of kurtosis for RGDP, REM, EXR, FDI were 1.468396, 1.123893, 2.873374 1.468396 accordingly. Also, the standard deviation is 19385.76 RGDP, 9.86E+09 REM, 127.9859 EXR, 2.65E+09. On the other hand, the coefficient of skewness were RGDP 0.303961, REM 0.022815, EXR 0.973835 and FDI 0.863591 .This implies that the data is positively skewed thus, the data do not meet the symmetrical distribution criteria. The most important statistics is the Jarque-Bera statistics and its probability value. The values were 3.507368(0.173135), 4.5490709(0.102845), 4.920542(0.085412), 4.194164(0.122814), RGDP, REM, EXR and FDI respectively used for normality test.

Unit root test (ADF)

This study adopted Augmented Dickey Fuller (ADF) to check and verify the stationarity of the variables included in the model. It also help to check the level of trend the times series data possessed in this study. The summary of unit root result is presented in Table 2 below.

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Table 2. Unit root (ADF) Result

Variables	@ level		@ first difference		order of integration
	t statistic	p value	*t* statistic	p value	
RGDP	-0.910176	0.7704	-2.659316	0.0410	1(1)
REM	-2.977915	0.0485	-2.977915	0.0059	1(0)
EXR	-2.963972	0.9853	-5.207274	0.0002	1(1)
FDI	-1.456548	0.5397	-2.398154	0.0185	1(1)

***Source**:* Author's computation using EViews Version 10.0, 2022

From Table 2 above, apart from Rem that was stationary at level, all other variables (RGDP, EXR AND FDI) became stationary at 1st difference. Hence, the use of ARDL became imperative.

ARDL bound test for remittances and economic growth in Nigeria

ARDL Bound test was adopted to examine long-run equilibrium among the variables studied. Table 3 below presents the result to evaluate whether there was long-run relationship among variables or not.

Table 3: ARDL Bound Test for Equilibrium

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	5.234085	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

Source: Author's computation using EViews version 10.0 2022

The Table 3 shows the ARDL bounds test approach to cointegration. From the above table, it can be seen that the F- statistic is greater than the upper and the lower values. Here, we conclude that there is cointegration relationship among the variables at 5% level of statistical significance. This result agreed with the work of Osigwe and Obi (2016) who evaluated the impact of remittances on the real exchange rate of Nigeria's Naira and supported the existence of long-run equilibrium among the variables in Nigeria.

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Table 4: Long-run Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REM	4.49E+07	4.70E+07	0.953677	0.3522
FDI	3.01E+06	1.64E+06	1.831084	0.0828
EXR	92.28013	26.39833	3.495680	0.0024
C				

Source: Author's computation using Eviews version 10.0,2022

In table 4 above, the expected sign between remittance and economic growth was in line with the economic theory. That is, positive sign exists among remittances variables and economic growth included in the model. Moreover, the coefficient of remittance is4.49E+07 units or 44.9% meaning a unit change in remittance would result to 4.49 units or 44.9% change in economic growth in the country. In addition, the remittance has a positive coefficient but was not significant in the model judging from its p-value 0.3522 and t-statistic of 0.95377. The foreign direct investment was 3.01E+06 units or 30%. It means a unit change in foreign direct investment would bring about 3.01E+06 units or 30% increase in economic growth. It has positive coefficient and statistically insignificant in the study as seen in the P-value of 0.0828. Therefore, the null hypothesis was accepted in the long run that remittance has not significant effect on economic growth in Nigeria based on this study. Finally, exchange rate exerts positive impact on economic growth in Nigeria. It has coefficient of 92.28013 units or 92% of change in economic growth. Exchange rate has significant impact on economic growth examining from its P-values of 0.0024 and t-statistic of 3.495680.

ARDL short-run Result

Apart from the long-run result presented in Table 4. It is appropriately to report short-run result in Table 5.

Table 5: Short-run Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.097.769	767.1431	4.038060	0.0007
D (RGDP (-1))	0.544691	0.134213	4.058420	0.0007
D(REM)	2.61E+07	1.34E+07	-1.943232	0.0470
D (FDI)	4.07E+07	1.82E+07	-2.622128	0.0168
D(EXR)	0.249119	6.258085	0.039808	0.0687
D (EXR (-1))	-16.02972	4.580026	-3.499919	0.0024
CointEq(-1)*	-0.548079	0.046034	-3.216728	0.0045

Source: Author's computation using Eviews version 10.0,2022

In the short-run analysis, it can be deduced that ECM signed correctly and in line with economic theory of negative coefficient and statistically significant. By ECM of -0.548079, it means when there are deviations or disequilibrium among the studied variables; it would be brought back to equilibrium point in

1year and 8 months. This speed of adjustment helps the variables included in the model to converge back to meeting point and it was statistically significant by its probability value of 0.0045. In the Table 5, the previous value of RGDP influences the current by 0.544691 units. This means 1 unit increase in previous value of RGDP would result to 0.544691 units or 54% increase in the current value of real gross domestic product in Nigeria. Moreover, the coefficient of REM was 2.61E+07 units, it simply means a unit increase in REM can increase real gross domestic product by 2.61E+07 or 26% in Nigeria. Foreign remittance was significant in the study as can be seen in its P-value of 0.0470 and T-statistic of -1.943232 in absolute term. Furthermore, foreign direct investment (FDI) has positive coefficient of 4.07E+07 units; it shows that a unit increase in FDI would increase RGDP by 4.07E+07 units or 40% increase in RGDP in Nigeria. In addition, real exchange rate has positive coefficient of 0.249119units that is if 1 unit increase in EXR would bring about 0.249119 units increase in RGDP within the study period. In fact, it was statistically insignificant in the model. This can be seen in its P-value of 0.0687 and T-statistic of 0.039808 in the analysis. In the same vein, EXR in the previous years portrayed negative coefficient of -16.02972.

Testing of hypothesis

In this section, the study is set to verify hypotheses formulated in section one (I) as:

Ho_1: *Remittances have not significant impact on economic growth in Nigeria;* in this, the study revealed that the coefficient of REM was positive and statistically significant by its P-value of 0.0470 and T-statistic of -1.943232 in absolute term. This means, the study therefore strongly rejects the null hypothesis and accept that the remittance has significant impact on economic growth in Nigeria within the study period.

Similarly, **Ho_2:** *Foreign exchange rate has no significant effect on economic growth in Nigeria*; by this, foreign direct investment (FDI) has positive coefficient and it was significant in the model based on its P-value of 0.0168 and t-statistic of-2.622128. Implies, the null hypothesis of insignificant impact on economic growth was rejected in this analysis.

Ho_3: *Foreign exchange rate has no significant effect on economic growth in Nigeria;* by this, real exchange rate has positive coefficient of 0.249119 units, it was statistically insignificant in the model. This can be seen in its P-value of 0.0687 and T-statistic of 0.039808 in the analysis. Therefore, the study accepts the null hypothesis of exchange rate does not have significant effect on economic growth in Nigeria.

Discussion of the results

In this section, the study discusses the result of the findings thus: first and foremost, the time series data used were normally distributed based on the descriptive statistics result. This result was in line with Hussaini*etal* (2019) investigated the impact of remittances on financial sector development in Nigeria using time series data for the period 1986-2019 and submitted that the data were normally distributed. However, Manuel & Mariellen (2019) evaluated the effect of money sent by migrant for investment and their impact on youth in rural areas and concluded that the data were not normally distributed.

Secondly, Augmented Dickey Fuller (ADF) revealed that there was mixed order of integration which necessitated the choice of ARDL in its analysis. In the same vein, Friday (2019) examined the short- and long-term relationship between remittances, development of financial sector and economic growth of

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Nigeria and reported mixed order integration in his study. On flip, Garba*etal*(2020) analyzed the possible role of the financial sector in the nexus between foreign remittances and economic growth in Nigeria and concluded that all the variables were integrated at order (I(1)). But this study aligned itself to the work of Friday (2019).

Thirdly, ARDL Bound result shows that a long-run equilibrium exists among the variables studied.

On the other hand, Manuel & Mariellen (2019) evaluated the effect of money sent by migrant for investment and their impact on youth in rural areas in Nigeria and reported no long-run relationship among the studied variables. This current finding agreed with the position of Odionye and Emelore (2015) andOsigwe and Obi (2016).

Moreover, the coefficient in the Table 4, the expected sign between remittance and economic growth was in line with the economic theory. That is, positive sign exists among remittance variables and economic growth included in the model. The findings agreed with Osigwe and Obi (2016) who evaluated the impact of remittances on the real exchange rate of Nigeria's Naira using ARDL on time series data and the result showed that long run relationship exists among variables. It revealed that all the variables used exert positive impact on real exchange rate.

Furthermore, foreign direct investment has positive coefficient and statistically insignificant in the study as seen in the P-value of 0.0828 in the long-run. It was corroborated by Osigwe and Obi (2016) who evaluated the impact of remittances on the real exchange rate of Nigeria's Naira using ARDL on time series data and the result showed that long run relationship exists among variables. It revealed that all the variables used exert positive impact on real exchange rate.

In the same, exchange rate exerts positive impact on economic growth in Nigeria. This is in line with Manuel & Mariellen (2019) who evaluated the effect of money sent by migrant for investment and their impact on youth in rural areas. The result indicates that the money sent by migrant has positively contributed to the lowest economic development of youth in their countries of origin.

In the short-run, the previous value of RGDP influences the current by 0.544691 units. This means 1 unit increase in previous value of RGDP would result to 0.544691 units or 54% increase in the current value of real gross domestic product in Nigeria. It was statistically significant in the model if evaluate from its P-values of 0.0007 and T-statistic of 4.05820 assuming all things being equal and vice versa. This outcome agreed with Hussaini*etal*(2019), Osigwe and Obi (2016) and Friday (2019) who examined the short-run and long-run relationship between remittances, development of financial sector and economic growth of Nigeria and submitted that previous RGDP has positive impact on economic growth in Nigeria.

Moreover, the coefficient of REM was 2.61E+07 units, it simply means a unit increase in REM can increase real gross domestic product by 2.61E+07 or 26% in Nigeria. Foreign remittance was significant in the study as can be seen in its P-value of 0.0470 and T-statistic of -1.943232 in absolute term. This result aligned itself to Garba*etal*(2020), Odionye and Emelore (2015) and Mabrouk and Mekni (2018) who examined the link between international remittances and food security for African countries using panel data from 1990 to 2013.

Furthermore, foreign direct investment (FDI) has positive coefficient of 4.07E+07 units; it shows that a unit increase in FDI would increase RGDP by 4.07E+07 units or 40% increase in RGDP in Nigeria. This result agreed with Meyer & Shera (2017) examines the impacts of remittances on economic growth in

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Nigeria and conclude that positive relationship exist between foreign direct investment and economic growth in Nigeria.

In addition, real exchange rate has positive coefficient and statistically insignificant. This can be seen in its P-value of 0.0687 and T-statistic of 0.039808 in the analysis. This finding corroborated the study of Fromentin (2017) investigated the long-run and short-run impact of remittances on financial sector development in developing countries. Similarly, Ahemen, Ominyi and Ijirsha (2020) evaluated the dynamics of remittances on economic growth in Nigeria using ECM and VAR modelling approaches. They revealed that remittances positively drive forward economic growth in Nigeria.

Finally, this finding indicated that remittance has positive and significant impact on economic growth in Nigeria. Meanwhile, the outcome of this study can be used to make policy recommendations for improvement in economic growth in Nigeria.

Conclusion

The main results showed that the remittance, foreign direct investment and exchange rate have positive impact on economic growth in Nigeria in the long-run. However, remittance and FDI are not statistically significant in the model except exchange rate which is significant.

On the part of short-run dynamism, the ECM signed correctly and in line with economic theory of negative coefficient and statistically significant. By ECM of -0.548079, it means when there is disequilibrium among the studied variables; it would be brought back to equilibrium point in 1year and 8 months. It shows that remittance has positive on economic growth and it was significant in the study. Furthermore, foreign direct investment (FDI) has positive relationship with economic growth but statistically insignificant. In addition, real exchange rate has positive effect on economic growth within the study period. However, it was statistically insignificant in the model.

Therefore, this study concluded that remittance has positive impact on economic growth but insignificant in the model estimated.

Recommendations

The following policy recommendations are made:

i. Government should provide proactive policy such as scholarship grants that could help boost the citizens settling and schooling abroad thereby encouraging more remittances to Nigerian economy.
ii. Insecurity challenges should be controlled in Nigeria in order to attract foreign investors, government should as the matter of urgency improve their security architecture thereby making life easy and safety for the investors, as such attracts foreign direct investment to their host community.
iii. Government should implement the policy of economy diversification for higher productivity in Nigeria so as to minimize high exchange rate fluctuations in the country. Therefore, the economy should equally improve their purchasing power in making the exchange rate more favorable and making the interest rate low for smooth economic.

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