



The Effect of Financial Sector Development on Poverty Reduction in Nigeria: An Empirical Investigation

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ABSTRACT

This paper examines whether financial services (McKinnon conduit) or provision of credit is more effective in reducing poverty in Nigeria using data for the period 1980-2018. It employs Autoregressive and Distributed Lag Model (ARDL) Approach to estimate the parameters and cointegration analyses for income and consumption models. The results of the ARDL Bound Test to Cointegration indicate a long-run relationship among the variables in the two models. The study reveals that availability and improvement in financial services is more beneficial than credit growth. In addition, the study suggests that financial instability may hurt the poor and retards the beneficial effect of financial development particularly in the short run. The paper recommends intensification of effort towards second-generation reforms, such as, design and implementation of financial inclusion policies that involve improving access to financial services that foster inclusive-growth. Furthermore, the study recommends guided deregulation in credit market as a way of precluding or subduing its susceptibility in triggering full-blown crises that is detrimental to the poor's aggregate welfare.

Keywords: Financial Sector Development, Poverty Reduction, ARDL Model, Nigeria

JEL Classifications: E51, E52, C52, E65

1. INTRODUCTION

A sound financial system is an indispensable ingredient to economic growth and development of any country. The last three decades have witnessed a growing research interest in finance-growth nexus, which was precipitated by financial crises and economic instability around the globe (Levine, 2005; Ang, 2005; Fitzgerald, 2006; Keho, 2017; Mohieldin et al., 2019). Debate on finance-growth nexus was confined to issue of direction of causality. The argument was whether financial development spurs economic growth or growth drives financial development. The issue of causality between finance and growth is to an extent over-romanticized, to the detriment of a more critical question that suffered a prolonged neglect, particularly, the role of financial development in poverty reduction. Levine (2008) remarked that economic discipline has done stunningly inadequate job of examining how formal financial system affect the poor. Conceptually, there are two broad channels in which financial development affect poverty: the direct and the

indirect channels. While the direct channels include access to financial services, credit channels and financial crises channel and the indirect channel refers to the positive effect of finance on poverty through economic growth (Holden and Prokopenko, 2001; Arestis and Cancer, 2005; Nnanna, 2004).

Conventional wisdom suggests that economic growth is a key element in the fight against poverty (Dollar and Kray, 2002; Bourguignon, 2003; Inoue, 2019). The premise is that aggregate increase in economic activities will benefit both the poor and the rich. However, there is evolving evidence that significant poverty reduction is possible even where there is little or no economic growth. For instance, Medvedev et al. (2013) demonstrated a case in Jamaica where growth rate between 2003 and 2007 was stagnant at 1.1%, and poverty headcount reduced drastically from 21% to all time low of 9.9%. They attributed this development to changes in institutional structures that support income re-distribution and improved financial sector development.

The Nigeria financial system has for the greater part of its history repressed, whereby excessive government interference create inefficiency in financial intermediation. The consequence is that financial repression fuels the emergence of fragmented financial market in which preferred borrowers obtained credit at subsidized rate, as directed by regulatory authorities, while less privileged but industrious borrowers with promising entrepreneurial capacity resort to informal and parallel market with exorbitant cost of borrowing. To move away from financial repression, Nigeria embarked on financial liberalization reforms in 1986. However, despite this, access to financial services and credit remain a huge problem as only 32.5% of adults have access to basic financial services (EFInA, 2012). About 64.1% of adults do not have access to formal financial service (CBN, 2012). The private sector credit as percentage of GDP as at 2012 was 20.2 % compared to 246.2% in US and 190.4 in South Africa. Similarly, the ratio of commercial bank branches per 100,000 adults decreased from 6.4% to 5.8% between 2009 and 2012 compared to 35.6 % in US and 10.4 in South Africa. Paradoxically, despite the abundance of human and natural resources, the percentage of Nigerian living below poverty line has been on the increase, from 28.1 % in 1980 to 44% in 1990, 74 % in 2000 and 70% in 2010 (NBS, 2013; 2019).

There are few studies that explore the relationship between financial development and poverty in Nigeria (Saibu et al., 2011; Fawowe and Abidoye, 2013; Goodness, 2013; Kebo, 2017). None of these studies examine the dichotomy of the channels of financial development on poverty reduction. In addition, the effect of financial instability on poverty was also not considered based on these channels. This study is an attempt to fill this vacuum. The objective of this study is to improve the existing literature by examining the transmission mechanism through which financial sector development and financial instability contributes to rising poverty incidences in Nigeria. The curiosity is whether the high incidence of poverty is related to the shallowness and fragility of the financial system. The rest of the paper is structured as follows. Section two presents the review of empirical literatures. Section three outlines the methodology. Section four presents the data analysis and empirical findings. Section five contains conclusion and recommendation.

2. REVIEW OF EMPIRICAL LITERATURE

There is scanty but growing body of empirical studies that address the finance - poverty nexus. Jeanneney and Kpodar (2008) examined different channels in which finance exert positive influence on poverty. They isolated growth effects and examined whether credit or access to financial services is more beneficial to the poor. They employed dynamic panel generalized method (GMM), with sample size of 92 countries that generated 187 observations between 1955 and 2000. Their study reveals that the effect of financial sector development in reducing poverty is stronger than economic growth, hence, concluded that the Mckinnon conduit effect is more beneficial to the poor than the credit effect.

Honohan (2004) examines the influence of financial depth (measured as the ratio of private credit to GDP) on poverty (using

\$1 a day poverty headcount standards) for 45 countries. The findings reveal that doubling financial depth is associated with 10 percentage decline in poverty headcount and concluded that mainstream finance is associated with lower poverty, and added that expanding the concept of credit penetration to include the activities of development banks, may possibly be associated with lower poverty.

Kpodar and Singh (2011) investigated the relevance of financial structure on poverty reduction in some selected developing countries and compared the efficacy of bank-based and market based financial system in poverty reductions. They adopted GMM developed by Blundel and Bond (1998). The results indicated that when institutions are weak, bank-based financial system is better at reducing poverty, and as institutions develop market-based financial system can turn out to be beneficial to the poor. This study collaborates the study of Inoue (2019) that used India data between 1973 and 2004.

Mohieldin et al. (2019) examined the impact of financial development on economic growth in Egypt using time series data between 1980 and 2016. They utilized ARDL technique to analyze the new data set of financial development indexes released by IMF. Their analysis reveals a strong relationship between real growth per capita and financial development. Surprising, their study indicates no causal relationship between access and uses of financial service and real per capita income. However, stock market indices have strong association with real per capita gross domestic product. The author suggest further reforms in banking and stock markets for their critical role in enhancing economic growth and welfare of Egypt.

Singh and Huang (2011) investigated two scenarios: determine the effect of financial sector development on poverty and investigate the effect of property right on poverty reduction in an efficient financial market environment in SSA and employed FGLS method and the results show that the ratio of private sector credit to GDP increases, its marginal contribution to poverty reduction and inequality declines. They concluded that the poor may only benefit from financial deepening in countries with secured property right, which enhances the use of collateral for better access to credit facilities.

In another study, Akhter and Dally (2009) investigate the impact of financial development on the poor in 54 developing countries using fixed effect vector decomposition method for the period 1993-2004. They concluded that on the average financial development is conducive for poverty reduction but cautioned that instability that accompany rapid financial deepening may erode the benefit of financial development. The result also indicates that access to saving and credit facilities are effective financial intermediation channels that contribute to alleviating poverty.

In a similar study, Khan, Ahmad and Jan (2012) examines the causal relationship between financial deepening and poverty alleviation for the period 1981-2010 using time series data from Pakistan. Broad money supply (M2/GDP), domestic credit to the private sector (DCP/GDP) and domestic money bank assets (DMBA) are

used as proxies for financial development and private per capita consumption as proxy for poverty reduction. Using ARDL, the result reveal that financial deepening (M2/GDP) have long-run relationship with poverty alleviation, DMBA have no long-run relationship with poverty alleviation and a positive relation between DMBA with per capita consumption. They concluded that financial deepening exerts positive effect on poverty reduction.

Quarley (2005) investigates the relationship between financial sector development, savings mobilization and poverty reduction in Ghana from 1970 to 2001 using time series technique. The result of Johansen co-integration test suggests long-run relationship between the variables and the Granger-causality test points to unidirectional causality from financial development to poverty reduction. The effect of financial development on poverty in Ghana is positive but insignificant, attributing it to the fact that financial intermediaries have not adequately channeled savings to the pro-poor sectors of the economy owing to government deficit financing, high default rate, lack of collateral and lack of proper business proposals etc.

Rewilak (2012) examine whether or not the incomes of the poor systematically grow with average incomes, and whether financial development enhances the incomes of the poorest quintile. The author build on Dollar and Kray (2002) data and he discovered that financial development aids the incomes of the poor in certain regions, whilst it may be detrimental in others and warned that adopting “one size fits all” may be detrimental to overall policy objective of poverty alleviation.

Saibu et al. (2011) examined the impact of financial development and financial volatility on poverty rate in Nigeria. Using bivariate and multivariate causality test on a data spanning from 1986 to 2010. Specifying two different models: based on banking sector indices (private sector credit to GDP) and stock market indices (the ratio of trading volume to market capitalization). The co-integration result indicates a long run relationship between financial development, financial instability, and poverty. The authors also added that while financial development variable has net positive effect on poverty, financial instability had negative impact on poverty.

Aliero and Ibrahim (2012) examined whether enhanced access to formal financial service reduces poverty in Nigeria especially among rural dwellers in Katsina State using multinomial logit regression model. They generated cross-sectional primary data from 384 respondents to capture average monthly income as poverty proxy and access to financial services like bank accounts, ATM, loan, mobile banking, insurance, internet banking etc. They discovered that access to formal financial services especially credit facilities have a high probability of reducing poverty.

Fawowe and Abidoye (2013) examined the effect of financial development on poverty and inequality in African countries. The results indicated that financial development has not had a significant effect on poverty and inequality. Macroeconomic variables such as low inflation and trade openness were found to be statistically significant, implying that they can help reduce the level of poverty and inequality. Our results confirm the deficiencies in African financial systems and highlight the fact that more efforts

need to be done to improve access of poor households and Small and Medium Scale Enterprises to financial services.

Goodness (2013) investigates the role of financial development on economic growth in Nigeria. Using annual data spanning from 1961 to 2012. A bootstrap rolling window approach is used to account for potential time variation in the relationship. The results indicate no causality between the two series. The relevant VAR is unstable for the full sample which undermines the confidence in the bootstrap full sample Granger causality tests. Therefore, a bootstrap rolling window estimation was used to evaluate Granger causality between financial deepening and economic growth over different time periods. These tests reveal periods where financial deepening has predictive power for economic growth, as well as periods where economic growth has predictive power for financial deepening.

3. METHODOLOGY

3.1. Variable Definition, Measurement and Sources

Poverty reduction indicators (PV): Household final consumption expenditure per person (HCEP) is used as proxy for poverty. HCEP is obtained as household final consumption expenditure divided by the population (Ho and Odhiambo, 2011).

Per capita income (PCI): Alternative proxy for poverty. It is gross domestic product divided by midyear population (World Bank, 2005).

Financial Development Indicators (FD):

- Private sector credit to GDP (pcgdp): This measures financial depth, it is the ratio of private sector credit to gross domestic product (Demirguc-Kunt and Klapper, 2013).
- Money Supply (M2) to GDP (msgdp): This measures financial deepening, it is the ratio of money supply to gross domestic product (Odhiambo, 2009; Beck, Demirguc-Kunt, & Levine, 2000).

Financial instability indicator (FI): Measure financial instability of variable x as average absolute value the variable residuals (Jeanneney and Kpodar, 2008). This is obtained by regressing financial development variable FD_t on it lagged values FD_{t-1} and a time trend (t). FI^x of variable x is given as follow:

$$FI^x = \frac{1}{n} \sum_{t=1}^n |\varepsilon_t|.$$

Where ε_t represent the residuals derived from the OLS estimation of the following equations:

$x_t = a + bx_{t-1} + ct + \varepsilon_t$. Thus, two financial development instability is iterated to access the effect of financial instability on poverty reduction in Nigeria: Financial Instability emanating from credit market (FINSC) and financial instability resulting from varies in money supply (FINSM).

Control variables:

- Inflation Rate (INF): This is the growth rate of consumer price index and captures the macroeconomic environment or monetary instability

- b. Real GDP (RGDP): This captures other indirect effect on poverty resulting from other macroeconomic policy including the financial sector. The Real GDP per capita can be computed as Real Gross Domestic Product divided by the population
- c. Trade openness (OPN): Measures the degree of trade liberalization of the economy. It is import plus export as ratio of GDP (Essien and Bawa, 2005).
- d. Human capital development (HCD): is proxied as federal government capital expenditure on education, health and other social community services as percentage of total capital expenditure.

All data are obtained from CBN statistical bulletin and World Bank WDI (Central Bank of Nigeria, 2019; World Bank (2019)).

3.2. Model Specification

The autoregressive and distributed lag (ARDL) approach is adopted where two models - the income and consumption models are estimated. The essence is to evaluate the impact of financial sector development and financial instability on poverty. The model is a modified version of Jeanneney and Kpodar (2008), Goodness (2013) and Saibu et al. (2011) as financial instability indicators is included as regressors in the model and additional control variables - international trade openness indicator and inflation has been included to capture the impact of trade globalization and macroeconomic vagaries on domestic poverty. The poverty model has the following form:

$$PV_t = \beta_0 + \beta_1 FD_t + \beta_2 FI_t + \beta_3 FE + \beta_4 CV_{it} + \varphi + \varepsilon_t \quad (1)$$

The framework for equation (1) is:

$$\begin{aligned} \Delta PV_t = & \eta_1 + \sum_{i=1}^p \varphi_{1i} \Delta PV_{t-i} + \sum_{i=1}^p \varphi_{2i} \Delta FD_{t-i} \\ & + \sum_{i=1}^p \varphi_{3i} \Delta FI_{t-i} + \sum_{i=1}^p \varphi_{4i} \Delta CV_{t-i} + \theta_{1i} PV_{t-i} \\ & + \theta_{2i} FD_{t-i} + \theta_{3i} FI_{t-i} + \theta_{4i} CV_{t-i} + ECT_t \end{aligned} \quad (2)$$

Where PV_t represent poverty indicators, FD_t is financial development indicators, FI_t is financial instability indicator, while CV_{it} represent control variables such as real GDP, inflation, trade openness, φ and ε_t represent time dummy and error term

respectively. In equations (2), the terms with the summation signs represent the error correction dynamics while θ 's correspond to the long run relationship. The null hypotheses is that $\theta_1 = \theta_2 = \theta_3 = \theta_4 = \theta_5 = 0$ which indicate the non-existence of the long run relationship.

At equilibrium, the error term is expected to be zero. However, during disequilibrium this is non-zero, which is an indication of how far the system is away from equilibrium at time t. The value of ECT is called the speed of adjustment as it shows how the dependent variable changes in response to disequilibrium. When this value tends to -1, it implies that economic agents remove a large percentage of the resulting disequilibrium in each period. However, a small value (tending to 0) implies that adjustment to the long-run steady state is slow which may be because of adjustment (Pentti, 1992; Pesaran & Shin, 1999; Pesaran, Shin, & Smith, 2001).

4. RESULTS AND DISCUSSIONS

4.1. Unit Root Test Result

Table 1 reports the augmented dickey fuller (ADF) and Perron (PP) test results. The results indicate that none of the variables is stationary at levels except financial instability (FINSM) and human capital development (HCD). All the variable becomes stationary after first difference. This implies that we can proceed with ARDL approach.

4.2. Regression Result and Analyses

The over-parameterised model for Model I and II where the dependent variables and the regressors were fixed at two and three lags respectively, was first estimated (results not shown). Most of the regressors in both models appear not to be significant even though they present near unity R squared. Therefore, the size of the model was further reparemaetrized to remove poor performing lags and variables by imposing zero coefficient on lags that is insignificant. Consequently, a more parsimonious and interpretable model were produced by setting the system to automatically select the optimum lags guided by akaike information criterion (AIC). The result is presented in Table 2.

Model I indicates that money supply to GDP, private sector credit to GDP, lagged value of financial instabilities, real GDP are all

Table 1: Unit root test results

Variables	Test techniques				I(0)
	ADF t-statistics		PP t-statistics		
	Levels	1 st diff.	Levels	1 st diff.	
hcep	-3.4635***	-11.3249*	-3.4311***	-11.2587*	1(1)
hsgdp	-3.263	-4.3650*	-2.50819	-7.8894*	1(1)
lpci	-2.5051	-5.8535*	-2.492	-5.9166*	1(1)
pcgdp	-3.3154***	-5.265*	-2.4008	-8.9469*	1(1)
inf	-3.4186	-5.7469*	-2.7634	-10.5522*	1(1)
opn	-2.0182	-7.0981*	-2.0149	-8.0981*	1(1)
insc	-2.0224	-5.0919*	-2.7983***	-6.0898*	1(1)
ginsm	-3.5132***	-5.8889*	-3.5376**	-9.0441*	1(0)
rgdp	-0.6495	-5.6624*	-0.6503	-5.6640*	1(1)
Lhcd	-4.095018**	-11.2630*	-4.19554***	-14.7336*	1(0)

4.03, 3.55 and 3.21 are the critical values of both ADF and PP procedure at 1%, 5% and 10%, respectively. *, **, *** denote significance at 1%, 5% and 10% levels respectively. Source: Author's computation with e-views 10

Table 2: Parsimonious short run models

Model I (Dep. variable=income)		Model II (Dep. variable=consumption)	
Variables	Coefficient	Variable	Coefficient
<i>log(income(-1))</i>	0.5388 (6.826)*	<i>log(consumptn(-1))</i>	0.1449 (0.717)
<i>Pcredit</i>	-0.0069 (-1.832)***	<i>Pcredit</i>	0.0032 (0.247)
<i>MoneyS</i>	0.0069 (2.098)	<i>Pcredit(-1)</i>	-0.017 (-1.923)**
<i>InstabilityC</i>	0.0001 (0.018)	<i>Pcredit(-2)</i>	0.0153 (1.698)
<i>InstabilityC(-1)</i>	-0.0116 (-2.055)**	<i>MoneyS</i>	0.0005 (0.051)
<i>InstabilityM</i>	0.0029 (0.595)	<i>InstabilityC</i>	-0.0431 (-2.181)**
<i>InstabilityM(-1)</i>	0.0104 (2.233)**	<i>InstabilityC(-1)</i>	-0.0180 (-1.022)
<i>Inflation</i>	-0.0002 (-0.523)	<i>InstabilityC(-2)</i>	0.0470 (2.180)**
<i>log(RealGDP)</i>	0.2991 (6.483)*	<i>InstabilityM</i>	0.0681 (3.218)*
<i>log(HumanCap)</i>	0.0027 (1.807)**	<i>InstabilityM(-1)</i>	-0.0101 (-0.596)
<i>C</i>	-3.6479 (-4.154)*	<i>instabilityM(-2)</i>	-0.0434 (-2.502)**
		<i>inflation</i>	-0.0058 (-2.708)**
		<i>log(RealGDP)</i>	0.2960 (2.121)**
		<i>HumanCap</i>	0.0002 (0.042)
		<i>C</i>	1.2943 (0.394)

R²=0.99, Adj. R²=0.97 DW=1.79, F-statistics=104.85
 Prob.*(F-statistics)=0.0000

R²=0.83, Adj. R²=0.70 DW=2.56, F-statistics=6.38 Prob.*
 (F-statistics)=0.000198

Figures in parenthesis are *t*-statistics. *1% level of significance, ** 5% level of significance, ***10% level of significance

Source: Author's computation with e-view 9

statistically significant (at 5%), while lagged value of per capita at 1% in influencing poverty reduction in Nigeria. This is in line with the vicious circle of poverty hypothesis. The human capital development variable is barely significant at 10% while inflation rate is statistically not significant but properly signed. All variable except private sector credit to GDP confirm with the theoretical expectations.

We tested whether payment system or credit is more beneficial to increasing the standard of living, and examined the channel of transmission of instabilities - money or credit – impact to welfare. Table 2 reveals that 1% increase in M2/GDP will translate to 0.6% increase per capita income. However, the financial instability indicator revealed that credit instability may induce reduction in income by 1.1% in subsequent year. Hence, the hypothesis of a positive direct effect of financial development on the standard of living of the poor and the hypothesis that financial instability seems to significantly reduce the per capita income cannot be rejected. Thus, confirming the McKinnon Conduit channels that the depth of the financial sector has amplifying effect in reducing poverty (McKinnon, 1973). This result supports the findings of Jeanneney and Kpodar (2008).

The coefficient of RGDP indicates that 10% increase in RGDP has the potential of reducing poverty by 2.9%. This connotes that the size and level of economic activity has a significant bearing in poverty reduction. This affirms the theoretical proposition that economic growth has indirect impact on poverty reduction.

The negative coefficient of inflation (statistically insignificant) indicate that it erodes the value of income which is detrimental to the poor. Human Capital Development is statistically significant and has positive infinitesimal impact on poverty reduction. This suggest paucity of funding to health, education and social sector that embodied human capital development. It may also imply that investment in human capital alone is not sufficient condition in the fight against poverty. This is in line with the findings of Anyanwu and Erjiakpor (2007) that other policy intervention such as sustaining democracy, upholding property right, acceleration

national income, creating enabling environment for foreign direct investment among others will contribute in poverty reduction.

Model II (consumption equation) indicate that financial instability and its lagged values, real GDP, and inflation have appropriate signs and statistically significant. A percentage point increase in financial instability will induce about 0.4% decrease in household consumption expenditures for the 1st year, and 1.8% the 2nd year. This shows that there is a negative relationship between financial instability and poverty reduction (consumption expenditure).

The negative coefficient of inflation indicates that 1% increase in inflation will decrease household final consumption expenditure by 0.5%. This reinforces the fact that persistent rise in price hurt the poor and low-income earners with mainly fixed income. Real GDP is statistically significant at 5% and with appropriate sign. The coefficient indicates that a 10% increase in real GDP will increase household consumption by 2.8%. This implies that growth conduit channel of poverty reduction is very strong.

Table 3 present ARDL Bound Test Approach to cointegration estimation result for Model I and Model II respectively.

The Bound Test F-statistics for Model I is 8.99. This clearly exceeds 1% critical value for the upper bound. Similarly, the bounds test F-statistics for Model II is 3.84. The F-value is higher than 5% critical value for the upper bound. All these suggests that we reject the null hypothesis of no long-run relationship. Hence, there exists a long run relationship in both models. Table 4 present the cointegrating form and the long run coefficient of the model.

In Model I, the error correction coefficient is properly signed with negative (-0.1602) and statistically significant at 5%. This means that about 16.02% disequilibrium is corrected annually because of converse adjustment in explanatory variables, indicating there is quick adjustment mechanism from disequilibrium. Income equation indicate 1% increase in real GDP has a positive associating effect on per capita income by 6.4%. This result point

to the significance of creating enabling environment for the real sector of the economy to thrive.

The coefficient of Money Supply to GDP ratios (measure of financial deepening) has a positive and statistically significant effect in long-run on per capita income (poverty reduction). A unit improvement in financial services and monetization may translate to about 1.5% reduction in poverty rate. This conform with the work of Quartey (2005), Odeniran, & Udejaja (2010), Odhiambo, (2009) and Omotor (2007).

The effect of human capital development is positive and statistically significant. However, the coefficient's magnitude has infinitesimal impact in the long-run on poverty reduction. This suggest that except couple with institutional and development framework, investment in human capital alone might have a limited impact in tackling poverty menace in Nigeria. Financial instability does not have statistical significance in reducing poverty in the long-run. It will be recalled that the short-run equation indicate that financial instability is significant. This implies that rapid and untamed financial development may fuel financial crises in the short run but the long-run effect through economic growth has far-reaching impact that outweighs the short-term instability.

In Model II (consumption model), the error correction coefficient is properly signed (-0.877) and statistically significant at 1% level. This implies that about 87.7% of the previous year's deviation from long-run equilibrium as a result of shock is corrected within the year. This implies that there is quick adjustment mechanism from disequilibrium. Interestingly, financial instability coefficients are also not statistically significant in the long run equation. This reaffirms the earlier result in income equation and conforms to previous studies on this subject that financial instability is a short run phenomenon that usually herald financial liberalization policy

Table 3: ARDL bound test approach to cointegration (Model I and II)

Statistics	Model I (Income)	Model II (Consumption)
F-statistics	8.99	3.84
Significance	I0 Bound	II Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.29	4.37

Sources: Author's computation with e-view 10.

Table 4: Long run coefficient Model I and II

Model I (Dep. variable=income)		Model II (Dep. variable=consumption)	
Variables	Coefficient	Variable	Coefficient
<i>Pcredit</i>	$-0.0151 (-1.972)***$	<i>Pcredit</i>	0.0009 (0.042)
<i>MoneyS</i>	0.0151 (2.383)**	<i>MoneyS</i>	0.0006 (0.052)
<i>InstabilityC</i>	$-0.0250 (-1.575)$	<i>InstabilityC</i>	$-0.0165 (-0.502)$
<i>InstabilityM</i>	0.0291 (1.900)**	<i>InstabilityM</i>	0.0171 (0.524)
<i>Infaltion</i>	$-0.0006 (-0.528)$	<i>log(RealGDP)</i>	0.3462 (2.798)*
<i>Log(RealGDP)</i>	0.6487 (9.774)*	<i>HumanCap</i>	0.0002 (0.0423)
<i>HumanCap</i>	0.0059 (1.828)**	<i>Inflation</i>	$-0.0068 (-2.672)*$
<i>C</i>	$-7.9109 (-3.816)*$	<i>C</i>	1.5139 (0.3874)

Figures in parenthesis are *t*-statistics. *1% level of Significance, **5% level of Significance, ***10% level of significance, Source: Author's computation with e-view 9

but the effect fettered out in the long run. The result support the conclusions of Rajan and Zingales (2003), Loayza and Ranciere (2005) an Jeanneney and Kpodar (2008) that posit that financial development may precipitate financial crises in the short run but the long-run effect through economic growth has far reaching impact that outweighs the short term instability. Similar to the findings of Jeanneney and Kpodar (2008), the result clearly indicates that credit growth does not benefit the poor. This seems to indicate that at rudimentary phase of financial sector development, improving access and expansion of financial services seems to be more effective in in poverty reduction than credit. This is peculiarly evidenced in developing countries where banks are disinclined to provide credit to the poor with prohibitive restrictions. Nevertheless, as the financial market grows, saving accumulation may improve access to credit.

Real GDP coefficient indicates that a percent increase in real GDP will increase household consumption by 3.4%. This implies that growth conduit channel of poverty reduction is very crucial. Inflation indicates a percentage increase in inflation will decrease household final consumption expenditure by 0.06% in the long run. This confirm the assertion that persistence inflation may harm the poor through its tendency of reducing the real value of wages and transfers, and eroding the value of financial asset that are liquid or near cash that dominate the poor preference and wallets (Holden and Prokopenko, 2001; Easterly and Fischer, 2001).

4.3. Post-estimation Diagnostic Test

To confirm statistical adequacy of the model, the two model were tested for normality, serial correlation, heteroscedasticity, specification error and stability test. The results is reported in Table 5: The diagnostics indicate that the residuals are normally distributed, homoscedastic and serially uncorrelated. The Ramsey's RESET test indicates that the functional form is correctly specified, which implies that the parameters estimate are stable. CUSUM and CUSUMSQ further affirm this position.

4.4. Parameter Stability Test

The test confirms that the models are not varying or wandering over time and also eschews the problem of misspecifications which could lead to biased result and inferenced. The cumulative sum (CUSUM) and Cumulative Sum of Square (CUSUMSQ) graph at 5% significance level are presented in Figures 1 and 2. The null hypothesis is that the regressions equation is correctly specified with stable parameter.

Figure 1: Model 1

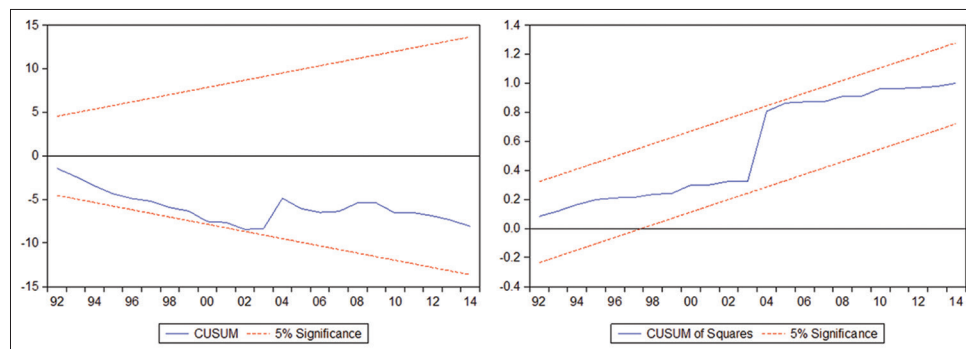


Figure 2: Model 2

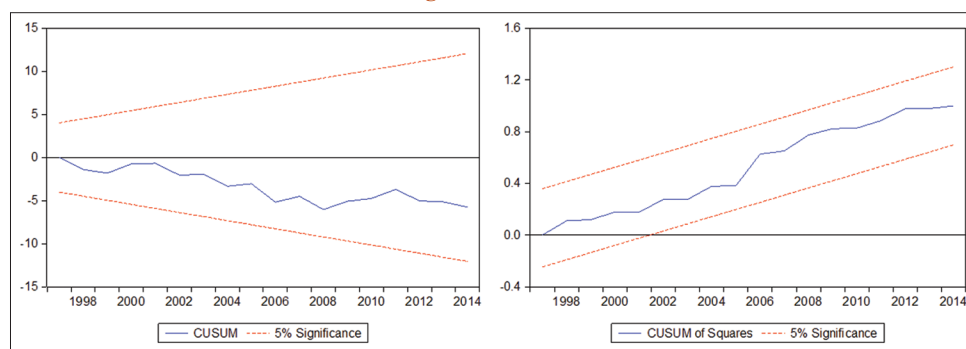


Table 5: Diagnostics test

Test	Model 1	Model 2
Normality test		
Jarque-Bera statistics	36.91 (0.0000)	0.8172 (0.6645)
Serial correlation test		
Breusch-Godfrey LM test	0.5266 (0.8428)	1.4031 (0.3221)
Heteroskedasticity test		
White Heteroscedasticity	0.4612 (0.8980)	0.6951 (0.7524)
Stability test		
Ramsey reset test	0.0211 (0.3232)	0.4055 (0.5327)

The above figure are the F-statistics and the corresponding figures in parentheses are the probability values

Source: Author's computation with e-view 10

Both Figure 1 and 2 indicate that the lines are well within the confidence bands, therefore the null hypotheses of stability are not rejected.

5. CONCLUSION AND RECOMMENDATIONS

This paper investigates the impact of financial sector development on poverty reduction. The study dichotomizes the channels of effect of finance sector development on poverty reduction. This study reveals that improvement in payment system and saving vehicle is likely to be more beneficial to the poor than credit facilities. This is premised on the fact that there is long-run relationship between improvement in payment system and saving function and reduction in poverty in Nigeria. Conversely, there is no relationship between credit growth and poverty reduction in the long-run. Financial instability is a short run phenomenon. Lending boom and uncontrolled rapid growth in credit activities may trigger instability, and this may hurt the poor

disproportionately. Growth effect on poverty reduction remain significant across the models. This reinforces the indirect channel of poverty reduction through economic growth.

To ameliorate the downside of financial sector development, particularly, financial instability emanating from credit crunch, there is need to monitor the ease of credit arteries and credit growth to forestall the precipitated financial crises. There are several ways of checking and taming the excesses and recklessness in credit market. This includes prudential guidelines, sectoral credit regulation, strict compliance to code of corporate governance code, credit activities report rendition, loan-monitoring activities, etc.

There is need to foster financial inclusion policies and implementation to reasonable level. This will encourage the expansion and improvement in financial services in the form of payment and saving vehicle affordable to the less privileged. This will ameliorate access and funding impediment, improve quality and productivity of human capital development, and compliment government fiscal effort towards these sectors.

The government should create pro-business enabling environment that will foster job creation and enhance economic activities that support inclusive growth will go a long way in ameliorating the economic condition of the populace. It is useful to encourage microfinance activities, particularly, microcredit lending to the poor, since credit growth may not benefit the lower income group directly.

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