Remittance-Domestic Investment Nexus in Nigeria

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Abstract
The study examined the impact of remittance on domestic investment in Nigeria for the period 1981-2020, using time series annual data obtained from the Central Bank of Nigeria statistical Bulletin and the World Bank database. The accelerator theory served as the framework of the study, where a linear model which specified investment as a function of remittances, gross domestic, interest rate and private sector credit was formulated to guide the investigation. The result of the unit root test of the time series data using the Augmented Dickey-Fuller unit root test for stationarity indicates that the series were stationary at levels I(0) and first difference I(1). The result of the bound test technique showed evidence of cointegration of the time series data. The result of the Autoregressive Distributed Lagged model shows that remittances have a positive and insignificant impact on domestic investment in the short run and long run. Based on the findings, it is recommended that pro-remittance inflow policies should be put in place by government to encourage investment in Nigeria. Nigerians in diaspora should be encouraged Nigeria government to see reasons why they should invest in their countries of origin.

Keywords: remittance, domestic investment, ARDL

INTRODUCTION

The entire world has become a global village as a result of globalization. This opportunity affords workers in the developing countries to migrate from their home countries where the compensation for labour is small compared to the industrialized and developed economies. Incomes made by workers in countries other than their own are repatriated to their home countries. Remittance is one of the key locomotives of economic growth and poverty reduction in developing countries as evidenced in Bangladesh (Muktadir-Al-Mukit, Shafiullah, and Sajib, 2013). Apart from influencing economic growth of the recipient countries by encouraging savings and investments, Solimao (2003) avers that the inflow of remittances impacts aggregate demand and output all the way through consumption.

Inflow of remittances is occupying a paradigm shift in international finance these days. Yet, these international remittances by migrant workers from their employment income, particularly to developing countries, are usually overlooked in discussions on international financial flows. Data from the World Development Indicators (WDI) show that by 2014, remittances had out spaced Foreign Direct Investment (FDI) and Official Development Assistance (ODA), being second only to oil as a foreign exchange earner for Nigeria as of 2017. World Bank estimates

show that as of 2013, Nigeria has moved into the top five recipients of remittances in the world and received 77 and 82% of the total remittance inflow to West African countries in 2011 and 2017 respectively. According to Price Water Coopers (2019), the sum of financial remittances sent by international migrants back to their families in countries of origin amounted to $581.6 billion in 2015. According to World Bank estimates; almost 75 per cent were sent to developing countries ($431.6 billion), representing more than three times the size of foreign aid received by such countries in the same year. Nigeria received $21.1 billion from the said remittances that year (the highest in Africa) compared to all developing countries in the world. In addition, remittances are the largest source of foreign capital in developing countries even more than Foreign Direct Investment (FDI). In 2018, a total of $25.08 billion was remitted by Nigerians in diaspora (Price Water Coopers, 2019). This represents about 14% increase from 2017 and 83% of the federal government's 2018. This was about $3 billion higher than the World Bank's previous estimates and placed Nigeria as the highest remittance recipient in Africa and fifth highest globally, behind the likes of India, china, Philippines and Mexico in that order. Figures obtained from the World Bank's Development Indicators (2020) show that remittances have declined to $23.81 by 2019.

The rapid growth of remittances in Nigeria raises the question of whether these earnings are used towards investment and thus expansion of the productive capacity of the economy. Despite the significant flow of remittances into the country in the recent past, not much is known about the impact of these remittances on domestic investment levels in the country. Empirical research from other countries has produced mixed results. Some studies suggest that remittances are primarily used for consumption purposes while other studies are of the view that remittances are used for investment rather than for consumption. Many of these studies used cross-country data where the behavioural pattern of remittances was analyzed by combining data from several countries (Adeniyi, Ogunjimi, Adekunle, Babatunde & Omiwale 2021; Přívara and Trnovský, 2021; Bjuggren Dzansi & Shukur, 2010; and Issifu, 2018). The result of this approach was that country specific dynamics were lost in the process. Furthermore, those studies merely established correlations and causation (Okeke, Utomi & Ezenekwe, 2019) but not impact. As a departure from previous studies, the present study establishes a dynamic analysis of the impact of remittance on domestic investment. Findings from this study would aid policy making that would help to facilitate remittance inflows and benefit the economy towards increasing domestic investment and poverty reduction in Nigeria. Unlike previous studies, the present study examines the short run and long run impact of remittance on domestic investment in Nigeria. The study is organized into five parts, namely introduction, literature review, methodology, result presentation and Conclusion.

LITERATURE REVIEW

Studies on the impact of remittances on domestic investment are few. Okeke, Chinanuife and Muogbo (2021) investigated the causal relationship between remittances and private domestic investment in Nigeria using quarterly data for the period 1981Q1 to 2020Q4. After the preliminary tests for unit root was conducted using Philips-Perron tool, the technique of Toda and Yamamoto causality test carried out reveals a unidirectional causality relationship between remittances and private investment in Nigeria. Okeke, Utomi & Ezenekwe, (2019) employed the Ordinary Least Squares technique to examine the impact of remittances on private investment in Nigeria. Result reveals that remittances increase the rate of private investment in Nigeria and the previous investment is a determinant of the current investment.

Abubakar & Folawewo (2019) analysed the impacts of various types of remittances on households' investment in the rural areas, urban areas and in the geo-political zones of Nigeria. While using the probit regression technique, result shows that impacts of remittances on households' investments are felt in the rural areas, urban areas and in the geo-political zones of Nigeria. The study by Adeniyi, Ogunjimi, Adekunle, Babatunde & Omiwale (2021) analyzed the interactive effects of remittances and financial development on savings-investment gap for a panel of 18 Sub-Saharan African (SSA) countries for the period of 1990 - 2017. Using the technique of Panel ARDL model estimation, result shows that higher remittances have significant and negative effect on savings-investment gap in the long run.

Issifu (2018) test the proposition that remittances does not have significant impact on domestic investment in five countries of sub-Sahara using panel data analysis Result of the Random effect analysis indicates that remittances exert a significant positive effect on domestic investment. The interaction effect of remittances and institutions shows that political institution serves as a mechanism through which remittances impact domestic investment. Odionye and Emereole (2015) investigated the impact of international remittances on the Nigerian economy. The study adopted the Autoregressive Distributed Lagged model (ARDL) to estimate the model. The result shows that international remittance inflow has positive and significant impact on the Nigerian economy. Ojapinwa and Odekunle (2013) examined the link between remittances and fixed capital formation. Using time series data for the period 1977-2010, the study employed the Dynamic Ordinary Least Squares- two–stage Instrumental Variable [2SIV] approach to control for the endogeneity problem that arises from utilization of lag independent variables. The study reveals that remittances boost investment in capital stock in Nigeria.

Dash (2020) examined the impact of remittances on domestic investment for South Asia over 1991–2017. Results of this study suggest that remittances increase domestic investment in the short term as well as in the long run for South Asia. This indicates that remittances are used not only for consumption purposes but also for investment activities such as human and physical capital development.

Hossain & Sunmoni (2021) examined empirical evidence on the effect of remittances on household investment decisions. The study used data from the World Bank's Migration and Remittances Household Survey, a recursive bivariate probit model, and instrumental variables approach to account for endogeneity concerns. The study finds that remittance-receiving households in sub-Saharan Africa are more likely to invest in human and social capital compared to non-remittance receiving households. The study by Přívara and Trnovský (2021) examined the contributions of remittances to household savings in the Baltics along with other macroeconomic variables in a post-crisis period. Estimation techniques of Fixed effects and pooled OLS reveal that remittances are an essential driver of savings in the Baltics in the long run.

Adedayo, Olusuyi, Agbolade, & Ebun (2017) employed the technique of Generalised Method of Moment (GMM) to estimate investigated the dynamic impact of workers' remittances on economic growth in Nigeria for the period 1970-2013. Result shows that all the coefficients of consumption, investment and import are positive and significant. The short run or impact multiplier of private consumption, investment, import and income respectively are positive.

Bjuggren Dzansi & Shukur (2010) examined the impact of remittances on investment in 79 developing countries during 1995-2005. Dynamic panel data approach was applied for this purpose. The results reveal that remittances, high quality institutional framework and well developed credit market increase investment.

From the review of the related studies, it is discernible that no study has attempted to determine the dynamic impact of remittances on domestic investment in Nigeria. The present study intends to bridge this gap by using the technique of Auto regressive distribute lagged Model for this purpose.

METHODOLOGY

This research adopts the *Ex-Post Facto* research design. The study employed secondary annual time series data obtained from the Central Bank of Nigeria Statistical Bulletin for the period 1981-2020. Time series for remittances was obtained from the World Bank database. The data analysis was executed using E-views 9.0 software.

The theoretical underpinning of this study is the flexible accelerator theory. This theory hypothesizes that firms plan to close a fraction of the gap between the desired capital stock, K^* and the actual capital stock, K in each period. This gives rise to a net investment equation of the form of:

$$I = K^* - 1 = \Delta k \qquad (1)$$

Therefore:

$$I = \Delta K = k\Delta Y_t \qquad (2)$$

Where I is net investment, Δk is a change in capital stock, ΔY_t is the change in the current output level where k is the capital-output ratio. The change in output (ΔY_t) is a function of domestic investment and foreign investment. This is where remittances come in as a type of foreign capital inflow into the economy.

Unit Root Test for Stationarity

The preliminary test for stationarity was done using the Augmented Dickey fuller Unit root test. The ADF equation is stated below:

$$\Delta Y_t = \delta Y_{t-1} + \ \Sigma\ \alpha_i \Delta Y_{t-i} + \mu_t \qquad (3)$$

The testing procedure follows an examination of the student-t ratio for δ. The critical values of the test are all negative and larger in absolute terms than standard critical t-values, so they are called DF and ADF statistics. If the null hypothesis cannot be rejected then the series Yt cannot be stationary. The decision rule is to reject Ho, if the absolute DF or ADF t-statistic > 5% critical values. If otherwise, accept Ho.

Bound Test Cointegration

This present study uses the autoregressive distributed lag (ARDL) Bound testing procedure to examine the cointegration (long run) relationship between the dependent variables and the explanatory variables, as well as the short run dynamics. Bound test is preferred to Johansen techniques method of cointegration, (Pesaran, Shin & Smith, 2001) An F-test of the joint significance of the coefficients of the lagged levels of the variables was used to test the hypothesis of no cointegration among the variables against the presence of cointegration among the variables. The F-test has a nonstandard distribution irrespective of whether the variables are

1(0) or 1(1). Pesaran et al. (2001) established two sets of adjusted critical values that provide the lower and upper bounds used for inference. One set assumes that all variables are 1(0) and the other assumes that they are all 1(1). If the computed F-statistics falls above the upper bound critical value, then the null of no cointegration is rejected. If it falls below the lower bound, then the null cannot be rejected. Finally, if it falls between the lower and upper bound, then the result would be inconclusive, estimation could go on as long as the variables are I(0) and I(1) variables (Ilyas, Hafiz, Afzal & Tahir, 2010).

Model Specification
The present study adopted the flexible accelerator model of investment which was also adopted by Okeke, Utomi and Ezenekwe (2019). The study mirrors the model employed by Okeke, Utomi and Ezenekwe, (2019) which studied the impact of remittances on private investment in Nigeria. The model by Okeke et al (2019) specified private investment as a function of immediate past values of private investment, remittances, real GDP interest rate, inflation, foreign direct investment, real exchange rate and private sector credit. The present study argues that the defect of the model (Okeke, et al 2019) above stems from the lagging of the dependent variable as an explanatory variable ($PINV_{t-1}$) without theoretical or empirical support. This led to a result of an error correction model coefficient that was positively signed and insignificant. Also, the inclusion of inflation rate and inflation as explanatory variables in the same model poses multicollinearity problems. Both variables are widely known to exhibit the same trend always.
The present study specifies the stochastic model in their logged form below:

$$LDINV_t = \alpha_0 + \alpha_1 \ LREM_t + \alpha_2 \ LGDP_t + \alpha_3 \ INTR + \alpha_4 \ LDCR_t + \ \mu_t \qquad\qquad 5$$

Where: $DINV_t$: annual time series data for domestic investment (gross fixed capital formation); REM_t = annual remittances received from abroad; $INTR_t$ = interest rate; DCR_t = domestic credit to the banking sector by banks; α_0 = regression constant; α_1 = regression coefficients; μ_t = error term

A priori expectations
$f(\alpha_1) > 0, f(\alpha_2) > 0, f(\alpha_3) < 0, f(\alpha_4) > 0$
Autoregressive Distributed Lag (ARDL) Model
Before performing the ARDL model, we will test for the level of integration of all variables because if any variable is I(2) or above, ARDL approach becomes inapplicable (Ilyas, Hafiz, Afzal and Tahir, 2010).
The long run form of the ARDL model is re-specified thus;

$$LDINV_t = \alpha_0 + \alpha_1 \ LREM_t + \alpha_2 \ LGDP_t + \alpha_3 \ INTR + \alpha_4 \ LDCR_t + \ \mu_t \qquad\qquad 5$$

Where:

α_i = regression coefficients and i= 0, 1,…,n
Equation 5 explains the long run impact of each of the independent variables on the dependent variable. However, with the assumption of cointegration of the variables in Eqn. 3.5, the short run dynamics of the autoregressive distributed lag model is therefore specified in equation 3.6.

$$\Delta LDINV_t = \propto_0 + \propto_{1i} \sum_{i=1}^{q} \Delta LDINV_{t-i} + \propto_{2i} \sum_{i=0}^{q} LREM + \propto_{3i} \sum_{i=0}^{q} \Delta LGDP_{t-i} + \propto_{4i} \sum_{i=0}^{q} \Delta INTR_{t-i}$$
$$+ \alpha LDCR_t + \varphi ECM_{t-1} + \mu_t \qquad\qquad 6$$

φ = error correction coefficient (speed of adjustment from the short run to the long run equilibrium after a shock)

RESULTS PRESENTATION

The empirical result begins by examining the characteristics of the time series variables. The result is presented in Table 1 below:

Table 1: Result of the descriptive statistics

	DINV	REM	GDP	INTR	DCR
Mean	9.037904	20.49888	10.31380	13.03750	6.429348
Median	9.012711	20.89520	10.10501	13.25000	6.456703
Maximum	9.667111	23.91420	11.17588	26.00000	10.27683
Minimum	8.642745	14.70115	9.530920	6.000000	2.148274
Std. Dev.	0.216729	3.194553	0.581383	4.002223	2.773950
Skewness	0.523438	-0.430168	0.249697	0.702213	-0.082411
Kurtosis	3.403742	1.736621	1.524527	4.437047	1.582665
Jarque-Bera	2.098262	3.893843	4.044025	6.729197	3.393341
Probability	0.350242	0.142713	0.132389	0.034576	0.183293
Sum	361.5162	819.9553	412.5518	521.5000	257.1739
Sum Sq. Dev.	1.831893	398.0015	13.18223	624.6938	300.0972
Observations	40	40	40	40	40

Source: Author's Eview 9 Computations

Table 1 above shows that domestic investment has the lowest standard deviation from its mean, while remittances have the highest standard deviation from its mean values. Domestic investment (DINV), gross domestic product (GDP, and interest rate show evidence of positive skewness, while remittances (REM) and domestic credit (DCR) show evidence of negative skewness. Apart from interest rate (INTR), whose Jarque-Bera's probability (0.035) falls below 0.05, other variables whose probabilities exceed 0.05 indicates that they do not follow normal distribution.

Unit Root Tests for Stationarity of time series

Table 2: Result of ADF Unit Root Test for Stationarity

Variables	ADF t-statistic	5% Critical Value	ADF t-statistic	5% Critical Value	Decision	Order of Integration
	At levels		At first difference			
LDINV	-2.232750	-2.943427	-5.083104	-2.943427	Stationary	I(1)
LREM	-0.894730	-2.938987	-6.334771	-2.941145	Stationary	I(1)

LGDP	-0.485037	-2.941145	-3.289451	-2.941145	Stationary	I(1)
INTR	-3.302339	-2.938987	-	-	Stationary	I(0)
LDCR	-0.853391	-2.938987	-4.259401	-2.941145	Stationary	I(1)

Source: Author's Eview 9 Computations

Table 2 above shows the result of the unit root test for Stationarity. The result of the Augmented Dickey-Fuller unit test indicates that all the time series variables are stationary at first difference, except the rate of interest (INT). This implies that these variables which were not stationary at levels. They contain unit root. As a result of this outcome, the study conducted cointegration test. The result of the bound test is presented in Table below.

Table 3: Bound Test Cointegration Result

ARDL Bounds Test			Bound Test 5%	
Test Statistic	Value	K	Lower Bound	Upper Bound
F-statistic	7.487061	4	2.86	4.01

Source: author's Eview computations

To determine the existence of cointegration in Table 3, the study compares the absolute value of the F-statistic and the lower and upper bounds 5% critical value. The value of the ADF F-statistic exceeds values of the lower and upper bounds 5% critical value (7.487061 > 2.86 and 4.01), therefore, cointegration exists.

This implies a long run equilibrium relationship among all the time series variables. The long run estimation of the remittances-domestic investment equation is presented below in Table 4.

Result of the Regression Equation

Table 4: Result of ARDL (Short run estimates)

Dependent Variable: LDINV				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LDINV(-1))	0.386443	0.158513	2.437931	0.0254
D(LDINV(-2))	-0.086708	0.131054	-0.661619	0.5166
D(LDINV(-3))	0.200802	0.133266	1.506772	0.1492
D(LREM)	0.044758	0.030850	1.450821	0.1640
D(LREM(-1))	0.064194	0.033726	1.903385	0.0731
D(LGDP)	-0.016700	0.500180	-0.033388	0.9737
D(LGDP(-1))	0.073932	0.887886	0.083267	0.9346

D(LGDP(-2))	-0.041561	0.894246	-0.046477	0.9634
D(LGDP(-3))	-0.607722	0.567236	-1.071374	0.2982
D(INTR)	-0.008660	0.006330	-1.368128	0.1881
D(LDCR)	0.147481	0.146680	1.005461	0.3280
D(LDCR(-1))	-0.334717	0.122856	-2.724480	0.0139
CointEq(-1)	-1.337165	0.249740	-5.354224	0.0000
Cointeq = LDINV - (0.0039*LREM -0.0282*LGDP -0.0012*INTR + 0.0636 +				
*LDCR + 8.8824)				

Source: author's Eview computations

Table 4 presents the short run parameters of the ARDL model analysis. The result shows that domestic investment was lagged to 3 years to itself by the model. Remittance was lagged to a year, while GDP was lagged to three years. Interest year was left at its current year in the model, while domestic credit to the private sector was lagged to one year. The short run model indicates that the cointegrating equation was negatively signed and appeared negative as expected by economic theory. The result indicates that the speed of restoration of domestic investment to its original equilibrium in the economy after a shock is 133 per cent. This outcome can be said to be explosive.

Interpreting the short run result, remittances is positively related to domestic investment but not statistically significant at 5 per cent in the short run. This means that the amount of remittance of remittance inflows into the economy of impacting domestic investment in the country, but so far in the short run, such inflows have not significance led to increase in domestic investment over the period under study. One per cent increase in remittances leads to 0.05 per cent increase in investment. in the short run. This finding agrees with the outcome of the study by Okeke, Utomi and Ezenekwe, (2019) which reveals that remittances increase the rate of domestic investment in Nigeria and the previous investment is a determinant of the current investment. On the other hand, the study by Adeniyi, Ogunjimi, Adekunle, Babatunde and Omiwale (2021) claim that higher remittances have significant reducing effect on savings-investment gap in the long run, and this becomes magnified while accounting for individual and interactive effects of remittances and financial development. The outcome of the present study is at variance with Adeniyi et al (2021) with its claim of a positive relationship between remittance and domestic investment. The difference could be because the present study is country-specific while unlike Adeniyi et al (2021).

The outcome of the study shows that the relationship between GDP and domestic investment is surprising by exhibiting a negative sign against a priori expectations. This implies that as GDP increases by one per cent, domestic investment declines by 0.02 per cent in the short run. The relationship between interest rate and domestic investment follows economic expectations by having a negative sign. The classical theory of investment posits that investment and interest rate has a negative relationship. As interest rate falls, investment increases and vice-versa. One per cent increase in interests rate leads to 0.01 per cent decline in domestic investment in Nigeria over the short run. In its current year, the relationship between domestic bank credit and investment is positive but not statistically significant. One per cent increase bank credit to the

private sector leads to 0.15 per cent increase in domestic investment. An increase in the advancement of credit by the banking sector will have a significant impact on domestic investment in Nigeria.

The long run result estimates of the model are presented at the last two rows of Table 4 above. The result indicates that all the explanatory variables are statistically insignificant since none of the probabilities of their t-statistics falls below 0.05. Interest rate and GDP maintains the same negative sign as they did in the short run. Remittances and domestic credit to the private sector maintained the same positive sign as in the short run. As a result of these characteristics, it is deductible that the short run result is similar to the long run result in this study.

Summary of Post-estimation Tests
Table 5: Summary of Post-estimation Tests

| Test Statistics	Normality	LM	Homoscedasticity	Ramsey Test
P(JB)	0.41762	-	-	-
P(F)	-	0.0946	0.4597	0.7697
Obs*R-squared	-	0.0101	0.3947	-
P(t)	-	-	-	0.7697
Likelihood ratio	-	-	-	0.7697

Source: author's Eview computations

Table 5 presents the summary results of post-estimation tests done to ensure the fulfillment of econometric criteria behind the empirical results obtained from the modeling. The result indicates that the residual follows normal distribution (P(J) = 0.42). The observed R-square value of 0.3947 shows that absence of unequal variance of the residuals. The probability value of the F (0.7697) and t-statistic (0.7697) shows that the model was well specified based on Ramsey tests. However, the LM statistic seems to shows signs of serial correlation.

Test for Model Stability
Stability of the short run model was tested using CUSUM test. The idea behind this test is to reject the hypothesis of model stability if the blue line lies outside the dotted red lines (5% critical region) otherwise, the model is said to be stable.
Figure1: Result of CUSUM test for stability
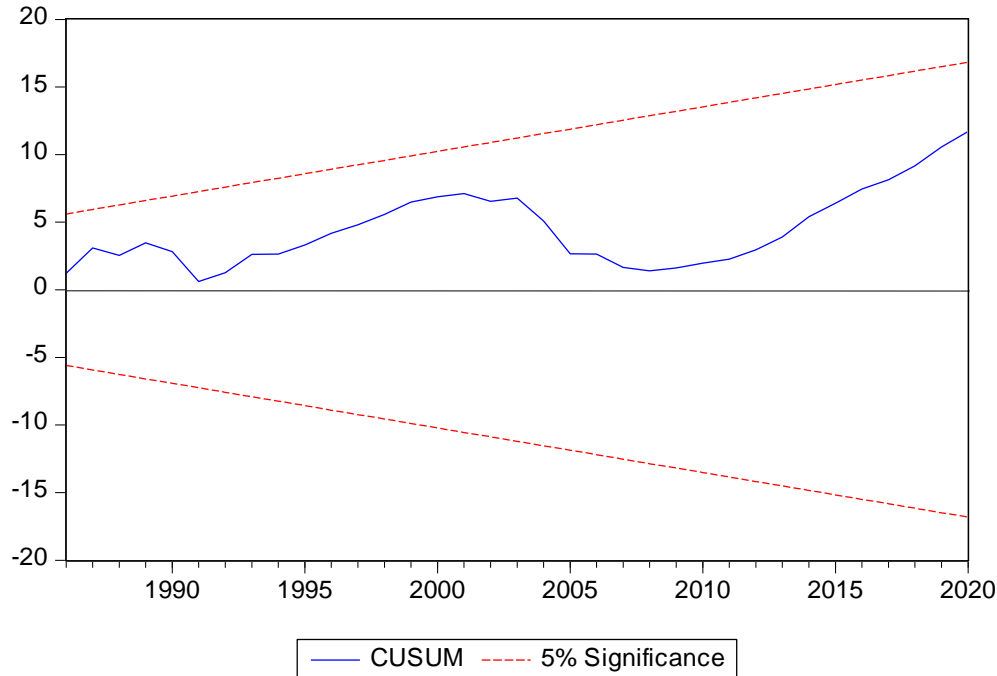
The graphical presentation indicates that CUSUM is within the critical bounds of 5% level of significance. This confirms that the study models is structurally stable

Conclusion

In this study, a linear model which specified investment as a function of remittances, gross domestic, interest rate and private sector credit was formulated to guide the investigation. The data investigation began with the examination of the time series variables for stationarity using the Augmented Dickey-Fuller Unit root test. The result indicates that the series were stationary at levels I(0) and first difference I(1). Peasarn (2001) bound test cointegration test was utilized to establish a long run relationship among the variables in the model. The result of the bound test technique showed evidence of cointegration of the time series data. The result of the Autoregressive Distributed Lagged (ARDL) model shows that remittances have a positive and insignificant impact on domestic investment in the short run and long run.

In view of the above finding and their implications, the study following recommends that government should come up with policies that will encourage easy inflow of remittances by Nigerians living in diaspora. Nigerians living abroad encouraged by government to see reasons why they should invest in their countries of origin, Nigeria. Government should provide security, cease multiple taxing of small businesses, and provide physical infrastructure in order to reduce the cost of doing business in Nigeria. These programmes will enable remittances to have significant impact on investment in the country.

REFERENCES

Abubakar, O. I. & Folawewo, A. (2019). The impact of remittances on household investment in Nigeria, *International Journal of Business and Economic Development*, 7 (2), 38-59

Adedayo, A. E., Olusuyi, A. O., Agbolade, G. B., & Ebun, A. F. (2017). Dynamic impact of remittance on economic growth in Nigeria, *Journal of Accounting and Financial Management*, 3 (3), 25-36

Adeniyi, O., Ogunjimi, J., Adekunle, W., Babatunde, M., & Omiwale, E. (2021). Analysis of savings-investment gap in Sub-Saharan Africa: does the nexus between foreign remittances and domestic financial sector matter?, *Research Square, Preprints*, DOI: https://doi.org/10.21203/rs.3.rs-239037/v1

Bjuggren, Dzansi, and Shukur, G. (2010). <u>Remittances</u> an investment, Working paper Series in <u>Economics and Institutions of Innovations 216</u>, Royal Institute of Technology, CESIS - Centre of Excellence for Science and Innovation Studies.

Dash, R. (2020). Impact of Remittances on Domestic Investment: A Panel Study of Six South Asian Countries, *South Asia Economic Journal*, 21(7), DO -10.1177/1391561420903199

Hossain, M. D. & Sunmoni, A. (2021). Do remittances influence household investment decisions? evidence from Sub Saharan Africa, Department of Economics, University of Reading 2021

Ilyas M., Hafiz K. A., Muhammad A. & Tahir M. (2010).Determinants of manufacturing value added in Pakistan: an application of bounds testing approach to cointegration, *Pakistan Economic and Social Review,* 48(2), 209-223

Issifu, I. (2018). The impact of remittance on domestic investment: the role of financial and institutional development in Five Countries in Sub-Saharan Africa, *Forum of International Development Studies*. 48(9), 1-20

Muktadir-Al-Mukit, D., Shafiullah, A. Z. M., & Sajib, A. H. (2013). Determination of causality between remittance and import: Evidence from Bangladesh. *International Journal of Business and Social Research*, *3*(3), 55-62.

Odionye, J. C., & Emerole, O. B. (2015).The impact of international remittances on the Nigerian economy, *British Journal of Economics, Management & Trade7(1): 1-9,*

Ojapinwa, T. & Odekunle, L.A. (2013). Workers' remittance and their effect on the level of investment in Nigeria: An Empirical Analysis. *International Journal of Economics and Finance*, Vol. 5(4). DOI: 10.5539//ijef.v5n4p89.

Okeke, I. C Utomi F. I. &Ezenekwe, U (2019). Impact of international remittances on private investments in Nigeria, *Saudi Journal of Economics and Finance*, 3(4): 159-166. DOI:10.21276/sjef.2019.3.4.2

Okeke, I. C., Chinanuife, E., and Muogbo, K. (2019) International remittances and private domestic investment in Nigeria: A Toda and Yamamoto Causality Approach, *International Journal of Humanities Social Sciences and Education* (IJHSSE), *8(7), 67-76*

Pesaran, M.H., Shin, Y. and Smith, R.J. (2001), Bounds testing approaches to the analysis of level relationships, *Journal of Applied Econometrics*,16(3), pp. 289-326.

Price Water Coopers, (2019). Strength from abroad: the economic power of Nigeria's diaspora. Retrieved online on June 15, 2020 from www.pwc.com/ng

Přívara, A. & Trnovský K. (2021). The impact of remittances on household savings in the Baltics. *Investment Management and Financial Innovations*, 18(1), 335-345. doi:10.21511/imfi.18(1).2021.27

Solimano, A. (2003). Remittances by emigrants: Issues and Evidence. WIDER Discussion Paper.
World Institute for Development Economics.

World Bank's Development Indicators (2020). www.worldbankdatabase.com