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Effects of Remittances on Financial Development in Nigeria

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Abstract
The study investigated the effect of remittance on financial development in Nigeria using error correction model (ECM). The study used various banking sector and stock market indicators to capture financial development. The ECM results in all the models showed that the parameters of the error-correction terms in the models were statistically significant and correctly signed as expected. Findings indicated that remittances positively influenced the financial development indicators. Remittances significantly contributed to financial development in Nigeria. The effects of inflation and degree of trade openness on financial sector development (FD) using different financial sector proxy indicators was inconclusive while exchange rate had a positive and significant influence on financial development.

Keywords: Remittances, Financial Development, Cointegration, Nigeria

Introduction

Workers' remittances refer to money and goods that a migrant family living in their country of origin receives from the migrant. Globally, remittances have been perceived as an essential feature of developing countries that constitutes an essential means of financial inflow for many developing countries. In recent years, remittances inflows to these economies have not only increased tremendously but have surpassed the inflows of other types of foreign exchange like official aids and private capital flows in many countries, which always exceeds other flows to the external capital account (Chami, Barajas, Cosimano, Fullenkamp, Gapen and Montiel, 2008; Ratha, 2009).

While the increasing waves of international migration witnessed in recent years have benefitted the migrant receiving countries, the large size and persistent increase in remittances flows can have macroeconomic challenges on the financial sector and economic growth of receiving economies thus, making the study of macroeconomic effects of remittances on recipient economies imperative. Remittances effect could lead to an appreciation of the real exchange rate of the recipients' economy which could undermine its international competitiveness otherwise known as "Dutch Disease" phenomenon (Rajan Subramanian, 2005; Lopez, Molina and Bussolo, 2007). Furthermore, remittances inflow can result into moral hazard problem by reducing remittances recipients' involvement in the labour market as a result of their dependence on the remittances received (Chami, Fullenkamp, and Jahjah, 2003). Migration pessimists opined that the decrease in investments in human capital due to remittances have a disastrous effects on growth (Chami, Fullenkamp, and Jahjah, 2003) and government effort in ensuring structural reforms, growth and reducing poverty through sound macroeconomic implementation might be derailed.

Migration optimists argue that remittances can be used to support consumption for the recipient which can have beneficial macroeconomic multiplier effects in the short-run (Adenutsi, 2010; Balde, 2010).

Remittances could also be used as a source of investment that can lead to growth (Mundaca, 2009) such as directly reducing poverty levels as a result of increased family income (Adams, 2006; Acosta et al; 2006). Remittances raises human and physical capital for recipients families (Cox , Edwards and Ureta 2003; Woodruff and Zenteno 2007; Fajnzylber and Lopez 2008; Yang 2008). When used to finance small business, it substitute for unavailable investment finance in the recipient countries as a result of underdeveloped financial system (Giuliano and Ruiz-Arranz, 2006) . Remittances further provide resources to be invested using an already functioning financial system (Bettin, Lucchetti and Zazzaro, 2011).

This has the effect of deepening the recipient economy's financial system and economic growth. The rising quantity and stable nature of remittances to developing countries in recent years has been the focus of researchers as well as policy-makers. This has led to a number of researches to analyse the development impact of remittances in different areas such as growth and poverty reduction (King and Levine, 1993, Beck, Levine, and Loayza, 2000; and Beck, Demirguc-Kunt, and Levine, 2004), inequality, education, infant mortality, and entrepreneurship. The importance of remittances effects in encouraging economic growth, in particular, the association between remittances and domestic financial development is an aspect that has received little focus in the literature.

Assessing the increasing growth of remittances, divergent opinions exist regarding its macroeconomic impact on the recipient economies. Therefore, two issues of interest regarding remittances inflows are how to control their macroeconomic effects and how to exploit their developmental capability (Chami et al. 2008). This has become very crucial as a result of migrants dependence on unorthodox types of money transfer and the accompanying insight of the huge amount of unrecorded billions of dollars flowing around the foreign financial system.

A recurrent issue of controversial debate in the remittances literature is whether and in what way remittances have impacted on the financial development of the receiving economies. Hence, this study extends this line of research by focusing on the effects of remittances on financial sector development in Nigeria within the context of protracted economic problems such as inflation and exchange rate problem. In other the study therefore investigate the effect of remittances on financial development in Nigeria

Stylized Fact on Remittances in Nigeria

A trend analysis of remittances flow to Nigeria indicates a significant increase from US$0.83 billion in 1996 to US$1.77 billion in 1997 and decreased to US$1.18 billion in 1999 as a result of the transition from military to democratic rule. The marvel of Nigerian emigrants, which is seen as abscond from difficulties in the home country and the exhaustion of human capital is attributed to this increasing inflow of remittances for the country.

Remittances flows into Nigeria have remained resilient in the face of the international financial and economic crisis that retarded private capital flows into economies. Remittances inflow increased from N2,117,046.6 million in 2007 to N1. 727 trillion in 2011 (Figure 1). Nominal GDP increased from N5,281.10 million in 2007 to N29,108,670.82 million in 2010 while the real GDP grow from 1.3% in 2007 to 11.8% in 2010.

Remittances to Nigeria declined from $21 billion in 2015 to $19 billion in 2016 (Migration and Development brief, 2017). This decline has been attributed to the significant decrease in foreign exchange income as a result of the decline in oil prices, which led to tighter capital controls and a "managed" exchange rate policy (Migration and Development Brief, 2017). As a result, a large part of orthodox remittances were diverted to unorthodox channels. However, remittances to Nigeria, the largest remittances recipient in Sub-Saharan Africa was projected among the top remittance-receiving countries – in dollar terms in

2018(Migration and Development Brief, 2018) .Remittances to Nigeria is officially expected to receive more than $25 billion by end of 2018

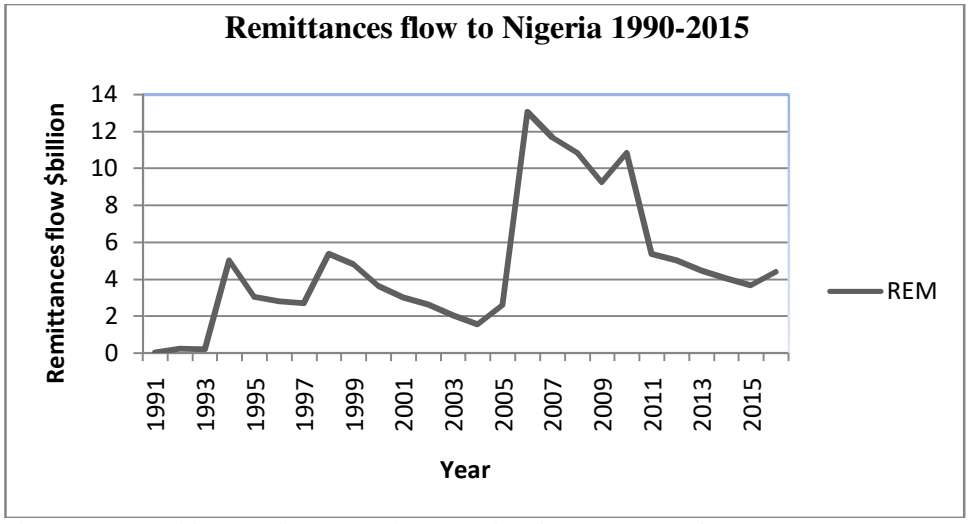

Figure 1. Trend in Remittances Flow to Nigeria (1990-2015)
Source: Author Computation using World Bank Data

Theoretical Framework

The theoretical foundation upon which argument for remittance inflow, financial development and economic growth is rested can be attributed to the main view of theoretical studies of the late 1980s, in particular in 1990s such as Bencivenga and Smith (1991), levine (1991), which are mainly about studying the relationships between long-run economic development and financial growth within the frameworks of endogenous growth. The view of the endogenous growth and finance school is that the reduction in the marginal product of capital (MPK) as a result of diminishing returns to scale (DRS) can be removed by development in the financial sectors.

The earliest debate on the endogenous and finance school according to Bencivenga and Smith (1991), where available savings can be used in profitable investments and investors are enable to move their assets to more liquid and growth promoting products. Requirement for future liquidity is thus satisfied by an investor as a result of uncertainty. This implies that liquid and illiquid assets are the two types of assets that can be owned by an investor. While the liquid assets are safe but less productive, the illiquid assets are more productive and riskier. The existence of financial agents, such as financial intermediaries, moves the investments towards more risky and highly productive assets, therefore promoting economic growth. Since individual investors have future liquidity needs, financial intermediaries such as banks are confronted with meeting the liquid demands of customers. Thus, due to the existence of financial intermediaries, individual savers are able to overcome liquidity constrain as a result of efficient allocation of investment funds by banks.

Sustained increase in the growth rate of economic development is assured in the endogenous growth model. This means than in an estimated model, the rate of technological progress can be determined endogenously.

Empirical Studies

Studies on direct impact of remittances on financial development focused on the relationship between remittances and financial development, with a view to finding their effects on financial widening (outreach) and financial deepening. For instance, the empirical studies conducted by Aggrarwal, Demirguc-Kunt and Martinez-Peria (2006) used balance of payments data in order to examine the effects of remittances on financial sector development in 99 developing countries

from 1975 to 2003. Of particular interest is how increasing level of aggregate deposits and credit provided by the domestic banking sector is attributable to remittances. Their findings using GMM dynamic framework shows that remittances are not for immediate consumption but are initially saved in the bank as deposit.

Giuliano and Ruiz-Arranz (2006) shows that remittances can substitute for financial system absence or inefficiency and can direct resources to productive investment by relaxing liquidity constraints. Mundaca (2009) examined the effects of remittance and financial sector development on economic growth in the period 1970-2002 in 25 Central America Countries (Latin America and Caribbean). The study indicates a positive influence of remittances on growth if channeled efficiently through the financial system. This finding contradicts the conclusion of Guliano and Ruiz-Arranz (2006). Bettin and Zazzaro (2009)'s finding indicates the positive effect of remittances on GDP growth by banking system efficiency. Adenutsi (2011), study validate the view that financial development promotes economic growth through its capacity to attract increase remittances to Ghana. Also, Masuduzzaman (2014) finding in Bangladesh indicates that remittances have a significant positive effect on financial development. Sobiech (2015) result indicates that in a financial developed country, remittances have a negative effect on economic growth. While there is a positive influence of remittances in an economy with a poorly developed financial market which is significant and observable at the early stages of financial development.

The studies that empirically investigate the remittances-financial development nexus in Nigeria include Oke, Uadiale, and Okpala (2011) which investigate of the impact of remittances on in Nigeria within the period 1977-2009 with annual data obtained from the World Bank and specifying a bivariate model. Their results showed a positive correlation between the two proxies (money supply/GDP and private credit to GDP) in all cases.

The inconclusiveness in empirical results on the impact of remittances and financial development on economic growth may be because much attempts were not made to examine various proxies of financial development since most studies consider one component of financial sector in relation to remittances and economic growth. In this regards, this study attempt to contribute to the existing knowledge on use of diverse set of financial development measures in Nigeria.

Methods

Secondary data on remittance inflow, financial development proxy indicators and other variables of interest were sourced mainly from two data banks namely; the Central Bank of Nigeria Database and World Bank World Development Indicators.

Estimation Technique

The study used both descriptive statistics and econometric method of analysis such as ordinary least squares (OLS). Since the data is in time series, the unit root test was used to test for stationary of the data. Co-integration test along with vector error correction model was employed to test the short and long-run relationship among the variables.

Model Specification

Following Aggarwal, Kunt and Peria (2006), to empirically analyse the remittances-financial development nexus, the following equation was adapted.

$$FD = f(REM, X) \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where FD is financial development and the dependent variable. A setback on measure of financial sector is that no single direct measure exists for financial development or the quality of services provided. As a result several proxy for "financial development" have been used (Al-Awad and Harb, 2005; Chuah and Thai, 2004).

Remittances (**REM)** is the main explanatory variable and it refers to the ratio of remittances to GDP (REM/GDP).

X = is a vector of control variables identified in the literature that affect financial development and these vector of variables are:

Inflation rate (INF) capture the price stability over time. It is the annual percentage change in the GDP deflator.

Exchange rate (EXCH) accounts for external imbalance (Bristy, 2014)

The degree of openness (OPEN) is the ratio of the sum of exports and imports of goods to total Gross Domestic Product (Sach and Warner, 1995; Rodrik, 1998).

The incorporation of all these variables into the model above yielded equation (2) as specified below:

$$FD = f(REM, INF, EXCH, OPEN) \quad \text{.....(2)}$$

In order to empirically analyze the link between remittances and financial development in Nigeria, equation (2) is specified in linear and log-linear econometric form as shown in equation (3) and (4) respectively as below:

$$FD = \alpha_0 + \alpha_1 REM + \alpha_2 INF + \alpha_3 EXCH + \alpha_4 OPEN \quad \text{..... (3)}$$

$$\ln FD = \alpha_0 + \alpha_1 \ln REM + \alpha_2 INF + \alpha_3 EXCH + \alpha_4 \ln OPEN + \varepsilon \quad \text{..... (4)}$$

Six different proxy indicators of financial sector growth were used. For the banking sector Money supply (M_2), Domestic credit to the private sector as a percentage of GDP (DCPS) and e ratio of Gross Domestic Savings to GDP (GDS) were used while stock market indicator were Market Capitalization to GDP ratio (MKTCAP) ,Total Value Traded (TVT)and finally Turnover Ratio (TOR)

A priori expectation

$\boldsymbol{\alpha_1, \alpha_4} > 0$, $\boldsymbol{\alpha_2, \alpha_3} < 0$

Results and Discussion

Unit Root Test

In testing the time series properties of the variables in the study, the Augmented Dickey Fuller (ADF) non-stationary test was used. The results of the unit root test using Augmented Dickey-Fuller (ADF) test showed that all the variables were stationary at first difference at 5% significance level (Table 1). This indicates that all the variables were integral order of one, I (1) series.

Table 1.Unit Root Test Using ADF

Variables	Level	First Difference	Order of Integration
DCPS	-1.78	-4.98	I(1)
GDS	-1.72	-5.08	I(1)
M2	-1.87	-8.06	I(1)
MKTCAP	-1.96	-5.07	I(1)
REM	-2.28	-5.24	I(1)
TOV	-1.66	-6.10	I(1)
TVT	-1.97	-4.22	I(1)
GRGDP	-2.19	-6.00	I(1)
OPEN	-1.90	-6.54	I(1)
EXCH	-0.46	-4.59	I(1)
INF	-2.28	-4.02	I(1)
Critical Values	1% : -3.74 5%: -2.99		

Cointegration Test and vector Error Correction Model

After ascertaining the order of integration of the data, the variables are found to be integrated of the same order, such as I(1) as shown above using Augmented Dickey-Fuller test results, it implies that an equilibrium relationship exists among the variables. Co-integration test was conducted in line with Johansen test taking into consideration only the variables that were integrated of order one I(1) using the decision of ADF.

Thus, the result of the cointegration test using banking sector proxy indicators of financial development (money supply, domestic credit to the banking sector and gross domestic savings) are shown in Tbles 2, 3 and 4 respectively. Stock market proxy indicators of financial development (market capitalization, total value traded and turnover ratio) are as shown in Tables 5, 6 and 7 respectively. They indicates that there were two co-integrating vectors based on Trace statistic and Eigen values since the hypotheses of no co-integration were rejected at 5% level for both test using Mackinnon-Haug Michelis (1999) p-values as shown in model 4 (M_2), 5 (DCPS) and 9 (TOR) while model 6 (GDS), 7 (MKT) and 8 (TVT) had one co-integrating vector based on Trace statistic and Max-Eigen values using Mackinnon-Haug Michelis (1999) p-values.

Table 2. Johansen Cointegration Test for Money Supply Model (M_2)

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	116.0304	69.81889	52.03545	33.87687
At most 1 *	63.99497	47.85613	34.22634	27.58434
At most 2	29.76863	29.79707	24.79393	21.13162
At most 3	4.974701	15.49471	4.633312	14.26460
At most 4	0.341390	3.841466	0.341390	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Table 3 .Johansen Cointegration Test for Domestic Credit to the Private Sector (DCPS) Model

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	101.3634	69.81889	52.03032	33.87687
At most 1 *	49.33307	47.85613	30.89437	27.58434
At most 2	18.43870	29.79707	14.93360	21.13162
At most 3	3.505103	15.49471	3.224666	14.26460
At most 4	0.280438	3.841466	0.280438	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Table 4. Johansen Cointegration Test for Gross Domestic Savings (GDS) Model

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	101.8156	69.81889	56.74473	33.87687
At most 1	45.07092	47.85613	26.04607	27.58434
At most 2	19.02484	29.79707	15.09024	21.13162
At most 3	3.934606	15.49471	3.728245	14.26460
At most 4	0.206361	3.841466	0.206361	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Table 5. Johansen Cointegration Test for Market Capitalization (MKTCAP) Model

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	105.3996	69.81889	61.47147	33.87687
At most 1	43.92814	47.85613	28.56351	27.58434
At most 2	15.36464	29.79707	12.19882	21.13162
At most 3	3.165818	15.49471	2.948365	14.26460
At most 4	0.217453	3.841466	0.217453	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Table 6. Johansen Cointegration Test for Total Value Traded (TVT) Model

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	108.1758	69.81889	64.09948	33.87687
At most 1	44.07632	47.85613	25.53641	27.58434
At most 2	18.53991	29.79707	15.19187	21.13162
At most 3	3.348048	15.49471	3.024741	14.26460
At most 4	0.323307	3.841466	0.323307	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Table 7. Johansen Cointegration Test for Turnover Ratio (TOR) Model

Hypothesized	Trace	0.05	Max-Eigen	0.05
No. of CE(s)	**Statistic**	**Critical Value**	**Statistic**	**Critical Value**
None *	101.9386	69.81889	40.99808	33.87687
At most 1 *	60.94053	47.85613	35.11683	27.58434
At most 2	25.82370	29.79707	14.12850	21.13162
At most 3	11.69520	15.49471	11.40855	14.26460
At most 4	0.286644	3.841466	0.286644	3.841466
**MacKinnon-Haug-Michelis (1999) p-values				

Error Correction Model (ECM)

After correlation (r) confirming the long-run relationship among the variables, the short-run dynamics of the model was examined using Error Correction Mechanism (ECM). The essence of error correction representation is to capture the effect of short run movement in empirical models in the study. The ECM was derived from the long run equation and it indicates the speed of convergence towards equilibrium among the variables.

Table 8. Empirical Analysis of Short-Run Results

Variables	ΔM_2 Model	$\Delta DCPS$ Model	ΔGDS Model	$\Delta MKTCAP$ Model	ΔTVT Model	ΔTOR Model
Constant	0.25 (0.90) [0.27] {0.79}	0.04 (1.04) [0.04] {{0.97}	-0.0002 (0.006) [-0.03] {0.98}	0.09 (0.05) [1.81] {0.09}	0.16 (0.09) [1.79] {0.09}	-0.13 (0.09) [-1.47] {0.19}
ECM	-0.72* (0.23) [-3.16] {0.01}	-0.49** (0.22) [-2.30] {0.03}	-0.56** (0.21) [-2.64] {0.02}	-0.61* (0.15) [-4.09] {0.00}	-0.62* (0.19) [-3.19] {0.00}	-0.41** (0.16) [-2.61] {0.02}
Δ***REM***	1.13** (0.46) [2.47] {0.02}	0.61 (0.37) [1.66] {0.11}	0.002 (0.002) [1.05] {0.31}	0.01 (0.02) [0.81] {0.43}	0.01 (0.03) [0.39] {0.70}	-0.02 (0.03) [-0.80] {0.44}
Δ***INF***	0.11 (0.07) [1.48] {0.16}	0.04 (0.08) [0.50] {0.62}	0.0002 (0.0005) [0.42] {0.68}	-0.01 (0.004) [-1.56] {0.14}	-0.02** (0.01) [-2.31] {0.03}	0.01 (0.01) [1.09] {0.29}
Δ***EXCH***	0.04 (0.04) [0.77] {0.45}	0.05 (0.06) [0.84] {0.41}	0.0004 (0.0004) [1.02] {0.32}	-0.001 (0.003) [-0.62] {0.54}	-0.002 (0.01) [-0.36] {0.72}	-0.001 (0.01) [-0.29] {0.78}
Δ***OPEN***	-2.77 (8.83) [-0.31] {0.76}	-5.01 (11.24) [-0.45] {0.67}	-0.01 (0.07) [-0.20] {0.84}	1.29** (0.49) [2.64] {0.02}	1.79** (0.92) [1.96] {0.07}	0.05 (0.88) [0.05] {0.96}
Adj. R^2 ***F-statistic*** ***Durbin Watson***	0.40 3.89** 1.79	0.15 1.87 1.61	0.17 1.96 1.81	0.42 4.48 2.17	0.35 3.55** 1.82	0.09 1.49 1.98

Note: Δ**FD** is the Dependent Variable. Values in () are standard error while values in [] are t-statistic and values in { } are probability values

The coefficient of the ECM is negatively signed and statistically significant as expected. Thus, this indicates the speed of convergence among the variables towards equilibrium exists.

The ECM results in all the models showed that the parameters of the error-correction terms in the models are statistically significant and correctly signed. This confirmed the speed of convergence in the relationship among remittance, financial development and economic growth. The coefficients of the ECM suggested the speed of adjustment it would take all the variables to converge for long run relationship were 72% for money supply (M_2) model; 49% for domestic credit to the private sector (DCPS) model; 56% for gross domestic savings (GDS) model; 61% for MKTCAP model; 62% for total value traded (TVT) model and 41% for turn-over ratio (TOR) model. This showed that the speed of adjustment was high in money supply (M_2) model compared to other models. Hence, variables in money supply (M_2) model converged quickly to

Empirical Analysis of Remittances and Financial Development Relationship

The empirical result of the effects of remittances on various proxies of financial sector development (FD) as well as the other variables that affects financial development in the literature. The estimated results are presented in Table 9 considering various measures of financial development.

Table 9: Empirical Analysis of Remittances–Financial Development Nexus in Nigeria

Variables	M2 Model	DCPS Model	GDS Model	MKTCAP Model	TVT Model	TOV Model
Constant	4.63 (4.45) [1.04]	7.09 (5.20) [1.36]	0.03 (0.03) [1.06]	-0.04 (0.09) [-0.49]	-21.97 (0.52) [-41.92]	6.24 (0.68) [9.18]
REM	0.90** (0.36) [2.49]	0.89** (0.41) [2.18]	0.004 (0.003) [1.88]	0.02** (0.007) [2.51]	0.09** (0.04) [2.18]	-0.09 (0.05) [-1.66]
INF	0.03 (0.06) [0.48]	0.02 (0.07) [0.30]	-0.00003 (0.0004) [-0.07]	-0.0008 (0.001) [-0.65]	-0.02** (0.007) [-2.18]	-0.007 (0.009) [-0.81]
EXCH	0.06* (0.02) [3.01]	0.07* (0.02) [2.84]	0.0004* (0.0001) [2.99]	0.0007 (0.0004) [1.78]	0.02* (0.002) [7.37]	-0.01 (0.003) [-3.23]
OPEN	7.88 (9.05) [0.39]	-9.32 (10.74) [-0.87]	-0.03 (0.07) [-0.40]	0.14 (0.19) [0.78]	2.76** (1.08) [2.55]	2.41 (1.40) [1.71]
Adj. R^2 ***F-statistic*** ***Durbin Watson***	0.57 9.09** 1.13	0.48 6.82** 0.99	0.50 7.31** 1.02	0.54 8.22** 1.58	0.88 46.58* 1.98	0.45 6.20** 0.63
Normality Test (Jaque-Bera) ***Serial Correlation Test*** ***Heteroskedasticity Test***	2.23(0.33) 3.46(0.05) 3.57(0.02)	20.39(0.00) 8.18(0.002) 4.06(0.01)	17.73(0.0) 4.91(0.02) 3.21(0.03)	1.14(0.57) 2.88(0.08) 2.09(0.12)	0.65(0.72) 1.24(0.31) 1.15(0.36)	0.83(0.66) 10.28(0.0) 9.36(0.00)

Note: values in () are standard error while values in [] are t-statistic; *(**) implies 1% (5%) level of significance.

The explanatory power of each model indicates that approximately 57%, 48%,50%,54%,88%and 45% in the money supply model, DCPS model, GDS model, MKTCAP model, TVT and TOR models respectively were explained in the financial development by remittances and other exogenous variables in the model. Hence, the model has moderate goodness of fit. The value of the F-statistic (9.09, 6.82,7.31,8.22,66.58 and 6.20) in each model showed that the independent variables significantly explained the dependent variable. Thus, the value suggested that the overall model is statistically significant at 5% level.

Discussion

The positive and significant effects of remittances on financial development in this study conform to theory and a priori expectation. The finding is in line with that of Kihangire and Katarikawe (2008) in Uganda, Gupta *et al.* (2007). The effect of remittances on domestic credit to the private sector and gross domestic savings conform with the study of Aggarwal et al. (2006) in developing countries and Martinez-Peria et al. (2008) findings in Latin America Countries (LAC), Guiliano and

Ruiz-Arranz (2009), Orozco and Fedewa (2005). The findings on the positive effect of remittances on financial development in this study however contradict the negative findings of Brown, Carmignani and Fayad (2011) on the relationship between remittances and financial development. This contradiction may be as a result of the use of diverse financial development indicatorsin this study as well as their argument that institutional, legal and regulatory environments are responsible for their result.

The effect of inflation on financial development is mixed as indicated by the various proxy indicators. Inflation coefficient has positive effects on M_2 and DCPS . The positive effect of inflation on money supply implies that increasing inflation erodes the value of money and thus, borrowers therefore respond by borrowing more. This is similar to the findings of Gazi and Sharma (2013). The effect of inflation on gross domestic savings (GDS) is however negative (-0.00003).

The reported negative effect of inflation on financial development as indicated by all the stock market proxy indicators (market capitalization, total value traded and turnover ratio) conform to theory and a priori expectation. This negative and insignificant relation between inflation and most of the stock market proxy indicators of financial development implies that inflation is detrimental to financial development especially for an economy with relative high rate of inflation like Nigeria. This negative finding is also in line with that of Motelle (2011) in Lesotho, Nuretin and Kadir (2012) in Turkey and Sulaimon (2014) in Nigeria. Al-Nasser and Jackson (2012) obtained similar results for Latin America.

Exchange rate shows a positive and significant influence on financial sector development as indicated by all the banking sector proxy and two of the stock market proxy indicators (market capitalization and total value traded). The coefficient of exchange rate influences turnover ratio negatively.

The effect of degree of trade openness on financial sector development (FD) using different financial sector proxy indicators is inconclusive. The effects of degree of trade openness on banking sector proxy indicators models are mixed. While trade openness is positively related to money supply model (7.88), a negative influence of degree of trade openness (OPEN) is observed on domestic credit to the private sector model (-9.32) and gross domestic savings model (-0.03). This implies that trade openness has an adverse effect on domestic credit to the private sector and gross domestic savings but a positive influence on money supply. This findings may be attributed to the fact that trade openness leads to increase in money supply but the money are not channeled to loans for private investment in Nigeria. The effects of degree of trade openness on all stock market proxy indicators are however positive.

Summary of Findings and Conclusion

The outcome of the study indicates that remittances (REM) have a positive and significant effect on financial development (FD) in Nigeria as indicated by all the proxy indicators. The fact that remittances have a positive and significant effects on the financial development shows that can be an important means of access to financial services by households in Nigeria in particular and low income countries in general. Remittances can enable low income households to accumulate funds which can be used to finance future consumption or investment. These funds as noted by Yang and Choi,2007 can also be used to smooth consumption in the event of unexpected fluctuations in income. This enable poor households to reduce the impact of negative shocks thus reducing their vulnerability. The accumulation of savings in turn, can create the opportunity for lending these funds back into the community. The availability of credit can enable the public to diversify their portfolios, and gain access to borrowing. Therefore, in Nigeria remittances can play an important role in not only providing financial access to the rural poor, but also serve as an important means of bringing a large proportion of those using informal channels into the mainstream.

From the foregoing, it can be concluded from the findings on the impact of remittances on financial development and its transmission to economic growth in Nigeria that remittances impact

positively on economic growth through financial development. From the result of the study it is recommended that policy makers need to be aware of the causal relationship between remittance and financial development particularly for long run economic development. If remittance contributes to financial development, then this may imply that policies that increase flow of remittance may also aid economic growth and financial development. Efforts should be geared toward policy that can curb inflation given its effect on financial development

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