

0.449 in 2009 and 0.454 in 2010. By 2011, Nigeria's HDI index was 0.459. Nigeria is the second country after India with the highest maternal mortality ratio of 840 per 100,000 live births in the year 2008. Life expectancy for 2011 stood at 51.9 years while infant mortality for 2009 is put at 138 per 1,000. Population under five suffering from stunting and wasting was 41% and 26.7% respectively. The UNDP (2010) Report further shows that 35.7% of the population was deprived of clean water in 2006 while 39.6% of the population was denied improved sanitation and 52.8% had no access to modern fuel. Adult literacy rate was put at 60.8% while the dependency rate was 86.1%.

Part of the efforts to achieving economic growth and development in Nigeria is financial development which has been identified as a critical and essential ingredient in the growth and developmental process of an individual, firm, industry and economy. A strong and resilient economy requires a virile and robust financial sector and a virile and robust financial system requires liberalisation.

Financial liberalisation started in Nigeria with the introduction of the Second-Tier Foreign Exchange Market (SFEM) in 1986 which came to a head with the deregulation of interest rates in August 1987. Prior to this, the Nigeria's financial landscape was largely repressed. This is evidenced by controls on interest rates, selective and directed credit policies, high reserve requirement and restrictions on entry into the banking industry.

Since then, the Nigeria economy has been increasingly and rapidly pursuing the policy of deregulation of all its sectors, the financial sector inclusive through the Structural Adjustment Programme (SAP). Under SAP, monetary policy was aimed at inducing the emergence of a market-oriented financial system for effective mobilization of financial savings and efficient resource allocation (CBN, 2009). This was designed to achieve fiscal balance and balance of payment viability by altering and restructuring the production and consumption patterns of the economy, eliminating price distortions, reducing the heavy dependence on crude oil exports and consumer goods import, enhancing the non-oil export base, reduce the size of the public sector, increase the role of the private sector and achieve sustainable economic growth (CBN, 2009).

This study is aimed at an empirical verification of the relationship between financial liberalisation and human capital development, proxied by per capita income. Many empirical studies have been conducted to examine the strength and direction of relationship between financial liberalisation and economic growth with differing results. In Nigeria, several studies on this have also been conducted but there are few studies on the effect financial liberalization on human capital development. Specifically, no study to the best of our knowledge has linked financial liberalization with human development. Thus the work is aimed at examining the relationship between financial liberalization and indicators of human capital development using quarterly series from 1986 to 2013.

2.0 LITERATURE REVIEW

Financial liberalisation, according to Chandrasekhar (2004), refers to measures directed at diluting or dismantling regulatory control over the institutional structures, instruments and activities of different segments of the financial sector. It is often characterized by policies that eliminate any form control on the financial sector. It involves the elimination of various forms of government intervention in financial markets which inherently allow the markets to allocate

credit and the price at which credit is allocated. Financial liberalisation could be internal or external (Chandrasekhar, 2004).

Internal financial liberalisation include reduction or removal of controls on interest rate; privatization of publicly-owned banks; decline of directed credit and the removal of requirements for special credit allocations to priority sectors and easing of conditions for participation of investors and firms in the stock market. It also includes the emergence of universal banking; expansion of the sources of credit and the instruments for accessing credit and the liberalisation of the kind of financial instruments issued and acquired in the financial system.

On the other hand, external financial liberalisation involves liberalization of exchange rates; current account liberalisation; trade liberalisation and capital account liberalisation. All these allow external borrowing without government guarantee or support and allow domestic residents to easily trade and hold foreign assets.

The argument for financial liberalisation is based on the belief of the efficiency of the market. Markets communicate, coordinate and motivate economic players so that an entirely liberalized market enable the free interplay of market forces to determine the conditions of supply of and demand for goods and services so that equilibrium price could be determined. McKinnon (1973) and Shaw (1973) developed the theory of financial liberalisation based on this principle. They found a positive relationship between financial liberalisation and economic growth and thus, advocated an end to financial repression but liberalisation of financial sectors. Financial repression is refers to a series of government intervention that have the effect of keeping very low, and often at negative levels, interest rates that banks offer to savers (Agenor and Montiel, 1999). The effects of the ceiling on nominal interest rates are many. First, it will increase the preference of individuals for current consumption as opposed to future consumption, thereby retarding savings and investment. Second, in a repressed financial system, banks do not perform their intermediation role effectively and efficiently and this also further reduces supply of funds. Third, it makes leading bank borrowers to choose more capital intensive projects due to low interest rates on loans. Fourth, it also leads to financing low-yielding projects more heavily.

A repressed financial system has many distinct features which include: quantitative controls and selective credit allocation to those considered as priority sectors, regions or activities by government. It is also characterized by high minimum reserve requirement; forced allocation of assets or loans to the public sector by private commercial banks and also, decisions on loan advancement of state-owned banks are most often based on political factors rather than business viability.

All these have severe implications. It leads to distortions and inefficiencies in the financial market so that the financial market cannot perform its mobilization and allocation roles effectively. It also retards and restricts the development of financial intermediation both in depth and in size. It also reduces saving and investment and therefore, economic growth. It increases the spread between deposit and lending rates. Because of the distortion, informal modes of financial intermediation emerge and this in no small measure alters greatly the transmission process of monetary policy, making monetary policy ineffective.

But despite these consequences of financial repression, governments intervene in the financial sector for some reasons. According to Reinert et al (2009), some of the reasons are: to control

fiscal resources and to channel funds to the government's own purposes instead of going through market procedures because of the differential between social and private returns; to avoid capital outflow, thereby raising tax; the high required reserve that banks are compelled to meet also serve as source of revenue for government through implicit taxation. Other reasons are to protect financial solidity; to protect the public from unexpected losses; and to limit concentrations of wealth (Reinert et al, 2009).

The postulations of Schumpeter (1911), Goldsmith (1969), McKinnon (1973), Shaw (1973) and King and Levine (1993) shows that liberalizing the financial sector can solve the ills of financial repression. Removal of these controls is expected to increase real interest rates which will boost savings, financial deepening, investment and economic growth. The higher real interest rates will encourage firms to undertake more productive and higher yielding investments. Also, when abolishing directed credit will improve efficiency in credit allocation by banks.

Ghosh (2005) reiterated the features of a typical financial market that makes it inherently imperfect and so the benefits of financial liberalisation may not be reaped fully. Such features includes lack of adequate information; inadequate monitoring, which encourages inappropriate risk taking; asymmetric information; adverse selection; incentive-incompatibility and moral hazards. Accordingly, instead of perfect competition, the financial market is characterized by oligopolistic market structure with increasing returns. The situation is worse in developing countries where there is high inequality in income distribution and lending rate to the most important sector in these countries, agriculture, is usually high. This affects economic growth adversely, giving the need for government to regulate the financial sector.

Ghosh (2005) further recognized some negative effects of financial liberalisation. One of such major negative effect especially for developing countries is that financial liberalisation increases financial fragility and propensity to crisis. The effect on developing countries is more because the market conditions in these economies are imperfect. Also, financial liberalisation has the tendency of leading to contractionary fiscal policy. In order to attract foreign investors, taxes are usually reduced and this leads to large fiscal deficits with its attendant effects. It is in the light of this that Arestis and Caner (2004) identified three main channels that financial liberalisation can affect poverty: the economic growth channel, financial crisis channel and access to credit and financial services channel.

Arestis and Caner (2009) opined that capital liberalisation in the short run benefit the rich and those that are politically connected more than the poor, leading to wider inequality in income distribution but in the long run, liberalisation has the potential of including those that were hitherto excluded from formal financial services, thereby offering higher benefits to the economy.

2.1 Empirical Literature

A lot of empirical studies have been conducted on the relationship between financial liberalisation on economic growth in Nigeria. Akpan (2004) conducted an empirical study to find the effect of financial liberalisation measured by increase in real interest rates and financial deepening on economic growth rate using Error Correction Model (ECM). The result shows a low coefficient of the real deposit rate but overall, the result shows a positive impact on Nigeria's economy.

Onwumere et al (2012) conducted a study on the impact of interest rate liberalization on savings and investment in Nigeria from 1976 to 1999 using simple linear regression technique. The study found that interest rate liberalization had negative insignificant impact on savings and negative significant impact on investment in Nigeria and thus concluded that though interest rate liberalization was a good policy but was counterproductive in Nigeria.

Adeusi et al (2012) examined the effects of financial liberalization on the corporate performance of informal capital market in Nigeria (2001-2010) using OLS method of multiple regression with Unity (IFE) NUT Cooperative Investment and Credit Society as a case study. The work found that financial liberalization has significant effect on deposit mobilized and loan granted by the market but did not have significant effect on their net surplus.

Okpara (2010) investigated the effect of financial liberalisation on some selected Nigeria's macroeconomic indicators such as real GDP, financial deepening, gross national saving, foreign direct investment and inflation from 1965 to 2008. Using discriminant analysis, he compared these macroeconomic indicators pre-liberalisation period (1965-1986) and post-liberalisation period (1987-2008). The study found that real GDP recorded the highest positive contribution, implying that financial liberalisation positively impacts on economic growth.

Sulaiman et al (2012) also conducted a study aimed at investigating the effect of financial liberalisation (measured by lending rate, exchange rate, inflation rate, financial deepening (M2/GDP) and degree of openness) on Nigeria's economic growth from 1987 to 2009 using ECM. The study found the existence of a long run relationship among the variables and the co-integrating equations, thus showing that financial liberalisation has growth-stimulating effect on Nigeria.

There are few/no studies on the effect of financial liberalisation on poverty and inequality in Nigeria, thus the justification for this study.

3.0 METHODOLOGY

The study adopted an econometric model to determine relationship between financial liberalisation in Nigeria and human capital development. The study used quarterly for the period covering 1993 to 2013 from the Central Bank of Nigeria Statistical bulletin, National Bureau of Statistics, IMF World Economic Outlook and World Bank PovcalNet and the analysis was performed using E-View econometric software. The methodology involved econometric techniques such as Augmented Dickey-Fuller (ADF) Unit Root test and Autoregressive Distributed Lag (ARDL) which allows for a long run equilibrium relationship to be established. The study hypothesized that financial liberalization does not have a significant long relationship with human capital development. A basic model was constructed to estimate the long run relationship between financial liberalization and human capital development and it is stated mathematically as follows:

$$Y = \alpha_0 + \alpha_1 FL + \alpha_2 C \text{ --- (1)}$$

Where θ = the variable of interest; FL = measures of financial liberalisation and C = set of conditioning information.

The model is stated econometrically as follows:

$$Y = \alpha_0 + \alpha_1 CP + \alpha_2 MG + \alpha_3 INF + e \dots \dots \dots -2$$

Thus, the model below was estimated:

$$\Delta(Y) = \alpha_0 + \Delta y(-1)\alpha_1 + \Delta y(-1)\alpha_2 + \Delta y(-3)\alpha_3 + \Delta y(-4)\alpha_4 + \Delta y(-5)\alpha_5 + \Delta cp(-1)\alpha_6 + \Delta mg(-1)\alpha_7 + \Delta inf(-1)\alpha_8 + y(-1)\alpha_9 + cp(-1)\alpha_{10} + mg(-1)\alpha_{11} + inf(-1)\alpha_{12} \dots \dots \dots (3)$$

Where: Y = % change in GDP per capita; MGDP = broad money supply/GDP(%); CPGDP = credit to private sector/GDP(%); INF = inflation rate to capture the macroeconomic condition and e is the error term. It is expected that the coefficients of MGDP and CPGDP will have positive signs while the coefficient of INF will have negative sign.

4.0 RESULTS AND DISCUSSION

4.1 Unit Root Test

The unit root test is conducted using Augmented Dickey-Fuller (ADF) test which is applied in order to infer the number of unit roots (if any) or non-stationarity in each of the variables. The decision rule is that ADF test statistics must be greater than Mackinnon Critical Value and at absolute term before the variable can be adjudged to be stationary, otherwise we accept the null hypothesis (H0) i.e. data is non-stationary and reject the alternative hypothesis (H1) i.e. data is stationary. The result of the unit root test is shown in Table 1.

Table 1: Unit Root Test Result

Variable	ADF Test Statistic	Order of Integration
Y	-3.748488***	I(0)
CP	-3.530492***	I(1)
MG	-3.295592**	I(1)
INF	-2.698153**	I(1)

Key: *** = 1%; ** = 5%; * = 10%

Source: author's computation

The essence of unit root test is to avoid spurious regression which could give meaningless regression results. It could be seen that apart from Y, all the other series became stationary only after first differencing at varying significant level. The result of the ADF unit root test has shown that the series are of different orders of integration, thus ARDL was used to establish long run relationship.

The Akaike Information Criteria (AIC) and Schwatz Criteria (SC) were used to select the lag length of 5 at 5% level.

4.2 Presentation of ARDL Result

The results of the ARDL conducted on the model 3 are specified in Table 2 below.

Table 2: ARDL Result

Dependent Variable: D(Y)
 Method: Least Squares
 Date: 10/21/14 Time: 11:06
 Sample (adjusted): 1993Q2 2013Q4
 Included observations: 83 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.421089	0.502764	-0.837548	0.4051
D(Y(-1))	0.850411	0.088603	9.598021	0.0000
D(Y(-2))	0.054436	0.098653	0.551791	0.5828
D(Y(-3))	0.054436	0.098653	0.551791	0.5828
D(Y(-4))	-0.684562	0.098653	-6.939111	0.0000
D(Y(-5))	0.678807	0.092221	7.360641	0.0000
D(CP(-1))	0.248986	0.164089	1.517381	0.1337
D(MG(-1))	-0.329130	0.209402	-1.571764	0.1205
D(INF(-1))	-0.014826	0.034683	-0.427466	0.6704
Y(-1)	-0.111450	0.027688	-4.025256	0.0001
CP(-1)	-0.106227	0.047758	-2.224271	0.0294
MG(-1)	0.155377	0.065803	2.361264	0.0210
INF(-1)	-0.018529	0.006679	-2.774100	0.0071
R-squared	0.769142	Mean dependent var		0.061657
Adjusted R-squared	0.729566	S.D. dependent var		1.184085
S.E. of regression	0.615763	Akaike info criterion		2.010999
Sum squared resid	26.54150	Schwarz criterion		2.389853
Log likelihood	-70.45645	Hannan-Quinn criter.		2.163201
F-statistic	19.43469	Durbin-Watson stat		2.141941
Prob(F-statistic)	0.000000			

Author's computation

Diagnostics Tests

Serial Correlation

The study next checked whether the errors of this model were serially independent by constructing a null hypothesis of no serial correlation against an alternate hypothesis of serial correlation.

The test for serial correlation was conducted using Breusch-Godfrey test. The decision rule is to reject H_0 if Tabular $F >$ Calculated F at 1% level of significance; otherwise do not reject H_0 . From the result obtained, Calculated $F = 2.642726$ while Tabular $F = 3.34$. Since calculated F is less than tabular F , we do not reject the null hypothesis of no autocorrelation and therefore conclude that the error terms in the model are serially.

Stability Test

The stability of the ARDL model was checked. The diagram below shows the inverse roots of the associated characteristic equation:

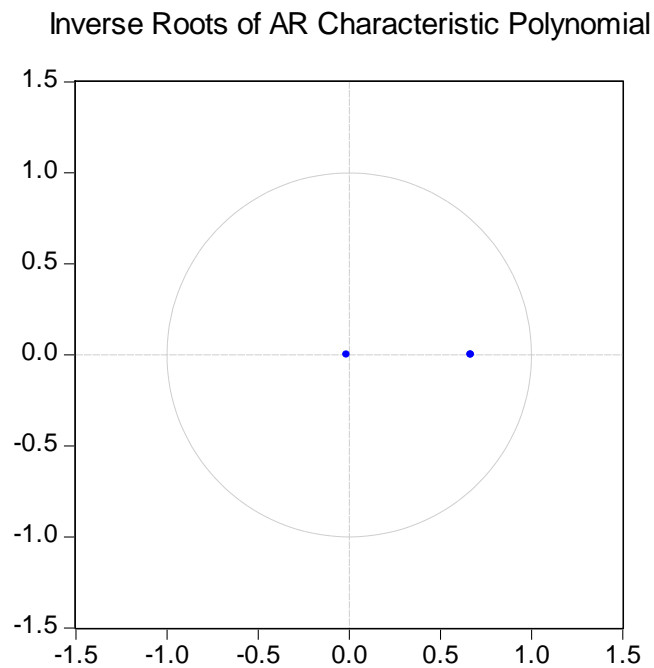


Figure 1: Inverse Root of AR Characteristic Polynomial
Source: Author's E-Views Output

From Figure 1, it can be concluded that all is well as the inverse roots are all inside the unit circle. The fit of the ARDL residuals is shown in Figure 2.

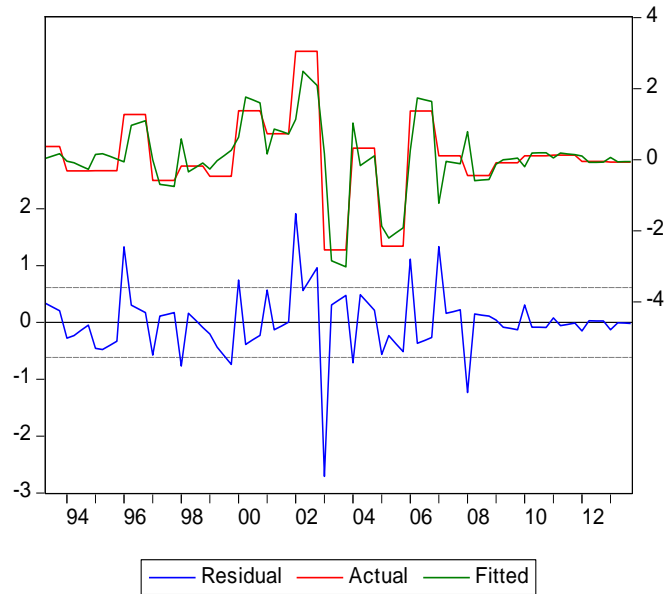


Figure 2: Fit of the ARDL Residuals
Source: Author's E-Views Output

Testing for Long Run Relationship- the Bound Test

Here, an F-test of the hypothesis, $H_0: \theta_1 = \theta_2 = \theta_3 = 0$; against the alternative that H_0 is not true was performed using Wald Test. The test is necessary for testing the absence of long run equilibrium relationship between the variables. When a long run equilibrium relationship is absent, the coefficients of the variables in the model are zero but when H_0 is rejected, it means that there is a long run relationship. The result of the Wald test is shown in Table 3 below:

Table 3: Wald Test

Equation: Untitled			
Test Statistic	Value	df	Probability
F-statistic	4.160294	(4, 70)	0.0044
Chi-square	16.64117	4	0.0023
Null Hypothesis Summary:			
Normalized Restriction (= 0)	Value	Std. Err.	
C(10)	-0.111450	0.027688	
C(11)	-0.106227	0.047758	
C(12)	0.155377	0.065803	
C(13)	-0.018529	0.006679	

Restrictions are linear in coefficients.

While calculated F is 4.16, tabular F is 2.53, thus we can conclude that there is a significant long run relationship between the variables. From the ARDL result table, we see the long run multiplier between CP and Y is $(-0.111450) / (-0.106227)$ is 1.05. This means that in the long run, an increase in 1 unit of credit to private sector will lead to an increase of 1.05 units in per capita income, which is according to a priori expectation. The long run multiplier between MG and Y is $(-0.111450) / (0.155377)$ is -0.72. This means that in the long run, an increase in 1 unit of broad money will lead to a decrease of 0.72 units in per capita income, which is not according to a priori expectation. The long run multiplier between INF and Y is $(-0.111450) / (-0.018529)$ is 6.01. This means that in the long run, an increase in 1 unit of inflation rate will lead to an increase of 6.01 units in per capita income, which is not according to a priori expectation.

Short run Result

Table 4: Error Correction Result

Dependent Variable: D(Y)
Method: Least Squares
Date: 10/21/14 Time: 13:58
Sample (adjusted): 1993Q3 2013Q4
Included observations: 82 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.449173	0.507616	-0.884866	0.3793
D(Y(-1))	0.932714	0.130783	7.131782	0.0000
D(Y(-2))	-0.002863	0.120024	-0.023852	0.9810
D(Y(-3))	0.051328	0.099366	0.516557	0.6071
D(Y(-4))	-0.687668	0.099366	-6.920560	0.0000
D(Y(-5))	0.710335	0.097855	7.259061	0.0000
D(CP(-1))	0.246194	0.172637	1.426077	0.1584
D(MG(-1))	-0.309175	0.228076	-1.355580	0.1797
D(INF(-1))	-0.020045	0.035254	-0.568591	0.5715
Y(-1)	-0.105451	0.029418	-3.584558	0.0006
CP(-1)	-0.100739	0.049889	-2.019263	0.0474
MG(-1)	0.149757	0.068333	2.191569	0.0318
INF(-1)	-0.017887	0.007255	-2.465649	0.0162
ECM(-1)	-0.166980	0.187906	-0.888636	0.3773
R-squared	0.772747	Mean dependent var		0.057866
Adjusted R-squared	0.729302	S.D. dependent var		1.190865
S.E. of regression	0.619591	Akaike info criterion		2.034738
Sum squared resid	26.10473	Schwarz criterion		2.445641
Log likelihood	-69.42425	Hannan-Quinn criter.		2.199709
F-statistic	17.78665	Durbin-Watson stat		2.036218
Prob(F-statistic)	0.000000			

The coefficient of the error correction term, ECM, is negative but insignificant. This is as expected if there is any cointegration among the variables. The size of the coefficient of the error correction term implies that nearly 17% of any disequilibrium in the model is corrected within one quarter.

The study was aimed at finding the relationship between financial liberalization and human capital development. Economic theory supports the view that as a liberalized financial sector

provides a strong backbone for the economy to thrive which will trickle down to individual in the economy by enhancing human capital through increased per capita income. Financial liberalization for the study was denoted by broad money supply as a percentage of GDP and credit to private sector as a percentage of GDP.

The result of the study shows that increased credit to private sector is capable of increasing per capita income Nigeria in the long run on the condition that there is macroeconomic stability. Moreover, for Nigeria, financial liberalization should not be limited to increases in money supply. It should go beyond that, making sure that cheap funds are directed to productive sectors like small and medium scale entities which will help in increasing per capita income of the population. The result further proves that the financial liberalisation mechanism in Nigeria, over the long run, can be made robust enough to ginger and sustain increase in per capita growth.

5.0 CONCLUSION AND RECOMMENDATIONS

The objective of the study was to find out the relationship between financial liberalization and human capital development in Nigeria using quarterly data from 1993 to 2013. The study employed the ARDL method. After checking for stationarity using Augmented Dickey-Fuller test, the study conducted the ARDL and found that financial liberalization has long run relationship with human capital development. Thus, given a stable macroeconomic framework, financial liberalisation has the potential of enhancing human capital development. On the basis of these findings, the following recommendations are proffered:

1. Economic stability (internal equilibrium) is very important before financial liberalization, as there could be a conflict between internal and external equilibrium.
2. Sustainable regulatory and supervisory framework should be in place to enable banks continue to adopt best practices.
3. Credit should be directed to productive sectors, rather than uncoordinated increases in money supply.
4. It is known that one of the major problems of policy formulation and implementation in Nigeria is lack of consistency and, therefore it is recommended that there should be emphasis on policy consistency so as to avoid uncertainty and instability in the financial system.
5. Policies that encourage economic growth such as technology, innovation, reduction in population growth rate, increased productivity, human capital development and empowerment etc should be vigorously pursued to improve per capita income.
6. Government at all levels should the business environment conducive for both local and foreign investors by providing all the necessary infra and super structures.
7. Capacity of banks to lend to productive sector especially agriculture and manufacturing should be encouraged.

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