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FINANCIAL DEVELOPMENT, HUMAN CAPITAL AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL ANALYSIS

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Abstract

This study investigated the impact of financial development on economic growth in Nigeria through the human capital channel. It also ascertained the direction of causality between financial development and human capital development. In order to address the objectives, the study utilized Autoregressive Distributed Lag (ARDL) model and Toda and Yamamoto Granger causality model. The result obtained from ARDL estimation showed that financial development through human capital development channel has positive and significant impact on economic growth in Nigeria. It was also discovered that stock market development passing through human development channel has positive and significant impact on economic growth. Also, the study observed that Toda and Yamamoto Granger causality test showed the existence of unidirectional causality running from financial development to human capital development in Nigeria. In view of these, the study concluded that policies meant to improve the contribution of financial development and stock market development on economic growth should be evolved. Again, the study recommended that financial and stock market education should be incorporated into the schools' curriculum starting from secondary schools. This would help to improve the quality human capital, enhance the perception of people in these areas and to help them make informed financial decision which would increase economic growth.

Keywords: Finance, Development, Human Capital, Economic Growth.

JEL classification: B26; C58; E44; F43; J24; O15; O16.

1. INTRODUCTION

Studies on the financial sector and the entire financial system have gained prominence in economic literature starting with the seminal work of Schumpeter (1912). A financial sector has different components that function as intermediaries in order to facilitate the flow of funds from the areas of surplus to the areas of deficit (Anthony-Orji, Orji, Ogbuabor, and Nwosu, 2019). A strong and well competitive financial sector is necessary to mobilize funds between lending and deposit units and also support investment projects in the economy. According to the analysis of McKinnon (1973) and Shaw (1973), a well-developed and functional financial sector promotes private savings through competitive interest rate.

Furthermore, empirical literature documents a positive relationship between economic growth and financial sector development (Orji, Ogbuabor, and Anthony-Orji 2015 and Orji, A, Ogbuabor, and Anthony-Orji, 2016b). And this can be supported through sectors such as real sector and provision of infrastructures (Baily and Douglas, 2013). Hence, the financial sector can develop a formidable and effective human capital through the provision of credit to private households which use such financial resources to invest in private education and training. Human capital development is relevant and necessary to improve the effectiveness of workers in their respective places of engagements. Studies have indicated that the success of every economy or organization is highly dependent on skills acquisition, knowledge and experience of its citizens/employees, which promote effective human capital development (Bokeno, 2011). In addition Ukenna, et al (2010) states that education, training and skill acquisition are estimates of human capital that can readily impact on growth of an economy.

However, one of the major problems of the financial sector in Nigeria since its inception is the challenge of lack of competent human capital to carry out its roles as facilitator of economic growth and financial development in the country (Ndekwa, 1994; Olayiwola, 2009). In Sub-Saharan Africa and particularly in Nigeria, the low literacy level is another challenge of financial sector development; because of high level of illiteracy among the populace, majority of these people prefer holding their wealth in the form of physical assets as against financial asset thereby hindering the development of the financial sector. These individuals prefer to hold their wealth as well as keep such wealth out of the financial system, thus hindering credit creation ability of banks in the country, which will have a negative effect on economic growth. Low level of educational experience in the region led to low human capital development which has affected the stock markets and other sectoral growth. But educated people are highly informed as such the available information at hand will encourage more banking patronage with more transactions passing through the financial system (Hakeem and Oluitan 2012). Nigeria has been regarded as the giant

of Africa but the country is backward economically. This is obvious from figure 1 below. For example, Nigeria's GDP growth rate from 1991 to 2013 remained low compared to Togo, Tunisia, Ghana and South-Africa; despite the huge sum of revenue the country was earning from oil.

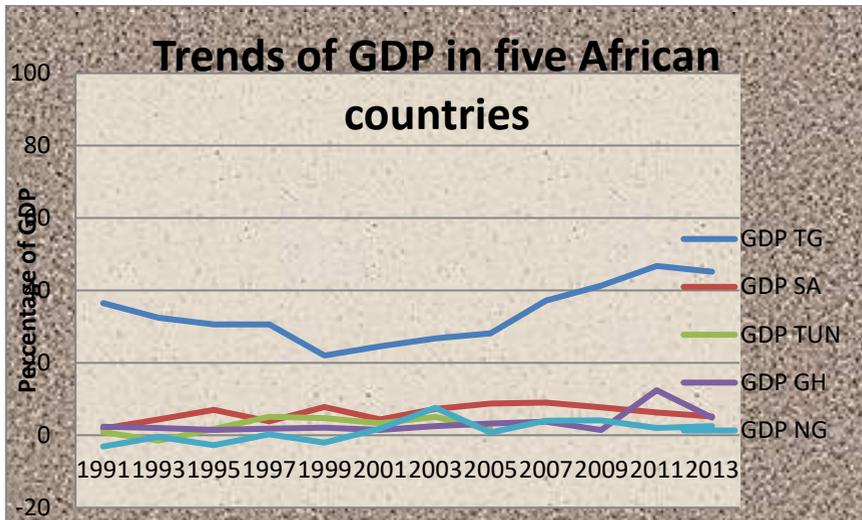


Figure 1. Trends of GDP in five African countries.

Source: World Development Indicators, 2015.

This shows lack of sincerity among government officials in managing the economy. The nation economy suffered as a result of lack of diversification into agriculture, manufacturing and commerce etc. Furthermore when we consider the level of investment into the education sector, official statistics have a lot to say. Figure 1.a show the trends of government capital expenditure on education across five African countries which include: South-Africa, Ghana, Tunisia, Togo and Nigeria.

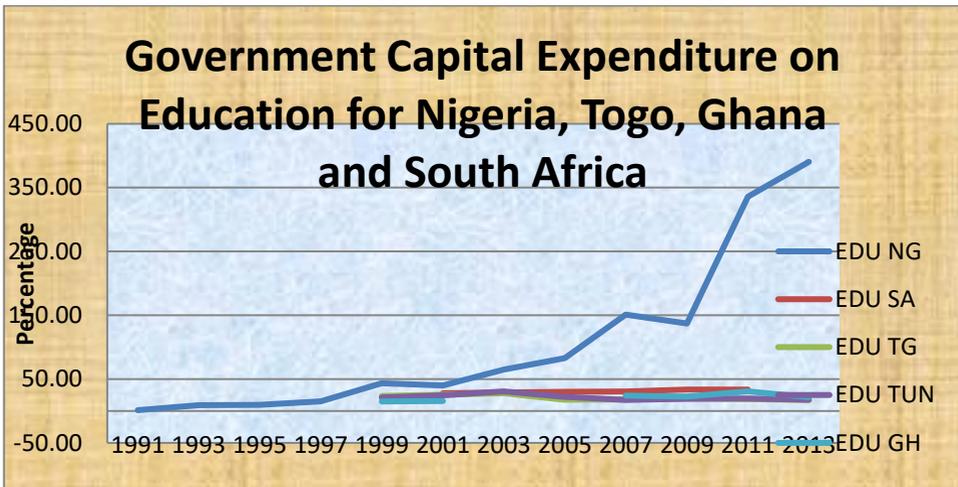


Figure 1.a. Trends of human capital expenditure in five African countries 1991-2013.
Source: World Development Indicators, 2015

Government capital expenditure on education in Nigeria is much greater and higher compared to South-Africa, Ghana, Togo and Tunisia. But despite the high allocation and excessive expenditures by government, the impact on human capital development has remained low because, majority of our graduates that passed out from our tertiary and secondary institutions are not productive as a result of stagnation in the educational system.

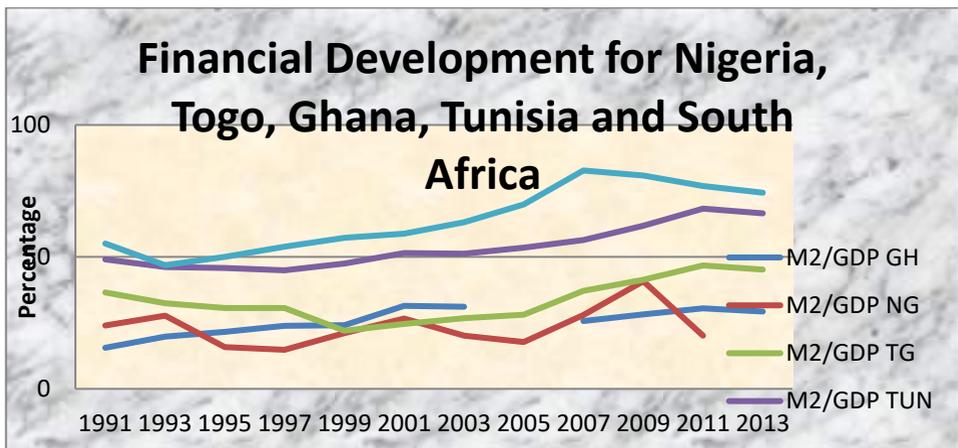


Figure 1.b. Trends of financial development in five African countries
Source: World Development Indicators, 2015

In addition, from the figure 1.b above, it is clear that during the military regimes the financial system in Nigeria remained low between 1991 and 1997. But it rose marginally from 1999 during the civilian regime. The financial sector in Nigeria like those of other less developed economies has been bedeviled by different challenge, thus leading to financial dis-intermediation which hinders economic

growth (Adekunle, Salami, and Adedipe, 2013). This is also reflected as weak financial policies, corruption and lack of financial system accountability.

Consequently, various economic policies and programs have been embarked upon by different governments in Nigeria to muzzle the problems facing financial sector and human capital development. Unfortunately, the level of development in Nigeria's financial sector is among the least developed in the world, and this can be attributed to misguided policies of the past which were characterized by political interference in the operation of financial institutions and this seems to affect economic growth negatively (Calvin and Liliana, 2007). Another issue of concern is the failure of the monetary authorities in Nigeria to harmony policies that would guarantee the optimal performance of the stock market and also allow investors in the stock market to take advantage of available information. The investors in this market depend on the available information to maximize their profit; hence information asymmetry has a negative effect on the volume of profits that would accrue to the few with supposedly sharper entrepreneurial acumen. Empirically, studies have been done to analyse the issues of financial development and economic growth, however no study has been done in Nigeria to investigate the relationship between financial development and economic growth through the human capital channel. As a result of the problems enumerated above and the gaps identified in the literature this study addressed two objectives: (1) It examined the impact of financial development and stock market development on economic growth in Nigeria through human capital channel. (2) It identified the direction of causality between financial development and human capital development. Empirical results from the Autoregressive Distributed Lag (ARDL) model and the Toda and Yamamoto Granger causality model showed that financial development through human capital development channel has positive and significant impact on economic growth in Nigeria and that there is existence of unidirectional causality running from financial development to human capital development in Nigeria respectively. The rest of the paper is structured as follows: Section 2 is literature, while section 3 is methodology. Results and discussion is found in section 4, while section 5 concludes the paper.

2. LITERATURE REVIEW

2.1. THEORETICAL LITERATURE

The theories underpinning this study are the financial development theories, human capital theory and the endogenous growth theory. Studies on the financial sector and the entire financial system have gained prominence in economic literature starting with the seminal work of Schumpeter (1912). Furthermore, the theoretical literature on finance and development postulates a symbiotic relationship between the evolution of the financial system as well as the development of the real economy. The literature on this relationship predicts that financial deepening depends on real income and real interest rate. This is predicted by both the McKinnon and Shaw models and in the endogenous growth literature. According to the McKinnon model (1973), the relationship between financial deepening and economic development is

based on the complementarity between money and capital. It is assumed that investment cannot be realized without the accumulation of a significant amount of savings in the form of bank deposits by individuals who are gainfully employed in the economy.

The development of human capital promotes economic growth through investment and access to loanable funds. In the Shaw model (1973), financial intermediaries witness an expansion in their activities and promote investment when savings grows more than the level of real economic activity. In these models, a positive real interest rate increases financial deepening through the mobilization of an increased volume of savings and promotes growth through a higher productivity of capital. However, the McKinnon/Shaw approach suggests that any distortion and limitation on the banking sector, such as interest rate controls, reserve and liquidity requirements, and government rationing of available credit to so called priority sectors, inhibit financial development mainly by depressing the real interest rate (McKinnon 1973; Shaw 1973; Galbis 1977; Kapur 1976; Mathieson 1980; Fry 1995). The deficiency in the amount of savings due to such repressing measures thwarts economic development through the perverse effects on the volume and the quality of investment. Thus, the main argument of McKinnon and Shaw is that financial repression has a detrimental effect on financial development and economic growth. Hence government should embrace policies that will promote financial sector development through increased expenditure in human capital development, in order to raise the per capita income of the people.

Furthermore, the human capital theory describes how increase in education leads to high productivity as well as efficiency of workers through a rise in their level of cognitive skills. Schultz (1993), Becker (1964) and Mincer (1958) had different perception to human capital. They hold the views that people invest in education in order to increase their stock of human abilities which can be formed by combining natural idea/creativity with investment in human (Babalola, 2000).

On the other hand, the new growth theory popularly called endogenous growth theory was developed as a reaction against the neoclassical exogenous growth theory. Romer endogenous growth theory was first presented in 1986. The theory classifies knowledge as input in the production function. The theory aimed at explaining the long run growth by endogeneized productivity growth or technical progress. The model predicts that the economy can grow forever as long as it does not run out of new ideas or technological advancement. Just like the exogenous growth theory, the endogenous growth theory professes convergence of nations by diffusion of technology. That is, a situation where poor countries manage to catch up with the richer countries through gradual increase in human capital and technology.

2.2. EMPIRICAL LITERATURE

Ewenta and Ike (2015) examined the long-run relationship between financial sector development and domestic saving in Nigeria from 1980 to 2012 using time series data. It employed autoregressive distributed lag (ARDL) bound estimation due to mixed integration order of the variables and small sample size. The study used a composite index of financial development index (FDIX) constructed from the three alternative measures of financial development indicators. The econometric results showed evidence that financial sector development and domestic savings have a long run relationship in Nigeria. The constructed composite index of financial development had a positive and significant impact on domestic savings likewise each of the respective three components of this index had a positive impact on domestic saving.

Ojofedo and Edez (2014) examined financial sector development and economic growth in Nigeria from 1990 to 2010. The study used time series data obtained from Central bank of Nigeria statistical bulletin. It also employed Vector Error Correction (VEC) model to ascertain the direction of causality between financial sector development and economic growth in Nigeria for the period 1990-2010. The results revealed that financial sector development and economic growth have strong positive relationship. Also, causality runs from market capitalization, banking sector credits and foreign direct investment to the real gross domestic product which supports the supply leading hypothesis. The study concluded that market capitalization, banking credits and foreign direct investment impact significantly on real gross domestic product.

Raphael and Gabriel (2015) studied the effect of financial sector development on disaggregated manufacturing output growth in Nigeria between 1986 and 2012. The study employed Vector Auto-regression (VAR) analysis to test whether or not financial sector variables encourage the growth of output in manufacturing sector of the Nigerian economy, by maintaining interactions with some key macroeconomic variables in the Nigerian economy. The study also applied unit root and Johansen co-integration tests to examine the behaviour of the macro variables. The results showed that money supply as ratio of GDP and credit to private sector as ratio of GDP are critical to the enhancement of cement output in Nigeria. Also, total savings did not positively impact on the components of manufacturing output growth in Nigeria, indicating the need to mobilize more financial savings to boost the output level of the manufacturing sector in Nigeria. The result implied that relaxing financial development constraints as well as deepening the financial sector is crucial to boosting the manufacturing output growth in Nigeria. This study also supports the finding of Orji, Ogbuabor, and Okolomike, (2015),

Ogwumike and Salisu (2014) investigated the short run, long run and the causal relationship between financial development and economic growth in Nigeria from 1975 to 2008. Using the autoregressive distributed lag Bound test approach, the findings showed that financial development and economic growth have positive long run relationship in Nigeria. Financial intermediation, credit to private sector,

stock market and financial reforms exert significant positive impact on economic growth. Further, analysis of the short run dynamics revealed that about 40% of the resulting disequilibrium is captured each period indicating minimal deviations from the equilibrium. Therefore the study suggested that, suitable regulation as well as macroeconomic policies that will foster the expansion and development of the Nigerian financial institutions should be pursued by the relevant authority. This also agrees with the finding of Orji, Anthony-Orji, and Mba (2015).

Abubakar and Kassim (2014) investigated the possible relationship amongst financial development, as well as human capital accumulation and real GDP growth. The study made use of panel co-integration approach as well as (full modified ordinary least square FMOLS, dynamic ordinary least square DOLS). The findings revealed that bank private credit and domestic credit contribute significantly to economic growth in the ECOWAS, both directly and through their influence on human capital accumulation. This shows that the development of the financial sector, represented by broad money as a ratio of GDP is not significant in influencing economic growth both directly and indirectly-via the human capital accumulation channel. On the contrary, real economic activities rather cause broad money growth. However, financial intermediation activities of banks and related institutions (in form of credit facilities) support accumulation of human capital that also turned to contribute significantly to real GDP growth of the ECOWAS region.

Mahyar and Mahmood (2014) examined the effect of financial development on human capital level in Iran for the period from 1967 to 2009. The proposed model was estimated using Vector Error correction approach. Some of the variables used were adult literacy rate as the indicator of human capital and domestic credit to private sector as a percentage of gross domestic products to measure financial development in Iran. The findings in the study revealed that financial development had a positive significant impact on human capital in Iran during the period. The results also suggested that financial development had a negligible contribution in promoting human capital in Iran's economy, and this could have been caused by low private sector investment in human development activities. The results in the study were consistent with the results of the studies carried out by Outreville (1999) and Evans (2002).

Thus, as earlier stated and as seen above, studies have been done to analyse the issues of financial development and economic growth, however no study has been done in Nigeria to investigate the relationship between financial development and economic growth through the human capital channel. This is the gap this study fills.

3. METHODOLOGY

3.1. THEORETICAL FRAMEWORK

This study will employ the endogenous growth model and modify the model used by (Luintel and khan, 1999; Ogwumike and Salisu 2014). The endogenous growth theory was first presented by Romer in 1986. The theory classifies knowledge as input in the production function. The theory is aimed at explaining the long run growth by endogeneized productivity growth or technical progress. The model predicts that the economy can grow forever as long as it does not run out of new ideas or technological advancement. Again, the model shows when less developed countries increase expenditure on human capital it will lead to economic growth, this is likely to have a positive effect on the financial sector development.

Therefore the production function is as follows:

$$Y = f(L, K, A) \quad (3.1)$$

where: Y= output, L = labour, K = capital and A = knowledge/technical progress.

Following the production function Y represents economic growth, L represents Labour and human capital, while A represents knowledge/ technical progress. Thus, there is a connection between human capital development and economic growth as shown by the production function.

3.2. MODEL SPECIFICATION FOR OBJECTIVE 1

This model is used to estimate the impact of financial development on economic growth in Nigeria through the human capital channel. Thus:

$$GGPGR = F(SER, FD, SMD, PDI, PUBDEBT, INF, RIR, TOP) \quad (3.2a)$$

Where GDPGR = Gross Domestic Product Growth Rate; SER = School Enrollment Rate (Prim & Sec. Erol.; proxy for Human Capital Development) FD = Financial Development (proxy by Credit to Private Sector/GDP Ratio); PDI = Private Domestic Investment ; MD = Stock Market Development (proxied by stock market capitalization/GDP ratio); RIR = Real Interest Rate, INF = Inflation Rate; PUBDEBT = Public Debt; TOP= Trade Openness

With that, the mathematical specification of the functional form of equation (1.a) becomes

$$\begin{aligned} GDPGR_t = & \alpha_0 + \alpha_1 \log SER_t + \alpha_2 SMD_t + \alpha_3 \log TOP_t + \\ & \alpha_4 \log PUBDEBT_t + \alpha_5 \log PDI_t + \alpha_6 \log FD_t + \alpha_7 \log FD_t * \\ & \log SER_t + \alpha_8 SMD_t * \alpha_9 SER_t + \alpha_9 INF_t + \alpha_{10} RIR_t \end{aligned} \quad (3.2b)$$

Where

α_i = parameters/coefficients

μ = error term. Other variables are as previously defined.

To estimate the impact of financial development on economic growth in Nigeria through the human capital channel, we specify equation (3.3) and interacts the human capital variable (SER) with the financial development variable. Also, to check the dynamic impact of the variables of interest, the study adopts an ARDL model proposed by Pesaran (2000) and Pesaran and Shin (2001). This has the ability to investigate the long run and the short run dynamics of the variables.

Econometrically, equation (3.2b) is transformed to an ARDL long run model of the form:

$$GDPGR_t = \alpha_0 + \alpha_1 \log SER_t + \alpha_2 SMD_t + \alpha_3 \log TOP_t + \alpha_4 \log PUBDEBT_t + \alpha_5 \log PDI_t + \alpha_6 \log FD_t + \alpha_7 \log FD_t * \log SER_t + \alpha_8 SMD_t * \alpha_9 SER_t + \alpha_9 INF_t + \alpha_{10} RIR_t + \mu_t \quad (3.3)$$

The short run specification of equation (3.3) is given in an autoregressive distributed lag form presented in equation (3.4).

$$\begin{aligned} \Delta GDPGR_t = & \alpha_0 + \sum_{i=1}^p \alpha_{1i} \Delta GDPGR_{t-i} + \sum_{j=0}^p \alpha_{2j} \Delta \log SER_{t-j} + \sum_{j=0}^p \alpha_{3j} \Delta SMD_{t-j} \\ & + \sum_{j=0}^p \alpha_{4j} \Delta \log TOP_{t-j} + \sum_{j=0}^p \alpha_{5j} \Delta \log PUBDEBT_{t-j} \\ & + \sum_{j=0}^p \alpha_{6j} \Delta \log PDI_{t-j} \\ & + \sum_{j=0}^p \alpha_{7j} \Delta \log FD_{t-j} + \sum_{j=0}^p \alpha_{8j} \Delta (\log SER * \log FD)_{t-j} \\ & + \sum_{j=0}^p \alpha_{9j} \Delta (SER * SMD)_{t-j} \\ & + \sum_{j=0}^p \alpha_{10j} \Delta INF_{t-j} + \sum_{j=0}^p \alpha_{11j} \Delta RIR_{t-j} + \varphi ECM_{t-1} \\ & + \varepsilon_t \end{aligned} \quad (3.4)$$

Where:

ϕ measures the speed of adjustment to long run equilibrium,
 Δ is difference operator and other variables remained as defined.

4. RESULTS AND DISCUSSION

4.1. UNIT ROOT TEST OF THE VARIABLE

The variables of interest were subjected to unit root test in order to ensure stationarity of the series. The unit root method adopted is Augmented Dickey-Fuller unit root test. Where the result of the ADF is not clear, the study cross checked it with NG-Peron unit root test.

ADF is not clear, the study cross checked it with NG-Peron unit root test.

Table 4.1. Result of ADF unit root test of the variables

Variables	Level Form		First Difference		Order of integration
	5% critical value	ADF test statistics	5% critical value	ADF test statistics	
FD	-2.742038	-2.742038	-2.883753	-3.750144	I (1)
GCEE	-2.885863	6.746218**	-	-	I (0)
GCEH	-2.883408	-2.692248	-2.883408	-4.065058**	I (1)
GDPGR	-2.883579	-2.319099	-2.883579	-6.358800**	I (1)
TOP	-2.883073	-2.045646	-2.883073	-3.824844**	I (1)
PUBDEBT	-2.882279	-0.121796	-2.882279	-2.967795**	I (1)
SMD	-2.883408	3.536061**	-	-	I (0)
INF	-2.882433	-3.942632**	-	-	I (0)
SER	-2.882433	-2.513125	-2.882590	-5.075776**	I (1)
INTR	-2.883753	-3.214963**	-	-	I (0)
PDI	-2.883073	-4.578833**	-	-	I (0)

Note: ** indicates significant at 5 % significant level. Mackinnon critical value for rejection of hypothesis of a unit root is 5%.

The result of the unit root test conducted in table 4.1 shows that (FD), (GCEH), (GDPGR), (SER)), (TOP), and (PUBDEBT) were stationary after first difference while (PDI),(GCEE), (SMD),(INTR) and (INF) were found to be stationary in level form. Hence, the study utilized I (0) and I (1) variables. This informed the use of bound test approach of cointegration.

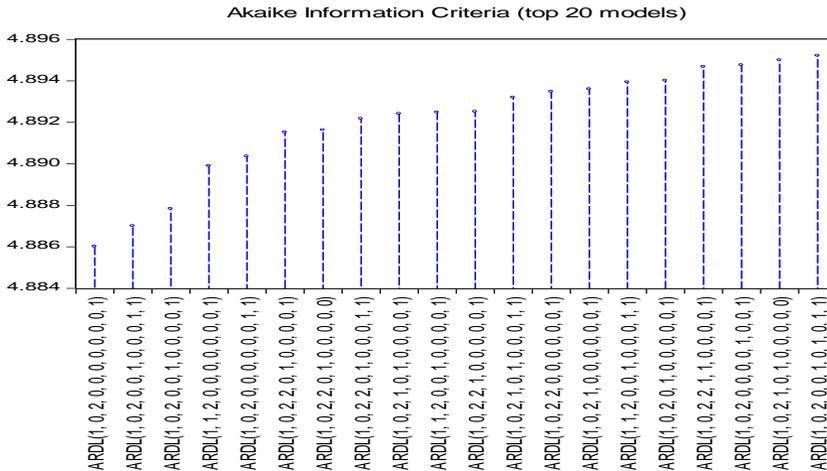


Figure 4.1. Graph of ARDL model lag selection

The above result of the lag length selection showed that after 20 evaluations, the selected ARDL (1,0,2,0,0,0,0,0,0,1) is different from other ARDL such as ARDL (1,0,2,0,0,1,0,0,0,1,1) and ARDL (1,0,2,0,0,1,0,0,0,0,1). Therefore, ARDL (1,0,2,0,0,0,0,0,0,1) becomes the suitable model for our analysis.

Table 4.2. Bound Test Result

Test Statistic	Value	K
F-Statistic	14.45141	8

Pasaran lower bound = 2.22

Pasaran upper bound = 3.39

The result in table 4.2 indicates that Pesaran F-statistic value (14.45141) is greater than Pasaran upper critical value (3.39) meaning that the null hypothesis of no long-run association among the variables of the selected ARDL (1,0,2,0,0,0,0,0,0,1) is to be rejected. However, rejecting the null hypothesis implies that even though the variables wonder about in the short run, in the long run there exists co-movement among the variables.

Table 4.3. The result of long run model of objective (1) estimated from cointegration and long run form

Dependent variable: GDPGR

Variable	Coefficient	Standard error	t-statistic	Probability
LOG(SER)	4.651446**	2.065677	2.251777	0.0260
SMD	1.239168**	0.312467	3.965756	0.0001
LOG(TOP)	-4.999412**	2.038402	-2.452613	0.0155
LOG(PUBDEBT)	3.402951**	0.434118	7.838770	0.0000
LOG(PDI)	2.199163**	1.031593	2.131814	0.0349
LOG(FD)	1.161907**	0.580971	1.999940	0.0433
LOG(FD)*LOG(SER)	1.310811**	0.510212	2.569150	0.0191
(SMD)*(SER)	0.761112**	0.219118	3.473518	0.0007
INF	0.189626**	0.051284	3.697572	0.0003
RIR	0.167304**	0.038582	4.336331	0.0000
C	-20.03250	12.92925	-1.549394	0.1237
<p>R-Square 0.657280 Adjusted R-Squared 0.630713 Durbin Watson 1.992068 F-statistic 24.74006 Prob. F-statistic 0.000000</p> <p>Note: ** denotes significant at 5 % level While * denotes significant at 10 % level</p>				

From the estimated result above, holding other variables in the model constant, a percentage change in the level of human capital development (in this case, an additional year of education acquired) would result to about 4.65 per cent increase in the growth rate of gross domestic product. Consequently, under ceteris paribus assumption a one per cent increase in the level of stock market development would result to about 1.24 percent increase in the growth rate of gross domestic product in Nigeria. This finding is in line with the findings of Adamu and Sanni (2005), Adekun (2010), Ojo and Adeusi (2012) and Ojofedo and Edez (2014) who also confirmed the existence of positive and significant impact of stock market capitalization on economic growth in Nigeria. But this finding is contrary to the findings of Alajekwu and Achugba (2012) who confirmed negative and weak correlation between stock market development and economic growth in Nigeria. The level of trade openness in an economy was also considered by the study. However, it was observed that the variable was found to be negative but has a significant impact on the growth rate of gross domestic product. Holding other variables in the model constant, one unit change in the level of trade openness would bring about 4.99 percent decline in the growth rate of gross domestic product in Nigeria. Although

this result does not conform to a priori expectation, it could be observed that increasing the level of trade openness without preparing and having strong terms of trade could be disastrous to the GDP growth rate in Nigeria.

Further result show that holding other variables in the model constant, one percent change in the amount of public debt would lead to about 3.40 percent change in the growth rate of gross domestic product in Nigeria, also another veritable growth driver is private domestic investment. The variable private domestic investment was found to be positive and has significant impact on GDP growth rate in Nigeria. Base on the *ceteris paribus* assumption, a one percent increase in private domestic investment would lead to about 2.2 percent change in GDP growth rate. Similarly, the estimated result for financial development was positive and statistically significant in explaining the changes in the GDP growth rate. Holding other variables of the model constant, one percent change in financial development would lead to 1.2 percent change in the GDP growth rate in Nigeria.

The interesting part of this study is the interaction of some of these variables. The result shows that interacting financial development with human capital development variable (secondary school enrolment) did not only appeared to be positive and statistically significant, but also improved the impact of financial development on GDP growth rate. However, holding other variables in the model constant, one percent increase in financial development through human capital development would bring about 1.3 percent increase in GDP growth rate in Nigeria. The implication of this finding is that financial development alone would not produce the level of growth expected by the country but working through human capital development would produce more significant result. Educating people on financial matters and how best to make use of limited available financial resource would produce profound result and increase the rate of economic growth in Nigeria. On the other hand, the interaction of stock market development with human capital development produced positive and significant result but the magnitude of the impact of the interaction variables were less than the individual impact of the variables. Thus, holding other variables in the model constant, a change in the interaction variable would lead to 0.76 percent change in GDP growth rate in Nigeria.

Also, the persistent rise in the general price level and the real cost of borrowing were examined alongside other variables in the model. Holding other variables in the model constant, one percent increase in persistent rise in the general price level (inflation) would lead to 0.2 percent increase in GDP growth rate in Nigeria. This may look surprising, but it is assumed that in the long run all economic activities must have adjusted to price fluctuation in the economy. It is pertinent to know that even though consumer price index was observed to have impacted positively on economic growth, this could be seen only on the aggregate level. The study also observed that one percent change in the real cost of borrowing (real interest rate (RIR)) would lead to about 0.2 percent change in GDP growth rate. The RIR variable was positive and statistically significant. This could mean that investors take the advantage of higher interest rate to move more fund across border into Nigeria, and with this situation, fund would be made available for interested

investors whose transaction activities might lead to increase in GDP growth rate in Nigeria.

Table 4.4. Interpretation of the Result of Short Run Model of Objective (1)

Dependent variable: GDPGR

Variable	Coefficient	Standard error	t-statistic	Probability
Δ GDPGR(-1)	0.699104**	0.212462	3.290495	0.0013
Δ LOG(SER)	0.929362	1.149893	0.808216	0.4207
Δ SMD	1.321424**	0.249712	5.291789	0.0000
Δ SMD(-1)	0.160528	0.212409	0.755748	0.4514
Δ LOG(TOP)	-0.436063	1.568908	-0.277940	0.7816
Δ LOG(PUBDEBT)	0.964546	0.777265	1.240948	0.2172
Δ LOG(PDI)	2.244267**	1.041799	2.154222	0.0333
Δ LOG(PDI(-1))	0.347741	1.383465	0.251355	0.8020
Δ LOG(FD)	15.08223**	3.818751	3.949518	0.0001
Δ LOG(FD(-1))	-14.51892**	3.796058	-3.824737	0.0002
Δ LOG(FD)*LOG(SER)	1.253239**	0.533330	2.349836	0.0205
Δ (LOG(FD(-1))*LOG(SER(-1)))	1.240860**	0.457654	2.711347	0.0077
Δ ((SMD)*(SER))	0.139748**	0.024931	5.605391	0.0000
Δ ((SMD(-1))*(SER(-1)))	0.314344	0.724060	0.434141	0.6650
Δ INF	-0.040459	0.052271	-0.774037	0.4405
Δ INF(-1)	0.165987**	0.049884	3.327456	0.0012
Δ RIR	0.090822**	0.034403	2.639921	0.0095
ECT(-1)	-0.606276	0.212047	-2.859159	0.0464
C	-9.080076	6.367556	-1.425991	0.1566
R-Square	0.947939			
Adjusted R-Squared	0.937803			
Durbin Watson	1.970880			
F-statistic	93.52421			
Prob. F-statistic	0.000000			
Note: ** denotes significant at 5% level				

The estimated result in table 4.4 above depicted the short-run dynamics of the impacts of financial and stock market development on GDP growth rate. It can be deduced from the result that, all the variables have the correct a priori signs except for trade openness (TOP), which is negative and this could be attributed to the fact that Nigeria is yet to reap the benefits resulting from trade openness. However, it's important to know that most of the variables were significant at 5 percent level except human capital development variable (school enrolment), trade openness, public debt and current value of inflation. Here, it is obvious that the current value of inflation has no statistical significant impact on GDP growth rate. The reason is because the effect of inflation is sensitive to lag(s).

In order to know the individual effects of each variables on GDPGR, all things been equal holding other variables in the model constant, one percent change in the previous year of GDP growth rate would lead to 0.7 percent change in the current year gross domestic product. Even though this percentage change is less than one, its value is significant enough to bring about substantial change in the current value of GDP growth rate. Similarly, one percentage change in stock market development would lead to 1.32 unit change in GDP growth rate, which is positive and statistically significant. Looking at the impact of private domestic investment (PDI) variable on GDP growth rate, holding other variables in the model constant, a percentage change in private domestic investment would lead to 0.96 percent change in GDP growth rate. This result is not unexpected, because increase in private domestic investment would have a multiplier effects on the economy. However, when examine the impact of financial development alongside other variables in the model, the result showed that one percent change in financial development would bring about 15 percent change in GDP growth rate. One interesting thing about the result presented in table 4.5 is that human capital development (proxied by secondary school enrolment) on its own has no statistically significant impact on GDP growth rate. However, interaction of this variable with financial development, holding other variables constant, showed positive and statistically significant impact on GDP growth rate. The findings further revealed that human capital development, working through financial development has significant impact on GDP growth rate. Because it was observed that, a one percent change in financial development working through human capital development would lead to 1.25 percent change in GDPGR.

In addition, holding other variables constant in the model, one unit change in human capital development working through stock market development would lead to 0.14 percent change in GDP growth rate. Meanwhile the coefficient of this interaction variable is positive and statistically significant at 5 percent level. Also the real cost of borrowing (measured by real interest rate) is positive and has significant effect on GDP growth rate. However, holding other variables in the model constant, one percent change in real interest rate would lead to 0.1 percent increase in GDP growth rate.

4.2. STABILITY DIAGNOSTIC TEST

Stability of the short run model was tested using CUSUM of square test. The idea behind this test is to reject the hypothesis of model stability if the blue line lies outside the dotted red lines otherwise, the model is said to be stable. The result of this test is presented in figure 4.2.

The result of the CUSUM and CUSUM square test shows that the blue lines lies inside the dotted red line which indicates that the model is dynamically stable.

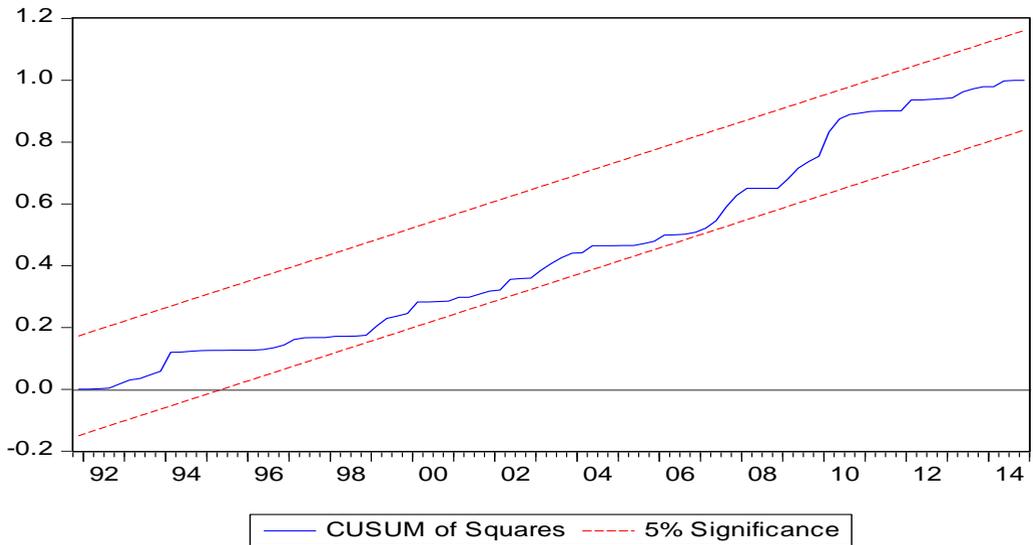


Figure 4.2. CUSUM of square test of the short run model for the objective

Model Specification for Objective 2

Model two is to determine the direction of causality between financial development and human capital development in Nigeria using Toda- Yamamoto causality test.

$$\begin{aligned}
 FD_t = & \alpha_0 + \sum_{i=1}^k \alpha_{1i} FD_{t-i} + \sum_{j=1}^{d_{max}} \alpha_{2j} FD_{t-j} + \sum_{i=1}^k \beta_{1i} PDI_{t-i} + \sum_{j=1}^{d_{max}} \beta_{2j} PDI_{t-j} \\
 & + \sum_{i=1}^k \varphi_{1i} GCEH_{t-i} + \sum_{j=1}^{d_{max}} \varphi_{2j} GCEH_{t-j} + \sum_{i=1}^k \gamma_{1i} GC EE_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \gamma_{2j} GC EE_{t-j} + \sum_{i=1}^k \omega_{1i} SER_{t-i} + \sum_{j=1}^{d_{max}} \omega_{2j} SER_{t-j} \\
 & + \mu_{1t}
 \end{aligned} \tag{3.5}$$

$$\begin{aligned}
 PDI_t = & \phi_0 + \sum_{i=1}^k \phi_{1i} PDI_{t-i} + \sum_{j=1}^{d_{max}} \phi_{2j} PDI_{t-j} + \sum_{i=1}^k \beta_{1i} FD_{t-i} + \sum_{j=1}^{d_{max}} \beta_{2j} FD_{t-j} \\
 & + \sum_{i=1}^k \gamma_{1i} GCEH_{t-i} + \sum_{j=1}^{d_{max}} \gamma_{2j} GCEH_{t-j} + \sum_{i=1}^k \varphi_{1i} GCEE_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \varphi_{2j} GCEE_{t-j} + \sum_{i=1}^k \alpha_{1i} SER_{t-i} + \sum_{j=1}^{d_{max}} \alpha_{2j} SER_{t-j} \\
 & + \mu_{2t}
 \end{aligned} \tag{3.6}$$

$$\begin{aligned}
 GCEH_t = & \phi_0 + \sum_{i=1}^k \gamma_{1i} GCEH_{t-i} + \sum_{j=1}^{d_{max}} \gamma_{2j} GCEH_{t-j} + \sum_{i=1}^k \phi_{1i} PDI_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \phi_{2j} PDI_{t-j} + \sum_{i=1}^k \beta_{1i} FD_{t-i} + \sum_{j=1}^{d_{max}} \beta_{2j} FD_{t-j} + \\
 & + \sum_{i=1}^k \varphi_{1i} GCEE_{t-i} + \sum_{j=1}^{d_{max}} \varphi_{2j} GCEE_{t-j} + \sum_{i=1}^k \omega_{1i} SER_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \omega_{2j} SER_{t-j} + \mu_t
 \end{aligned} \tag{3.7}$$

$$\begin{aligned}
 GCEE_t = & \phi_0 + \sum_{i=1}^k \phi_{1i} GCEE_{t-i} + \sum_{j=1}^{d_{max}} \phi_{2j} GCEE_{t-j} + \sum_{i=1}^k \beta_{1i} FD_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \beta_{2j} FD_{t-j} + \sum_{i=1}^k \gamma_{1i} PDI_{t-i} + \sum_{j=1}^{d_{max}} \gamma_{2j} PDI_{t-j} \\
 & + \sum_{i=1}^k \varphi_{1i} GCEH_{t-i} + \sum_{j=1}^{d_{max}} \varphi_{2j} GCEH_{t-j} + \sum_{i=1}^k \alpha_{1i} SER_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \alpha_{2j} SER_{t-j} + \mu_{2t}
 \end{aligned} \tag{3.8}$$

$$\begin{aligned}
 SER_t = & \alpha_0 + \sum_{i=1}^k \omega_{1i} SER_{t-i} + \sum_{j=1}^{d_{max}} \omega_{2j} SER_{t-j} + \sum_{i=1}^k \alpha_{1i} FD_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \alpha_{2j} FD_{t-j} + \sum_{i=1}^k \beta_{1i} PDI_{t-i} + \sum_{j=1}^{d_{max}} \beta_{2j} PDI_{t-j} \\
 & + \sum_{i=1}^k \varphi_{1i} GCEH_{t-i} + \sum_{j=1}^{d_{max}} \varphi_{2j} GCEH_{t-j} + \sum_{i=1}^k \gamma_{1i} GCEE_{t-i} \\
 & + \sum_{j=1}^{d_{max}} \gamma_{2j} GCEE_{t-j} + \mu_{1t}
 \end{aligned} \tag{3.9}$$

Where the variables remained as defined and the value of d_{max} measures the order of integration of the variables.

Toda Yamamoto Granger Causality Test VAR lag length selection

The result of the lag length selection showed that sequential modified (LR) test statistics (each test at 5% level), final prediction error (FPE), akaike information criterion (AIC) and hannan-quinn information criterion (HQ) favoured lag 6. The stability test of the selected VAR is thus given in figure 4.3. This showed that the selected VAR of lag 6 is suitable for our estimation.

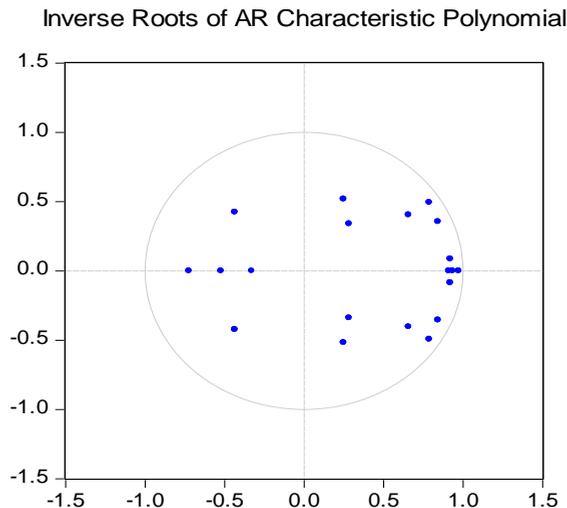


Figure 4.3. Inverse Root of Characteristic Polynomial

Stability Test of the Toda Yamamoto VAR Granger causality test showed that no root lies outside the unit circle for the VAR selected lag of six based AIC criteria. The existence of cointegration of these variables has been determined earlier using the bound test approach.

Table 4.5a. Result of Toda Yamamoto Granger Causality Test of financial development and set of independent variables (PDI, GCEH, GCEE and SER). Dependent Variable: FD

Excluded	Chi-Square	Df	Prob.
PDI	11.93721	6	0.0634
GCEH	8.543129	6	0.2009
GCEE	3.786010	6	0.7056
SER	1.861349	6	0.9320

The result of table 4.5a shows the Toda Yamamoto Granger Causality test of financial development and public domestic investment, government capital expenditure in health, government capital expenditure in education and human capital development. It could be observed from the result that at 10 percent level of significant, only public domestic investment Granger causes financial development. This is shown by the probability value of 0.0634. The probability value of other variables in the model were insignificant.

Table 4.5b. Toda Yamamoto Granger Causality Test of private domestic investment and set of independent variables (FD, GCEH, GCEE and SER). Dependent Variable: PDI

Excluded	Chi-Square	Df	Prob.
FD	5.540496	6	0.4766
GCEH	10.35086	6	0.1106
GCEE	14.49872	6	0.0245
SER	14.49951	6	0.0245

Table 4.15b shows the result of Toda Yamamoto Granger Causality test of public domestic investment (PDI) and FD, GCEH, GCEE and SER. It could be observed that only government capital expenditure on education and human capital development Granger cause public domestic investment. Other variables in the model such as financial development and government capital expenditure on health do not Granger cause private domestic investment since their probability values are not significant at 1 percent, 5 percent or 10 percent respectively.

Table 4.5c. Toda Yamamoto Granger Causality Test of government capital expenditure in health and set of independent variables (FD, PDI, GCEE and SER). Dependent Variable: GCEH

Excluded	Chi-Square	Df	Prob.
FD	173.6951	6	0.0000
PDI	3.904316	6	0.6896
GCEE	1.972199	6	0.9222
SER	4.482069	6	0.6117

Table 4.5c shows the result of Toda Yamamoto Granger Causality test of government capital expenditure on health and FD, PDI, GCEE and SER. The result further shows that only financial development Granger Causes government capital

expenditure on health. Other variables in the model (PDI, GCEE and SER) do not Granger cause government capital expenditure on health.

Table 4.5d. *Toda Yamamoto Granger Causality Test of government capital expenditure in education and set of independent variables (FD, PDI, GCEE and SER). Dependent Variable: GCEE*

Excluded	Chi-Square	Df	Prob.
FD	5.519166	6	0.4791
PDI	13.78311	6	0.0322
GCEE	2.881157	6	0.8236
SER	1.546868	6	0.9563

Table 4.5d shows the result of Toda Yamamoto Granger Causality test of government capital expenditure on education and FD, PDI, GCEE and SER. It could be observed that only the probability value of PDI was found to be statistically significant at 5 percent level. This implies that only private domestic investment Granger causes government capital expenditure on education.

Table 4.5e. *Toda Yamamoto Granger Causality Test of secondary school enrolment (proxy for human capital development) and set of independent variables (FD, PDI, GCEE and GCEE). Dependent Variable: SER*

Excluded	Chi-Square	Df	Prob.
FD	51.49309	6	0.0000
PDI	3.716430	6	0.7150
GCEE	5.706934	6	0.4568
GCEE	0.434020	6	0.9986

Table 4.5e shows the result of Toda Yamamoto Granger Causality test of human capital development and FD, PDI, GCEE and GCEE. It could be observed that only financial development has probability value of less than 0.05. This implies that among the variables in this model, only financial development Granger causes human capital development.

In a nutshell, the study discovered the existence of bi-directional causality between private domestic investment and government capital expenditure on education, uni directional causality running from financial development to human capital development, unidirectional causality running from financial development to government capital expenditure on health, unidirectional causality running from private domestic investment to financial development and unidirectional causality running from human capital development to private domestic investment.

5. CONCLUSION AND RECOMMENDATIONS

This study shows that financial development and stock market development impact on economic growth through human capital development. That is, the more people acquire education, the more they make informed decisions (regarding

financial matters and stock and shares) and this will impact positively on economic growth. Lastly, the unidirectional causality running from financial development to human capital development is an indication that in order to have good and robust financial system, greater percentage of the people must be literate and understand the reason behind any financial development policy in place. As a matter of reference, consider the case where a country wants to go cashless. Without adequate knowledge and understanding of the implications of cashless policy, greater number of the citizens would hoard cash and this will render the policy futile. If financial development cause unidirectional human capital development as shown in the second model, it therefore means that there is need to invest more in human capital. We consider this very necessary to gain more understanding of the financial system.

Therefore, this study recommends that the quality of education in the country needs to be improved and issues concerning financial matters and prudence management of finance should be incorporated into secondary school curriculum and beyond. This would enable those who might have the opportunity to pursue higher education to gain knowledge and be well equipped in financial matters.

REFERENCES

- Abubakar, A., Kassim, S.H., & Yusoff, M.B. (2014). *Financial development, human capital accumulation and economic growth: Empirical evidence from the Economic Community of West African States (ECOWAS)*. Global Conference on Business and Social Science, GCBSS
- Adamu, J.A., & Sanni, K. (2014). Stock market development and Nigerian economic growth. *Journal of Economic and Allied Fields*. 2(2) 116-132
- Adekunle, O.A., Salami, G. O., & Adedipe, O. A. (2013ss). Impact of Financial Sector Development on the Nigerian Economic Growth. *American Journal of Business and Management*, 2(4), 347-356.
- Adelakun, O.J. (2010). *Financial sector development and economic growth in Nigeria*. Unpublished work. Department of Economics, Joseph Ayo Babalola University, Osun State, Nigeria.
- Aghajanyan, M., & Erbasol, T. (2008). *Returns to education for Mexican immigrants to the United State*. Unpublished work. Master thesis. Lund University.
- Babalola, J.A. (2000). *Development of the Nigerian capital market: A catalyst for the economic growth*. A paper presented at the Central Bank In- House introductory course on microeconomic issues of the Nigerian Economy, July 4.
- Baily, M.N., & Douglas, J.E. (2013). *The role of finance in the economy: Implications for structural reform of the financial sector*. Brookings Institution, Washington, DC.
- Becker, G. (1964). *Human Capital*. 2nd edition. New York: Columbia University Press.

- Calvin, M., & Liliana, S. (2007). *Financial deepening in Sub-Saharan Africa: empirical evidence on the role of creditor rights protection and information sharing*, IMF working paper.
- Central Bank of Nigeria (CBN). Statistical Bulletin (2015).
- Chinaemerem, O.C., & Chigbu, E.E. (2012). An evaluation of financial development and economic growth of Nigeria: A causality test. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 1(10), 27-44.
- Demetriades, P., & Andrianova, S. (2004). Finance and growth: What we know and what we need to know. In Goodhart, C.A.E. (Ed.), *Financial development and growth: Explaining the Links*, New Work: Palgarve Macmillan.
- Evans, D. (2002). Human capital and financial development in economic growth: New evidence using the translog production function. *International Journal of Finance and Economics*, 7, 123-140.
- Fry, M.J. (1995). *Money, interest, and banking in economic development*. Baltimore: John Hopkins U. Press,.
- Gidado, A.M., Kusairi, S., & Muhamed, S. (2014). Investing in human resource development: Empirical evidence from banking institutions of Malaysia and Nigeria. *Journal of Economic and Sustainable Development*, 5(12), 123-132.
- Galbis, V. (1977). Financial liberalization and economic growth in less developed countries: A theoretical approach. *Journal of Development Studies*, 13(2), 58-72.
- Goode, R.B. (1959). Adding to the stock of physical and human capital. *American Economic Review*, 49(2), 147-155.
- Hakeem, M., & Oluita, O. (2012). Financial development and human capital in South Africa: A time series approach. *Research in applied economics*, 4(3), 1-21.
- Luintel, K.B., & Khan, M. (1999). A quantitative reassessment of the finance-growth nexus: evidence from a multivariate VAR. *Journal of Development Economics*, 60: 381–405.
- Mahyar, H., & Mahmood, Y. (2014). The effect of financial development on human capital in Iran (1967-2009). *International Journal of Management and Humanity Sciences*, 3(3), 1572-1577.
- McKinnon, R.I. (1973). *Money and capital in economic development*. Washington, DC.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of Political Economy*, 66(4), 281–302.
- Ndekwa, E.C. (1994). *First bank of Nigeria: A century of banking*. Ibadan: Spectrum Books Limited. Nigeria. Abuja: UNDP, 2008-2009.
- Ogwumike, F.O., & Salisu, A.A. (2014). Financial development and economic growth in Nigeria. *Journal of Monetary and Economic Integration*, 12(2), 91-119.

- Okwo, I.M., Chubuzor, E.E. & Okelue, U.D. (2012). Does financial sector development causes economic growth? Empirical evidence from Nigeria. *International Journal of Current Research*, 4(11), 343-349.
- Olayiwola, W. K. (2009). *Practice and standard of corporate governance in the Nigerian banking industry*. A paper presented at the international conference on corporate governance. Organized by Covenant University and FISL international UK. Covenant University Learning Resource Centre, October 27.
- Orji, A, Ogbuabor, J.E., & Anthony-Orji, O.I. (2016a). Financial openness and output volatility in Nigeria: A defacto and de jure approach. *International Journal of Economic Research (IJER)* 13(4), 1575-1594. Available online at: http://www.serialsjournals.com/articles.php?volumesno_id=1078&journals_id=41&volumes_id=845
- Orji, A, Ogbuabor, J.E., & Anthony-Orji, O.I (2016b). Financial openness and growth in Nigeria: Empirical evidence from defacto and de jure approach. *International Journal of Economic Research (IJER)*, 13(4), 1595-1627. Available online at: http://www.serialsjournals.com/articles.php?volumesno_id=1078&journals_id=41&volumes_id=845
- Orji, A., Ogbuabor, J.E., & Anthony-Orji, O.I. (2015). Financial liberalization and economic growth in Nigeria: An empirical evidence. *International Journal of Economics and Financial Issues*, 5(3), 663-672. Available online at:<http://econjournals.com/index.php/ijefi/article/view/1284/pdf>
- Orji, A., Ogbuabor, J.E., & Okolomike, F.C. (2015). Financial Liberalization, Private Savings and Private Investment in Nigeria” *European Journal of Economics, Finance and Administrative Sciences*, 72, 38-54. Available at:http://www.europeanjournalofeconomicsfinanceandadministrativesciences.com/issues/EJEFAS_72.html
- Orji, A., Anthony-Orji, O.I., & Mba, P.N. (2015). Financial liberalization and output growth in Nigeria: Empirical evidence from credit channel. *International Journal of Economics and Financial Issues*, 5 (1): 297-311. Available at: <http://www.econjournals.com/index.php/ijefi/article/view/1099/pdf>
- Outreville, J. F. (1999). Financial development, human capital and political stability. *UNCTAD discussion paper 142*. United Nations Conference on Trade and Development. Geneva, Switzerland.
- Rao, T.V. (2000). *Human resource development – concept and background, human resources development: Experiences, interventions and strategies*. New Delhi: Sage Publications.
- Raphael, A. I. and Gabriel, A. A. (2015). Effect of financial sector development on manufacturing output growth in Nigeria (1986-2012): A Vector Auto Regression Approach. *Journal of Applied Economics and Business Research (JAEBR)*, 5(1), 38-55.
- Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.

- Schultz, T.W. (1993). The economic importance of human capital in modernization. *Education economics*, 1(1), 13-19.
- Schumpeter, J.A. (1912). *Theorie der Wirtschaftlichen Entwicklung*, Leipzig: Dunker & Humblot [The theory of economic development: An inquiry into profits, Capital, Interest, and the Business Cycle, translated by Redvers Opie. Cambridge, MA: Harvard University Press]
- Schumpeter, J.A. (1911). *The theory of economic development*. Cambridge: Harvard University Press.
- Shaw, E.S. (1973). *Financial deepening in economic development*. New York: Oxford University Press.
- Ukenna, S., Ijeoma, N., Anionwu, C., and Olise, M. (2010). Effect of investment in human capital development on organisational performance: Empirical examination of the perception of small business owners in Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 26, 93-107.