NEXUS BETWEEN FINANCIAL SECTOR AND INCOME DISTRIBUTION IN NIGERIA

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ABSTRACT

The nexus between the financial sector and income distribution has been identified in the literature, being the second pillar and an indispensable requirement to achieving sustainable development. Unfortunately, it is uncertain if Nigeria will meet up with the United Nations sustainable development goal of ending poverty by the year 2030. This is due to the extreme income gap among her citizens, with over 50 percent of its populace currently living below the poverty line of US $1.90 per day. This study examines the nexus between financial sector and income distribution in Nigeria. Time series data from 1986-2015 were obtained from the World Development Indicators, Central Bank Statistical Bulletin, the Global Consumption and Income Pattern Database. Autoregressive Distributed Lag (ARDL) bounds test was estimated and findings reveal that: The level of banking sector intermediation has a negative and significant relationship ($\theta = -0.674; P < 0.01$) with income inequality; degree of monetization in the economy has a negative and significant relationship ($\theta = -0.238; P < 0.1$) with income inequality; Stock market capitalization exerts a negative and significant relationship ($\theta = -0.110; P < 0.1$) with income inequality; Stock market liquidity negatively and significantly ($\theta = -0.036; P < 0.01$) influences income inequality; and the level of insurance business penetration in the economy has no significant relationship ($\theta = 0.070; P > 0.1$) with income inequality in Nigeria. This study concluded that the banking and the stock market sub-sectors of the financial system significantly influence income distribution in Nigeria. Study therefore, recommends that the government through its regulatory authorities should put in appropriate policies that can encourage financial intermediation at low costs; and strengthen the regulatory framework guiding the operations of the stock market sub-sector of the financial system in order to make it resilient, effective and efficient toward income distribution in Nigeria.

Keywords: Income Distribution, banking sub-sector, stock market, and insurance Sub-sector.

JEL Classification Code: C2, C21, C22, D31, D33

INTRODUCTION

Income distribution is an indispensable requirement to achieving sustainable development as it constitutes the second pillar of sustainable development (Ridzuan, Ismail & Hamat, 2017). No nation in the world can be said to be sustainably developed without an improved income distribution among her citizens. However, literature has identified a nexus between the financial system and income distribution. The United Nations Development Programme (UNDP), (2015); and Klapper, El-Zoghbi, and Hess (2016) are of the opinion that an underdeveloped financial sector widens income gap, creates poverty trap, and slows down economic growth, hence, the need to develop the financial sector towards bridging the gap between the rich and the poor especially in the developing nations like Nigeria becomes imperative.

The Nigerian financial system is a conglomerate of financial institutions, markets, operations that interact to provide financial services needed to propel economic growth, redistribute income and attain development. The dominant sub-sectors of the Nigerian financial system are the banking sub-sector, insurance sub-sector and the stock market (Onwumere, Onudugo, & Ibe, 2013); Umejiaku, (2017); and CBN, (2017). The Nigerian financial sector has also undergone several reforms in all sub-sectors of the financial system till date so as to engender a developed financial system.

The gap between the rich and the poor has been growing over the past four decades both in the developed and developing countries alike and Nigeria is not an exception. According to Mayah, Mariotti, Mere, and Odo (2017), the scale of income inequality in Nigeria has reached extreme levels with majority of Nigerians living below the poverty line of US $ 1.90 per day. The World Poverty Clock, as cited in Kazeem (2018) posits that Nigeria has overtaken India and is ranked as the country with the most extreme poor people in the world.

However, despite the presence of all these financial institutions and the various strands of reforms in the Nigerian financial sector, poverty level is still very high with extreme levels of income gap among Nigerians. Particularly, over 50 percent of the Nigerian population are living below the poverty line of US$1.90 per day (World Bank, 2015; World Bank Group, 2017; Aigbokan 2017; and Kazeem, 2018). It is however, unclear whether the financial sector has no nexus with income distribution in Nigeria; hence, this study examines financial sector and income distribution in Nigeria.

LITERATURE REVIEW

Available studies have considered the nexus between financial development, poverty reduction and income inequality, for example Jalilian and Kirkpatrick (2002) investigated

financial development and poverty reduction in some selected developing countries and found that a developed financial sector contributes to poverty reduction in developing nations. The study used two indicators for financial development which are bank deposit money assets over GDP and net foreign assets over GDP in line with King and Levine (1993). Beck, Levine and Loayza (2000). However, the study did not capture the capital market indicators as well as the indicators of other sub-sectors of the financial system. Furthermore, the study considered poverty reduction and not income distribution, as the latter could be the major cause of the former.

Shahbaz, Loganathan, Tiwari, and Sherafatian-Jahromi (2014) assessed the financial development and income inequality in Iran. The study confirmed the Greenwood-Jovanovich hypothesis in the case of Iran and concluded that a developed financial sector reduces income disparity. The limitation of the study is similar to Jalilian and Kirkpatrick (2002), as the study did not include the indicators of the insurance sub-sector of the financial system for the Iranian economy.

Ogunniyi and Igberi (2014) examined foreign direct investment and poverty reduction in Nigeria from 1980 to 2012. The study employed ordinary least square regression estimation technique, and submits that foreign direct investment does not affect poverty reduction in Nigeria. However, the study only ascertained foreign direct system and not the financial system. Furthermore, the study focused on poverty reduction and not income inequality in Nigeria.

Dauda and Makinde (2014) investigated financial sector development and poverty reduction in Nigeria and reported that credit granted by financial intermediaries as percent of GDP, real GDP per capita and broad money to GDP failed to reduce poverty in Nigeria. Although, the study adopted a better proxy for poverty reduction by using the ratio of the numbers of poor to total population from 1980 to 2010 as against per capita GDP used to proxy poverty in the study of Ogunniyi and Igberi (2014). However, the study omitted the indicators of the insurance sub-sector and stock market among other variables of the financial sector, and also did not focus on income distribution, which could be a major cause of poverty in Nigeria.

Dabwor and Abimiku (2016) examined the relevance of financial deepening on poverty incidence in Nigeria. The study considered five financial deepening indicators and found that value of total shares traded as a percent of GDP and credit to the private sector as a percent of GDP worsened poverty in Nigeria, while market capitalization to GDP, M2 to GDP, and ratio of foreign direct investment in stock market to GDP reduce poverty in Nigeria. This study however, did not focus on income distribution but on poverty reduction in Nigeria.

Using a conceptual approach,

Ndubuisi-Okolo and Anekwe (2018) investigated strategies for achieving sustainable development in Nigeria, and found that sustainable development can only be feasible in Nigeria if poverty is drastically reduced, effective leadership is put in place, and youths are empowered to be self reliant. However, the study used a single period and did not indicate how sustainable development was measured, of which income distribution is one of the components. A measurement gap therefore, exists in this study.

Summary of Related Empirical Studies

Title of Study	Author(s) and Year	Country/ Region	Time Series Data	Method of Analysis	Findings
Openness, Growth and Poverty: The Case of Taiwan	Tsai and Huang (2005)	Taiwan	1964-2003	OLS regression	Findings revealed that poverty has been mitigated by a sustained economic growth in Taiwan and that Trade Openness relieves the poor through a tangential distribution effect.
Growth, Inequality and Poverty Reduction: A Case of Eight Provinces in China	Zhu, Luo and Zhang (2007)	China	1988-2004	GIC	Results showed that equal opportunities and access to basic education enhances economic growth, lowers income gap, and reduces poverty in China.
Financial Development and the FDI – Inequality nexus	Liu, Kim and Lee (2014)	Asia	1976-2005	Panel Regression	Study posits that Financial development defines the link between FDI and Inequality. And that foreign inflow raises income inequality.
Economic Growth, Poverty and Inequality Trend in Bangladesh	Peshpati and Debat (2014)	Bangladesh	1991-2010	Qualitative	Results indicated that the accuracy of poverty incidence and poverty reduction is higher in rural areas than urban areas, and that income inequality is attributable to food and general inflation in Bangladesh.
Foreign Private Investment and Poverty Reduction in Nigeria	Okpe and Abu (2009)	Nigeria	1975-2003	OLS	The study observed that government expenditure, foreign private investment, and foreign loans significantly reduces poverty in Nigeria.
Economic Growth and Poverty Reduction in Nigeria	Ijaiya, Ijaiya, Bello and Ajayi (2011)	Nigeria	1980-2008	Multiple Regression	Results showed that economic growth in short run does not reduce poverty in Nigeria but a positive change in economic growth mitigates poverty.
Relationship between Sustainable Financial Services and Poverty Reduction in Nigeria	Muritala and Fasanya (2013)	Nigeria	1965-2010	ECM	Findings showed that savings, credit to the private sector, prime lending rate and inflation have significant impact on the financial deepening.
Impact of FDI on Poverty Reduction in Nigeria	Ogunniyi and Igberi (2014)	Nigeria	1980-2012	OLS regression	Study revealed that FDI does not reduce poverty in Nigeria because it has a positive but insignificant effect on real per capita income of Nigerians.
Financial Sector Development and Poverty Reduction in Nigeria	Dauda and Makinde (2014)	Nigeria	1980-2010	VAR	Study revealed that financial intermediation has failed to reduce poverty in Nigeria.
Financial Development, Income Inequality and Poverty Reduction in Nigeria	Yinusa and Alimi (2015)	Nigeria	1981-2013	ECM	Study showed that financial development does not reduce poverty and income inequality.
Poverty incidence in Nigeria: Does Financial Deepening Matter?	Dabwor and Abimiku (2016)	Nigeria	1990-2013	OLS	Findings showed that poverty still persist in spite of financial intermediation.
Relationship between Economic Growth and Poverty Reduction in Nigeria.	Gangas (2017)	Nigeria	1980-2012	OLS Regression	Findings showed that economic growth only reduces poverty in the long-run and not in the short-run in Nigeria

Source: Author's Investigation, (2019)

Available studies in Nigeria have focused on financial sector development, economic growth, and poverty reduction. For example, studies that concentrated on financial development and poverty reduction in Nigeria include: Muritala and Fasanya (2013); Dauda and Makinde (2014);Yinusa and Alimi (2015); and Dabwor and Abimiku (2016), among others. Studies that focused on economic growth and poverty reduction in Nigeria are; Ijaiya, Ijaiya, Bello and Ajayi (2011); Ebong and Ogwumike (2013); and Gangas (2017). Other related studies on foreign direct investment and poverty reduction include: studies of Okpe and Abu (2009); and Ogunniyi and Igberi (2014); among others. This study deviates from existing studies by focusing on income distribution which is more inclusive than poverty reduction as the latter could probably be the driver of the former.

Adding to this, empirical investigations that have actually focused on financial sector indicators and income distribution in Nigeria are very rare (to the best of researcher's knowledge) this study however bridges this gap by examining the financial sector and income distribution in Nigeria in line with the views of the United Nations Environmental Programme (UNEP) Finance Initiative (2016); and Klapper *et al.*, (2016), among others.

Furthermore, this study stands is unique based on the financial sector variables used, they capture the major segments of the Nigerian financial system (banking sub-sector, stock market, and insurance sub-sector) as opined by Onwumere, *et al.*, (2013); Umejiaku, (2017); and Central Bank of Nigeria (CBN, 2017). This study therefore, deviates from existing studies by including the insurance sub-sector indicator among its variables of the financial sector.

Theoretical Review

The Greenwood-Jovanovic Hypothesis also known as G-J

hypothesis originates from the works of Jeremy Greenwood and Boyan Jovanovic in (1990) building on the Kuznet's Curve of Simon Smith Kuznet's of 1955. It shows a relationship between financial sector development and income distribution, and follows an inverted U-shape (Kuznet's Curve) showing that inequality rises with economic growth rate but decreases when the financial sector fully develops. The attainment of a stable economic growth coupled with even income distribution has been a major challenge for developing nations (Shahbaz, Loganathan, Tiwari, & Sherafatian-Jahromi, 2014). Greenwood and Jovanovich (1990) argued that financial sector worsens income distribution at the early stage of growth, but improves income distribution once the financial sector fully matures. Therefore, the relationship between financial sector and income distribution is envisaged.

Related studies that were built on this theory include: Shahbaz *et al.*, (2014); Moosa, (2016); Baiardi and Morana, (2016); and Ndubuisi (2017).

METHODOLOGY

This section presents the model specification and the analytical review techniques adopted in this study.

Model Specification

The model proposed by Mah (2003) was modified to achieve the objectives of this study, and to cater for the major sub-sectors of the Nigerian financial sector which include: the banking sub-sector, the stock market and the insurance sub-sector based on the submissions of Umejiaku (2017); and Central Bank of Nigeria (CBN, 2017). The model is specified as:

$$\ln IND_t = \ln IND_t = \beta_0 + \theta_1 \ln CPS_t + \theta_2 \ln BM_t + \theta_3 \ln MCAP_t + \theta_4 \ln TST_t + \theta_5 \ln ISP_t + \theta_6 GR_t + \mu_t \quad (2)$$

An ARDL bounds representation of equation (2) is specified as:

$$\Delta lnIND_t = \beta_0 + \theta_0 lnIND_{t-1} + \theta_1 lnCPS_{t-1} + \theta_2 lnBM_{t-1} + \theta_3 lnMCAP_{t-1} + \theta_4 lnTST_{t-1} + \theta_5 lnISP_{t-1} + \theta_6 GR_{t-1} + \beta_i \Delta lnIND_{t-1} + \gamma i \Delta lnCPS_{t-1} + \delta i \Delta lnBM_{t-1} + \lambda i \Delta lnMCAP_{t-1} \sum_{i=1}^{p} \sum_{i=0}^{q} \sum_{i=0}^{r} \sum_{i=0}^{s}$$

$$\vartheta i \Delta lnTST_{t-1} + \zeta i \Delta ISP_{t-1} + \psi i \Delta GR_{t-1} + \mu_t \quad (3)$$

$$\sum_{i=0}^{t} \quad \sum_{i-0}^{u} \quad \sum_{i=0}^{v}$$

Where:

$\ln IND_t$ = log of income distribution.
$\ln CPS_t$ = log of credit to the private sector $\ln TST_t$ = log of total shares traded
$\ln ISP_t$ = log of gross insurance premiums
GR_t = government reforms (control variable)
Δ is the first difference operator, β_0 is the drift component, $\theta_1 - \theta_6$ represent the long run elasticities, $\beta_i, \gamma_i, \delta_i, \lambda_i, \vartheta_i, \zeta$ and ψ_i stand for the short run dynamics.
μ_t = white noise residuals.
For the priori expectation, a negative relationship is expected between the

financial sector variables (banking, insurance and capital market variables) and income distribution in Nigeria. While government reforms is expected to direct the financial sector towards an intermediation that can reduce poverty and income inequality. Therefore, implying that $\theta_1, \theta_2, \theta_3, \theta_4, \theta_5$ and $\theta_6 < 0$.

Analytical Review Technique

This study adopted the ex post facto research design. Data were obtained from the World Development Indicators, Central Bank Statistical Bulletin, Global consumption and Income Pattern Database, and Annual Reports of National Insurance Commission spanning from 1986 to 2015. The year 1986 was chosen because it marks the commencement of the Structural Adjustment Programme (SAP), and financial sector reform was a major component of SAP; while the choice of the year 2015 is based on data availability as the data for income distribution is only available up till 2015. Unit root test was applied on the time series data used in this study in order to check for stationarity in data using the Augumented Dickey-Fuller and Phillips-Perron tests. This was necessary in order to be sure that no single variable was integrated at second difference I(2). The different diagnostics tests were also conducted before determining whether long run association exists among the variables using the bounds test to co-integration. Further, the Autoregressive Distributed Lag (ARDL) short run and long run elasticities were obtained in order to see the effect of each of the financial sector variables on income distribution both in the short and long runs respectively.

RESULTS AND DISCUSSION OF FINDINGS

Unit Root Test.

The Unit root test was conducted using the Augmented Dickey-Fuller (ADF) test and Phillips-Perron (PP) tests to examine the stationarity of variables for level I(0) and at first difference I(1) where applicable.

4.1 Results of ADF and PP Unit Root Test

Level I(0)	ADF Unit Root		PP Unit Root		Order of Integration
	Level	First Difference	Level	First Difference	
LNIND	-1.866	-5.512***	-1.861	-6.493***	I(1)
LNCPS	-2.495	-4.558***	-1.803	-8.357***	I(1)
LNBM	-3.077	-4.858***	-2.510	-5.042***	I(1)
LNMCAP	-2.583	-4.792***	-2.642	-5.705***	I(1)
LNTST	-2.188	-4.026**	-2.188	-4.666***	I(1)
LNISP	-2.811*	-	-2.780*	-	I(0)

Source: Authors' Computation, (2019)

Note: 1. ***, ** and * are 1%, 5% and 10% levels of significance respectively. 2. The optimal lag length is selected automatically using the Schwarz Info Criteria (SIC) for ADF test and the bandwidth had been selected by using the Newey–West method for PP unit root test.

Results from Table 4.1 reveals that only the ratio of gross insurance premium to GDP is stationary at level i.e., I(0) under order of integration and is significant at 10% level of significance using both ADF and PP tests, while income distribution, ratio of credit to the private sector to GDP, ratio of broad money to GDP, ratio of stock market capitalization to GDP, and ratio of total shares traded to GDP are not stationary at level. However, at first difference, income distribution, ratio of credit to the private sector to GDP, ratio of broad money to GDP, ratio of stock market capitalization to GDP, and ratio of total shares traded to GDP are all stationary i.e., I(1) under order of integration and are each significant at 1% level of significance under intercept; and trend and intercept. These imply that the variables are combinations of I(0) and I(1) series and therefore, satisfies the assumption for estimating ARDL.

Diagnostic Tests

The diagnostics checks on the model used in this study include the Serial correlation test, the Heteroskedasticity test, the Normality test, the functional form, Misspecification test, and the Stability test.

Table 4.2: Results on Diagnostic Tests

(a)	(b)	(c)	(d)
Serial Correlation (Lagrange Multiplier test)	Heteroskedasticity (Breusch-Pagan-Godfrey Test)	Normality (Jarque-Bera)	Misspecification (Ramsey's RESET Test)
F-stat. (4.933)	F-stat. (2.097)	Jarque-Bera (0.102)	F-stat. (7.205)
P-values (0.269)	P-values (0.373)	P-values (0.950)	P-values (0.253)

Source: Authors' Computation, (2019)
Note: ***, ** and * represent 1%, 5% and 10% levels of significance respectively.

Serial correlation Test

Results from Table 4.2 show that the Lagrange Multiplier (LM) test was used to conduct the Serial correlation test on the model of income distribution. The probability value of the F-statistic is 0.269 and which is not also significant; this therefore, lends support to a null hypothesis of no serial correlation in the model.

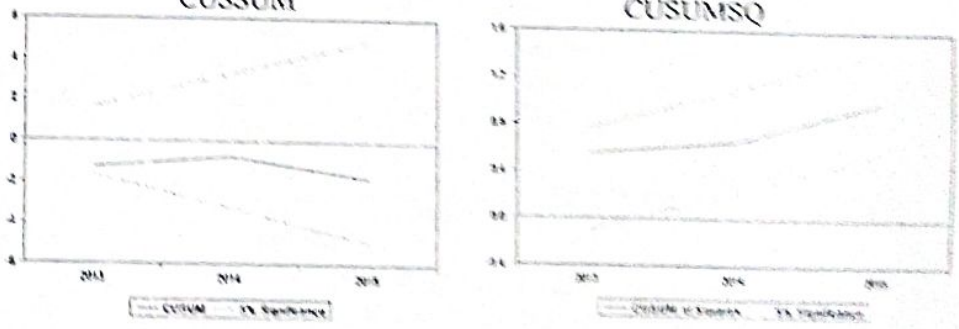
Heteroskedasticity Test

Results from Table 4.2 reveal that the Breusch-Pagan-Godfrey test was used to conduct the heteroskedasticity test on the model used in this study. The attendant probability of the F-statistic is 0.373 which is not significant at 1%, 5% and 10% level of significance and therefore, implies that the null hypothesis of no heteroskedaticity holds.

Normality Test

Results as indicated on Table 4.2 reveals that the data used in this study is normally distributed noting that the probability of Jaque-Bera is 0.950 which is above 10% level of significance and therefore, assumes the null hypothesis of normality of residuals which satisfies an assumption for estimating ARDL.

Figure 4.3: CUSUM and CUSUMSQ



Source: Authors' Survey, (2019)

Misspecification Test

The functional form misspecification check was conducted using the Ramsey's RESET test. Result validates the null hypothesis of no misspecification of functional form in the model since the probability value of the f-statistic is above 10% level of significance.

Structural Stability Test

The stability check was conducted on the model used in this study using the CUSUM and CUSUM of Square (CUSUMSQ) tests, noting the plots (blue lines) and the critical bounds (red lines) in the graphs of CUSUM and CUSUMSQ.
The graphs on Figure 4.3 for CUSUM

and CUSUM of Square (CUSUMSQ) tests confirm the structural stability of the model used in this study as argued by Brown, Durbin, and Evans (1975). The blue lines (plots) lie between the two dotted red lines (critical bounds) at 5% significance on the CUSUM and the CUSUMSQ graphs respectively. It is therefore, believed that this model will produce a reliable results for policy makers.

Multicollinearity Test

Table 4.4 presents the result of the pairwise correlation analysis depicting the relationship among variables.

Table 4.4: Pairwise Correlation Matrix

Variable	LNIND	LNCPS	LNBM	LNMCAP	LNTST	LNISP
LNIND	1.0					
LNCPS	-0.798528 (0.0000)	1.0				
LNBM	-0.723022 (0.0000)	0.738566 (0.0000)	1.0			
LNMCAP	-0.608592 (0.0004)	0.730474 (0.0000)	0.727780 (0.0000)	1.0		
LNTST	-0.523760 (0.0030)	0.695617 (0.0000)	0.697565 (0.0000)	0.698896 (0.0000)	1.0	
LNISP	-0.013209 (0.9448)	0.161617 (0.3935)	0.181707 (0.3366)	0.285229 (0.1266)	0.063742 (0.7379)	1.0

Source: Authors' Computation, (2019) Note: p-values in parenthesis.

Results from Table 4.4 shows that the relationship among the explanatory variables i.e. credit to private sector (LNCPS), broad money supply (LNBM), stock market capitalisation (LNMCAP), stock market liquidity (LNTST) and insurance business penetration (LNISP) all have correlation coefficients below 0.8 which is benchmark above which there would be indication of multicollinearity in the model (see Gujarati & Porter, 2008). This implies that the model in which these explanatory variables are employed is free from the problem of multicollinearity.

Cointegration and Long Run Form

The cointegration test was conducted using Bounds test in order to confirm whether or not a long a run association exists among the variables used in the model of this study. The norm is to compare the F-statistic value with the critical values of the bounds.

Table 4.5: Result of Long Run Cointegration

Max Lag	Lag order	F statistics	
(3,3)	(3,3,3,3,3,3)	7.251	
Critical Values for f-statistic		Lower I(0)	Upper (1)
10%		2.26	3.35
5%		2.62	3.79
1%		3.41	4.68

Source: Authors' Computation, (2019)

Results from Table 4.5 indicate presence of long run relationship among the variables used in this study. The F-statistic value 7.251 is larger than the upper and lower critical bound values at 1%, 5%, and 10% significance level respectively therefore, the null hypothesis of no long-run relationship is rejected.

ARDL Short run and Long run Elasticities

The short run and long run elasticies of ARDL estimation are shown on Table 4.6. The short run elasticities were interpreted based on their current coefficient values alongside the long run coefficients to see their implications both in the short and at the long-run.

Table 4.6: Results on ARDL Short run and Long-run Elasticities

Short run Elasticities		Long run Elasticities	
Variables	Coefficient	Variables	Coefficient
D(LNCPS)	-0.690***	LNCPS	-0.674***
D(LNBM)	-0.543*	LNBM	-0.238**
D(LNMCAP)	-0.433***	LNMCAP	-0.110**
D(LNTST)	-0.171***	LNTST	-0.036***
D(LNISP)	0.740	LNISP	0.070
D(GR)	-0.098**	GR	-0.038*
CointEq(-1)	-0.475***	C	-0.361***

Source: Authors' Computation, (2019). Note: ***, ** and * are significant at the 1%, 5% and 10% levels, respectively.

Findings reveal from Table 4.6 that the short run coefficient of the ratio of credit to the private sector, which is a proxy of the level of banking sector intermediation is -0.690 while its long run coefficient is -0.674 and both are statistically significant at 1% level of significance. These imply that a 1% increase in the ratio of credit to private sector (banking sector intermediation) will decrease income inequality by 0.69% and 0.67% respectively in the

short and long run. These results therefore, suggest that the credit to the private sector is an important financial sector variable that can be used to redistribute income in Nigeria as it significantly reduces income inequality both in the short and long run. Also, noting that the private sector is the largest employer of labour in Nigeria, the government is therefore, expected to pay proper attention to the credit to the private sector in order to reduce income inequality in Nigeria. This finding corroborates that of Biyi, Femi, and Hambarsita (2018).

The short run coefficient of the degree of monetization in the economy, which is proxy as ratio of broad money is 0.343 and it is significant at 10% while its long run coefficient is -0.238 and is significant at 5% level of significance. Results therefore, suggest that a 1% increase in the ratio of broad money (degree of monetization) decreases income inequality by 0.343% in the short run and 0.238% in the long run. These imply that broad money reduces income inequality both in the short run and the long run in Nigeria. Although, the rate of reduction on income inequality is lower (0.238%) in the long run in Nigeria. This study however, lends support to the findings of Ridwan *et al* (2017).

The coefficient of the ratio of stock market capitalisation to GDP in the short run is 0.411 and it is significant at 1%, while its long run coefficient is 0.110 and significant at 5% level of significance. Results indicate that a 1% decrease in the ratio of stock market capitalisation increases income inequality by 0.411% and 0.110% in the short and long run respectively. Finding is in tandem with that of Johansson and Wang (2011), and Ridwan *et al* (2017).

The coefficients of the stock market liquidity proxy as ratio of total shares traded in the short run is -0.117 while its long run coefficient is -0.036 and are both significant at 1% level of significance. Findings suggest that a 1% increase in value of total shares traded decreases income inequality by 0.117% in the short run but by 0.036% in the long run, though with a lower impact (0.036%) in the long run. Nevertheless, results indicate that the total shares traded improve income distribution in the short and long run in Nigeria. Perhaps, these might have translated into portfolio growth in investors and therefore, improves their income distribution.

The coefficients of insurance business penetration proxy as ratio of gross insurance premiums to GDP show that the insurance sub-sector of the Nigerian financial system does not significantly impact on income distribution in the short and long run respectively. Result however, contradicts that of Beck, and Webb (2003), and Manasa (2008).

The coefficient of government reforms is -0.008 in the short run and is significant at 5% while in the long run its coefficient is -0.038 and is significant at 10% level of significance. These imply that government reforms in the Nigerian financial system towards income distribution is significant both in the short and long run but its impact on the reduction of income inequality is around 0.008% in the short run and 0.38% in the long run and therefore, calls for more aggressive policies that could further propel the financial system to reduce income inequality in Nigeria.

The coefficient of the error correction term is -0.473 and it is significant at 1%. This implies that the speed of adjustment for the model to converge in the long run is approximately 47.3%.

CONCLUSION AND RECOMMENDATIONS

This study concluded that both the banking and the stock market sub-sectors of the Nigerian financial sector negatively and significantly influence income distribution in Nigeria, while the insurance sub-sector does the contrary.

However, based on the findings that the banking sector intermediation significantly influences income distribution in Nigeria; it is recommended that the government through the Central Bank of Nigeria should come up with appropriate policy that could encourage banks to advance more and adequate loans at low and affordable costs to the private sector being the largest employers of labour in Nigeria, as this could empower Nigerians and help improve income distribution.

Furthermore, based on the finding that the degree of monetization significantly affects income distribution in Nigeria, it is recommended that the Central Bank of Nigeria should ensure that the bulk of money supplied to the economy is channelled to priority sectors considered as growth driven to better improve income distribution in Nigeria.

Based on the finding that stock market capitalization significantly influences income distribution in Nigeria; it is recommended that the capital market regulators, especially the Securities and Exchange Commission (SEC) should strengthen the regulatory framework guiding the stock market operations to make it more stronger, efficient, and reliable to insulate the financial system from contagion and engender financial services that can reduce income inequality in Nigeria.

Furthermore, on the findings that the stock market liquidity exerts a significant influence on income distribution in Nigeria; it is recommended that the government through its relevant agencies should create a secure and friendly investment climate to encourage more investments inflows on the Nigerian Stock Exchange especially, in sectors considered as growth driven so as to positively influence portfolio growth, which can directly or indirectly improve income distribution.

Based on the finding that the insurance business penetration does not significantly impact on income distribution in Nigeria; it is recommended that the government

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