

IMPACT OF FINANCIAL DEVELOPMENT AND HUMAN CAPITAL DEVELOPMENT ON
ECONOMIC GROWTH IN NIGERIA



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ECONOMIC GROWTH IN NIGERIA

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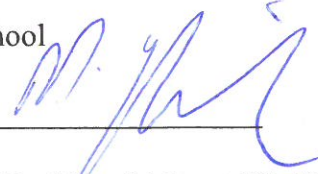


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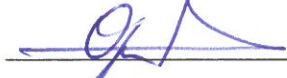
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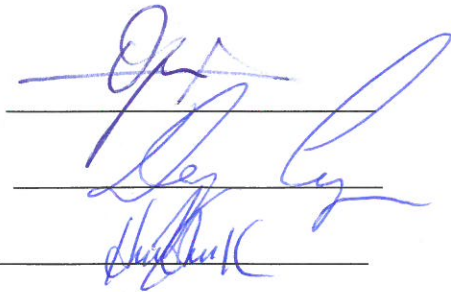
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ABSTRACT

The financial sector performance and human capital development have been on a low in most Sub-Saharan Africa countries since the 1970s to 2000s. The region has suffered tremendously from low level of human and physical capital accumulation leading to severe constraint on resources used for development of the financial sector and consequently impacted negatively on financial sector stability and hence economic growth. This is a study on Nigeria, the financial sector performance and human capital accumulations have been poor and leading to considerable financing gap for investment with adverse consequences on poverty alleviation and economic growth. Given the relevance of finance and human capital on growth, this study examines the long run and short run effect of the impact that financial development and human capital accumulation have on economic growth in Nigeria from 1981-2016, using the Ordinary Least Squares (OLS) regression estimation technique and Vector Error Correction Model. This study shows that the simultaneous interaction of financial development and human capital accumulation are slightly significant and impact positively on growth. However, inflation is found to reduce the growth of output and is insignificant. The policy implication is that the enable environment for investment in the real as well as the financial sector growth policy should be pursued. Therefore, the government should strive to ensure sound macroeconomic stability. This study contributes to the currently limited literature by providing an econometric understanding of relationships in finance, human capital, and economic growth for Nigeria. This understanding is of relevance to academics, policy makers, and development partners in shaping future financial development, human capital accumulation, and economic growth.

Key words: Financial development, Human capital accumulation, VECM, Economic growth

ÖZET

Finans sektörünün performansı ve beşeri sermayenin gelişimi 1970 ve 2000lerden beri bir çok sahraaltı Afrika ülkesinde düşük seviyededir.Bölge finansal sektörün gelişmesi için kullanılacak kaynakların ciddi bir şekilde kısıtlanmasından ve sonuç olarak finansal sektörün ve dolayısıyla ekonomik gelişimin olumsuz bir şekilde etkilendiği son derece düşük insan gücünden ve sermaye birikiminden zarar görmektedir.Bu çalışma Nijeryada finansal sektörün fakirliği hafifletme ve ekonomik büyümenin olumsuz sonuçlarıyla büyük ölçüdeki finansal açığa neden olan insan sermayesi birikiminin zayıf olduğunu ortaya koymaktadır.Verilen finansal ilişki ve insan sermayesi gelişimiyle,bu çalışma finansal gelişimin ve insan sermayesi birikiminin 1981-2016 arasında,Sıradan En az alanla gerileme tahmin ve Vektör Hata Düzeltme Modeli'ni kullanarak Nijeryada ekonomik gelişimin sahip olduğu uzun ve kısa süreli etkileri incelemektedir.Bu çalışma eş zamanlı finansal gelişim ve insan sermayesi birikiminin gelişimde az ölçüde önemli olduğunu ve pozitif etkisini göstermektedir.Yine de,enflasyonun çıktının gelişimini azalttığı ve önemsiz olduğu bulunmuştur.Politik çıkarım,finansal sektörün gelişim politikasının yanı sıra gerçekte yatırım için çevre sağlanması sürdürülmelidir.Böylece,hükümet ima edilen büyük ekonomik tutarlılığı korumak için çabalamalıdır.Bu çalışma Nijerya için finasta,insan sermayesinde ve ekonomik gelişimde ekonometrik bir kavrama sağlayarak şu an ki sınırlı kaynaklara katkı sağlamaktadır. Üniversitelerle,siyasete yön verenlerle ve gelecek finansal gelişimi şekillendiren kalkınma ortaklarıyla ,insan gücü sermayesi birikimi ve ekonomik gelişmeye bağıntısı bu anlayıştır.

Anahtar Kelimeler: Financial development, Human capital accumulation, VECM, Economic growth

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CHAPTER 1

INTRODUCTION

1.1 Background to the Study

The impact of financial development on economic growth cannot be over emphasized. This is because despite the fact that a generally acceptable consensus on the indispensable role of financial markets in economic growth, hence, economic development, a vast amount of theoretical and empirical work is still very much in progress and also revealing results that supports the aforementioned consensus agreed upon.

Following the outstanding impact of financial development on economic growth, development economic literatures have been able to broaden the scope of how an effective and economic growth which in turn enhance economic development by attaching the rate of physical and human capital accumulation into the process. However, the possible presence of causality in financial development, human development and its causal effect on economic growth has been a rather complex controversy, with the debate still ongoing. These discrepancies occur because while some empirical results have shown that financial development causes economic growth, other results have proven otherwise revealing that economic growth causes financial development. Another major debate that has little consensus has been the relationship between financial development, human development and economic growth. The most vigorous of which is whether the progress and performance of an economy is led by finance and human development or rather growth driven.

One of the major debates on financial development and economic growth in recent past has been the issue of the causal relationship that exist between them. As stated above, while some researchers affirm through empirical and theoretical results that an effective and efficient financial development can be channeled to enhance economic development, there is also an increasing set of literatures that provides evidence that economic growth leads to a sound growth of the financial sector as well as whether there are other factors which can also lead to a well-developed financial system.

The supply leading and demand following hypothesis formulated by Patrick (1966) emphasized that finance can lead to economic growth and simultaneously, economic growth can also enhance financial development respectively. However, this hypothesis has been difficult to prove and has brought about

various empirical results on the direction of causality between financial development and economic growth to have remained inconclusive.

The current intellectual conflicts in this field among researchers about the direction of causality between financial development and economic growth are: Studies of Ahmed and Malik (2009), Bangkok and Eggoh (2011) among others whose results revealed a pass through from financial development and economic growth. While on the other hand, results that validate the notion that economic growth spurs financial growth were revealed by Aye (2013), Candida (2013), Checheli (2012), Hurlin and Vamet (2008). Also, Hassan and Yu (2011) found a two-way causation between financial development and economic growth.

The seminar paper presented by Romer (1990), using the Solow (1956) growth model with technological change in which he argued that the rate of technological change depends on the level of investment directed to technology and also, that the progress of any technological change depends on the amount of investment required by the firm which in turn is as a result of two factors: the level of general and scientific knowledge in the world and the barriers to be adopted by the firm's country. To support this view, Parente and Precott (1994) also revealed in their study that the creation of knowledge is the result of research and development undertaken by individuals and firms. They found that technology is a key factor in long run economic growth and development. Schumpeter (1911\1954) supported the view that by enhancing the accumulation of physical capital and productivity, the roles and activities of financial intermediaries and also their level of developments have been recognized as the potential determinant of economic growth and also argued that adoption of new technology, innovation, can be facilitated by the activities of banks and other financial intermediaries. However, not without the additional contribution of the investment in physical capital and hence economic growth.

Most studies in recent years have applied the multivariate VAR model in time series data to forecast the link between financial development and economic growth. Prominent among these studies include Khan and Luintel (1999), Chand and Candill (2005), Liang and Teng (2006), Aug and McKibbin (2007), Abubadr and Abuqarn (2008), Masih et al (2009), Grier et al (2009) and Wolde Rafael (2009). The use of this method has been made popular because it best explains the channels through which interaction occur between financial development and economic growth. However, it is also important to note that the endogenous growth models paved the way for explanation on the linkage between financial development and economic growth which occur through these channels (investment,

productivity and savings), despite this progress in these empirical studies, the issue of causality between financial development and economic growth is yet to be resolved.

Just like every other country in the world, the financial sector and human capital level of Nigeria are important factors that can help enhance the growth and development of the nation's economy. Reason been that the financial instability and the low level of human capital accumulation combined with limited capital flows and deteriorating terms of trade with increasing external debt have led to a severe limitation on resources used for development of the financial sector which in turn has posed difficulty of maintaining the economic growth of the nation.

The financial systems in most sub-Saharan African countries still exhibits some degree of insufficiencies and thinness despite during the 1980's and early 1990 when most African countries implemented various financial reform policies such as liberating interest rate, phasing out direct credit, adopting indirect investment of monetary policy, bank restructuring and bank supervisory improvement. Due to this financial sector over regulation, the region continues to experience a high level of capital flight. Hence, a worrying financial gap has been created by factors like low level of domestic resource sectors, limited degree of human and physical capital development, underutilized resources in the informal sector which has created an adverse effect on growth and poverty alleviation in Africa (Beck et al (2005)).

In the case of Nigeria, recent empirical literatures have emphasized on the increasing role of financial intermediaries on economic growth with the use of different statistical analysis and methods. With the use of the OLS method on time series data from 1980 to 2008, Adelokun (2010) studied the relationship between financial development and economic growth and derived a result that revealed there indeed exist a positive effect of financial development on economic growth in Nigeria and also a causality test that showed that financial development promoted economic growth. However, in his study, the result also revealed that there is evidence of causality form economic growth to the development of the financial sector. Osuji and Chigbu (2012) carried out the same investigation on Nigeria using ECM on time series data from 1960 to 2008 and revealed similar results of the positive effect of financial development variables on GDP. The result also showed a causality effect form financial development to economic growth and vice versa. Ohwofosa and Aiyedogbon (2013) used the VAR methodology to investigate financial deepening in the banking sector on economic growth and derived that there exists the presence of co integration and long run relationship between the variables. Olabanji and Henry (2013) derived a result that revealed a long run relationship between

financial development and economic growth in Nigeria using the VAR and VECM on time series data from 1981 to 2011 to support this evidence. The causality result of the study also indicated that there exists a causal relationship between financial development and economic growth. Audu and Tubo (2013) employed the ECM on time series data from 1970 to 2012 which revealed the existence of a long run relationship between financial development and economic growth. Chukwube et al (2014) studied the impact of financial development on economic growth in Nigeria using the OLS methodology and Granger causality test using time series data from 1980 to 2012. The derived result revealed that there is an existence of a long run relationship and also conformed with the finance led growth hypothesis.

In all of these literatures, the endogenous growth model has consequently been used to form the theoretical basis and background on the relationship between financial development and economic growth and this is due to the role the model assigns to financial development through productivity of investment among others. However, few studies have been able to link the exploration of human capital through financial development despite the fact that physical capital accumulation is one of the major determinants of growth in the new growth theories. Studies that explore the role of human capital and economic growth include: Abdusalam et al (2015) studied financial development, human capital accumulation and economic growth using data of ECOWAS countries and employed FMOS and Panel co integration approaches revealed that the financial development indicators have a significant effect on economic growth in the ECOWAS region directly and also through their influence on human capital accumulation. Alimany et al (2016) provided evidence from Sira Leone employing the OLS estimation technique and revealed that the simultaneous interaction of financial development and human capital accumulation are significant, and both impacts negatively on growth.

Therefore, any inquiry into finance growth nexus has to include the role of human capital accumulation, Unfortunately, this is not the case for vast majority of literatures in the case of Nigeria, this study aim to fill that gap by exploring how financial development leads to economic growth through its influence on human capital accumulation in Nigeria and also by contributing to the existing literatures.

1.2 The Nigerian Financial and Human Development Sector

1.2.1 The Nigerian Financial Sector

Just like in any economy, the financial sector is the foundation of all production activities. It usually consists of banks and other financial institutions. In Nigeria, the financial sector is made of financial institutions like banks, capital markets, specialized banks, insurance companies, mortgage banks, bureau de change, community banks, and the development institution banks, (Mordi 2004).

Banking in Nigeria started in 1892 with the establishment of the African Banking Corporation (Beck et al 2005). In the 1930's, many indigenous banks were established. However, the earliest banks were essentially owned by foreign investors. In 1952, the Banking Ordinance was enacted which was the initial effort of regulating the banking system in Nigeria because prior to this time, most of all the indigenous banks collapsed few years after establishment making the first incidence of banks failure in Nigeria. In 1959, the Central Bank of Nigeria was established and empowered to regulate the Nigerian banking industry (Aggarwal et al. (1999)).

Prior to the financial sector reform in Nigeria in 1987, the financial sector was highly repressed. The typical financial instruments in the sector were interest rate controls, selective credit expansion and use of reserve requirements and other direct monetary control instruments. Also including stagnant growth, rising inflation, unemployment, food shortages and mounting external debt, Access into banking business was limited and government-owned banks dominated the industry. The essence of a financial transformation in the country became more evident as a result of these background of economic problems which destabilized the country since the early 1980's. The country dived into an economic recession as a result of the sharp reduction in crude oil prices which in turn resulted in deterioration in government's finances and foreign exchange earnings. The corresponding response was the initial policy of stringent austerity measures which were adopted in 1982. However, as the economic situation worsened, more strict measures were also imposed in the subsequent years. Despite all the efforts, expectations were not met because the measures implemented were complex administrative controls which brought in their wake additional costs, such as fraudulent malpractices and corruption of officials administering the stringent control measures, particularly the import licensing allocation of foreign exchange. (Ojo, 2010).

In July 1986 the Government implemented the Structural Adjustment Programme (SAP) as a result of the unstable condition of the economy however, it had economic and financial deregulation as a major

feature. In order to achieve fiscal balance, balance of payment equilibrium, intensify growth potential of the private sector and hence, set the economy on the path of steady and balanced growth, the Nigerian government adopted the SAP policy as a financial tool to restructure and diversify the productive base of the economy, A major blank of this program is the restructuring of the fiscal sector and the liberalization of the control and regulation of financial institutions and markets (Olomola (1994)).

Although the policy framework of the SAP implemented in Nigeria were the recommended policy analyses presented by the Bretton Woods institutions, it was used as a substitute to IMF loan-based adjustment as a result of the rejection of the IMF loan package with its conditionalities. The deregulation of interest rates, exchange rate and access into banking business were the main policy reforms attributed with the SAP program. Inclusively, the establishment of Nigeria Deposit Insurance Corporation (NDIC), capital market deregulation, strengthening the regulatory and supervisory institutions, and introduction of indirect monetary policy instruments were also part of the SAP reform policy. Some distressed banks were liquidated while the Central Bank of Nigeria took over the management of others. Government shareholdings in some banks were also sold to the private sector. Due to the reform of the foreign exchange market in 1986, exchange controls were aborted and establishment of a market-based autonomous foreign exchange market was introduced. Bureaux de change' were allowed to operate from 1988. However, a fixed official exchange rate has continued to exist alongside the autonomous market (Kanyo et al 2010).

However, despite the SAP Reforms, the ineffective performances of banks in facilitating the development of the economy was the foundation to the emergence of widespread banking crisis in the early 1990s. The linkage between the sector and the growth of the economy remained weak throughout this period. Not only was industrial finance appalling, the cost of capital was prohibitive. With respect to the number of institutions, ownership structure, as well as depth and breadth of operations, it can be said that the Nigerian banking system has undergone remarkable changes over the years. These changes have been influenced largely by challenges posed by deregulation of the financial sector, globalization of operations, technological innovations and adoption of supervisory and prudential requirements that conform to international standards.

In the year 2004, the CBN carried out an assessment that revealed that while the overall stability of the Nigerian banking system could be categorized as satisfactory, the condition of some banks were less promising. As evidence proved as at end-March, 2004, the CBN's ratings of all the banks,

classified 62 as satisfactory, 14 as marginal and 11 as unsatisfactory, while 2 of the banks did not render any returns during the period. The degrade of some of the ineffective banks were caused by their overdrawn positions with the CBN, high incidence of non-performing loans, capital deficiencies, ineffective management as well as an undependable corporate governance. The sector's weaknesses can be attributed to the poorly managed liberalization reform of the 1980s' hence, so as to strengthen the financial system and improve on the ending to the private sector, the consolidation exercise was launched in mid – 2004 introducing a new financial sector reform.

The Central Bank of Nigeria (CBN) unveiled a ten-year reform blueprint anchored on four cardinal reform programs for the stabilization of the banking sector and the finance sector in general in 2009. This is due to the knowledge that there were eight main interdependent factors which are believed to have led to the buildup of a delicate and a fragile financial system that was tipped into crisis by the global financial crisis and recession. These determinants include; firstly, weaknesses in the business environment in the country coupled with the unstructured governance and management process at the CBN through uneven supervision and enforcement which corresponds to the frequent failures in corporate governance at banks and led to critical gaps in regulatory framework and regulations. Secondly, macroeconomic instability caused by an enormous and sudden capital inflows. And lastly, inadequate disclosure and transparency about the financial position of banks which in turn led to a low level of investor and consumer protection. The four cardinal programs to be used as tools for the sector's transformation involves enhancing the quality of banks; establishing financial stability; enabling healthy financial sector evolution and ensuring that financial sector contributes to the real economy. A five-part programs were made by the CBN to enhance the operations and quality of banks in Nigeria, which would consist of (a) internal transformation of the CBN, (b) industry remedial programs to fix the key causes of the crisis, (c) enhanced provision for consumer protection (d) implementation of risk-based supervision and (e) reforms to regulations and regulatory framework,. It also included the development of directional economic policy and counter-cyclical fiscal policies by the government and further development of capital markets as alternative to bank funding. Some of the potential regulations for the new macro-prudential rules as well included limiting capital market lending to a set proportion of bank's balance sheet, preventing banks from using depositors' funds for proprietary trading, private equity or venture capital investment, adjusting capital adequacy and forward-looking capital requirement driven by stress tests by the CBN. Despite the substantial changes over the last two decades, the system remains quite unstable and under-developed, since it is yet to

achieve that degree of financial intermediation, which the economy requires to foster growth and development. (Micheal Emeka 2010)

1.2.2 Human Development in Nigeria

The concept of human capital can be regarded as the abilities and skills of human resources of a country, while human capital development refers to the process of accumulating and increasing the number of persons who have the skills, education and experience that are essential for economic growth and development of a country's economy (Okojie, 2005). Ejere (2011) also argued that human capital is the human factor in the production process and consists of the combined knowledge, skills or competencies and abilities of the workforce. Of all factors of production, only human beings are capable of learning, adapting or changing, innovative and creative. Harbison (1973), refers to human development as the deliberate and continuous process of acquiring requisite knowledge, skills and experiences that are implemented to produce economic value for enhancing sustainable national development. It has been widely acknowledged in various studies that there is indeed a significant and relevant argument that human capital development has a role to play in the achievement of meaningful and sustainable economic growth and development. It would be impossible to achieve sustained economic growth and development without a substantial level of investment in the development of human capital in any country. Therefore, the place of human capital development in economic growth cannot be overemphasized. Human capital development is a key attribute to a country's socio-economic and political transformation. Among the generally agreed causal factors responsible for the impressive performance of the economy of most of the developed and the newly industrializing countries is an impressive commitment to human capital formation (Adedeji and Bamidele, 2003; World Bank, 1995, Barro, 1991).

In 1967 and 1976, Nigeria launched a mass-oriented education program; Universal Basic Education (UBE) which was launched in Sokoto by President Olusegun Obasanjo and Universal Primary Education (UPE) by the then President respectively. The aim of these programs were an attempt to develop the human capital so as to achieve sustainable growth through educational programs but these have only served as an instrument to transfer money to the corrupt political leaders and their cronies and these acts have caused undesirable consequences for the development of high quality human capital in Nigeria. During the period of commencement of these programs, the federal government reported that the falling standard of education in Nigeria is caused by acute shortage of qualified teachers in the primary school level. About 23 percent of the over 400,000 teachers employed

in the nation's primary schools were reported not to have possessed the Teachers' Grade Two Certificate, even when the National Certificate of Education (NCE) is the minimum educational requirement one should possess to teach in the nation's primary schools (Ogbeifum and Olisa, 2001). In spite of these negative setbacks, the focus of the Nation of Nigeria on human capital development in its objective to achieve significant levels of economic growth haven't changed. Given the high prospects of achieving economic growth in Nigeria which human capital development may contribute to, education and health therefore continues to receive significant attention from the Nigeria government.

It is important to note that the economic growth of Nigeria is oil driven including non-oil resources which are exploited from the land still, the high level of income inequality, poverty and unemployment are still issues of great concern. The UNDP data shows that the probability of not living past the age of 40 is 39%, adult literacy for ages 15 and above is 30.9%, 52% of the population have no access to clean drinking water and the Human Poverty Index was estimated at 37.3 points. While there are evidences that economic growth has brought about development in other parts of the globe, the evidences for Nigeria are mixed. From 2001 to 2003, Nigeria's HDI dropped from 0.463 to 0.45 (UNDP, 2005). For the same period, GDP growth rate moved from 4.6% to 10.2% (CBN, 2007). It shows that, while the nation recorded growth in the economy, it did not lead to development. While official figures are being published daily to show that the Nigerian economy is growing, the average quality of life for Nigerians is still low as captured by the Human Development Index (Abraham 2011). One of the reasons for Nigeria's unemployment, high level of poverty, unsustainable growth is that technical know-how and skills usually come with foreign physical capital which is yet insufficient for diverse and varied requirements of Nigeria's growth and development. Moreover, less developed countries in which Nigeria inclusive are characterized by economic backwardness which manifests itself in low labour efficiency, factor immobility, limited specialization in occupations, deficient supply of entrepreneurship and customary values and traditional social institutions that minimize the incentives for economic change. In addition, the economic quality of population remained low when there is little knowledge of natural resources that are available and where alternative production techniques, necessary skills, the supply of entrepreneurship and other opportunities to boost growth and development is inadequate (Paul et al 2016).

1.3 Objective of the Thesis

This thesis focuses on financial development, human capital accumulation and the economic growth of Nigeria. It uses time series data from 1980 to 2017 and set to achieve the following.

- a. To examine the short run dynamics and the long run causality between financial development and economic growth in Nigeria using annual data from 1981 to 2017
- b. To evaluate the effect of financial development human capital development on the economic growth of Nigeria

1.4 Motivation

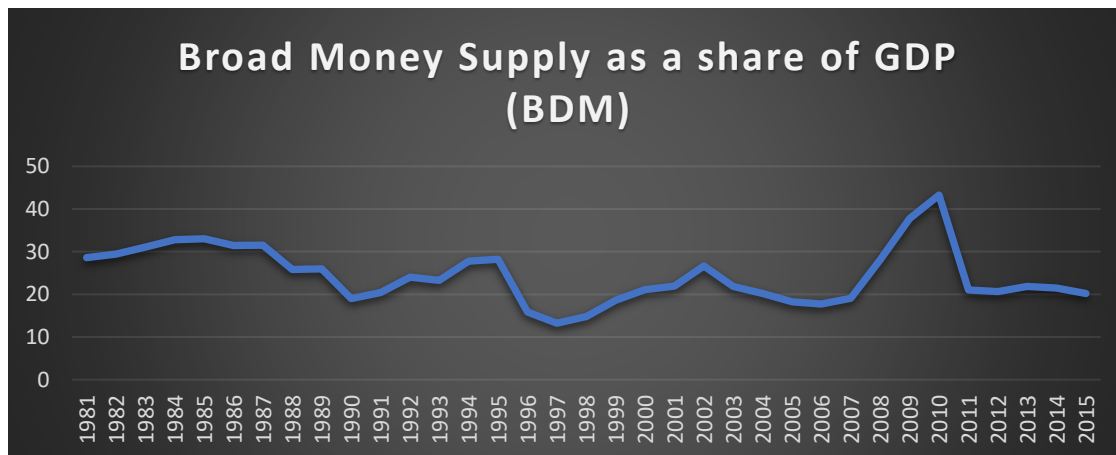
This thesis focuses on Nigeria one of the largest economies in Africa. This is because the country has adopted various economic and financial reforms over the years which were aimed at promoting the economic growth and development as well as the level and standard of the human development in the country. It is evident from the background of study of this thesis that the issue of causality between financial development and economic growth has remained inconclusive and also it is evident that most of the literature haven't explained how the channel of human capital accumulation can be explored through the financial sector to enhance economic growth in Nigeria. Therefore, an absence of literatures on the study with respect to Nigeria as a case study, provides the background for the motivation of this study. Hence, a further study on these issues using annual data from Nigeria would provide a better insight that may help policy makers in planning and making efficient economic decisions for the country.

World Bank (2007) explains that although African financial system is confronted with a lot of challenges, it has been recording accelerating growth over the past years. It shows that the indicators of financial development have steadily increased, and the real private sector has been growing at an accelerating rate in the past decades. This is an indication that financial development in Sub-Saharan Africa has potentials of promoting rapid economic growth. The thesis however focuses only on one of biggest economies in the sub-continent, Nigeria. Therefore, the motivation and the reasons for the choice of his country are briefly examined below:

Figure 1.1 below presents the Nigerian financial development indicators. Figure 1 (A), depicts liquid liability which can also be referred to as broad money and it explains the amount of money supply in circulation. It shows that from 1981, the bank credit has been on relatively decrease reaching over less than 20% of GDP in 1989 following the same trend till 2001. which coincides with the first

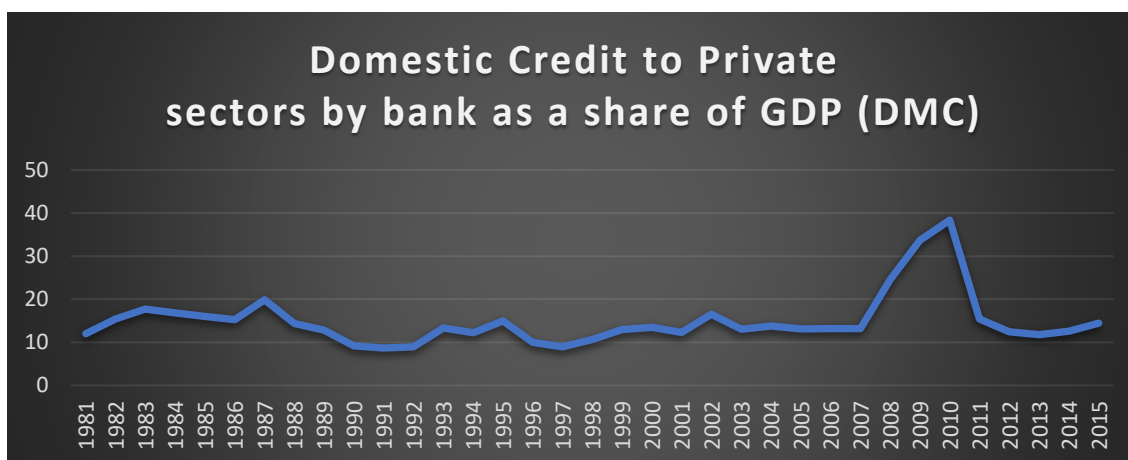
deregulation of the Nigerian nominal interest rates. It, however, had a sharp incline to more than 40% between 2008 and 2011 resulting to its slow decline up until 2015. In Figure 1 (B) depicts domestic **Nigeria Financial Development Indicators**

Figure 1. 1 Broad Money Supply represented by BDM



credit to private sector by banks and it captures the amount of funds that is channeled by the banking sector to the productive sector of the economy The figure illustrates this trend from 1981 where the flow of credit was as at a steady rate but not above 20% not until 2007 when there was a sharp inclination to more than 35% which could be attributed to the development of the structural adjustment program

Figure 1.2 Domestic Credit to Private Sector by Bank



Source: World Development Indicators (2018).

1.5 Structured Plan of the Thesis

The thesis consists of five chapters: An introductory chapter, literature review, theoretical framework and research methodology, result analysis, and a concluding chapter.

Chapter one focuses on the introduction of the thesis. It entails the general background to the study and a brief outline of the Nigerian financial development and the human development sectors. It also presents the objectives of the study, motivations for the study, and plan of the thesis. Chapter two presents a literature review of existing and prominent studies in the field of financial development, human capital and economic growth. The theoretical framework and research methodology, model and data, including choice of variables were discussed in Chapter 3. Chapter 4 discusses the regression results in detail. Finally, a brief conclusion and recommendations for future studies are presented in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

Many studies have investigated the impact of financial development on growth or the effect of human capital on growth. Yet very few studies have examined the interaction of financial development and human capital on growth. This section will provide a review of the prominent studies in the field of financial development, human capital and economic growth.

Schumpeter (1911) explains that a well-developed national economy will facilitate technological innovation and economic process through the supply of economic services and resources to investors who are able to invest in new product.

The argument of Joseph Schumpeter (1911) was later advanced because of the McKinnon-Shaw (1973) hypothesis, that may be a policy analysis tool for developing countries with sturdy recommendation for top capital accumulation and localized money mediation. McKinnon-Shaw (1973) make a case for that misallocation of resources, interest ceilings, poor investment and unskillfulness square measure sometimes related to the policy of economic repression that was prevailing within the 60's and 70's within the Less Developed Countries (LDCs). Therefore, the viable various is money relief that stimulates saving and investment, ultimately resulting in high economic process. The hypothesis became formalized and popularized through the endogenous growth models of Fry (1988), Timberland and Jovanovic (1990) and Pagano (1993). The endogenous growth model addresses a number of the weaknesses related to the McKinnon-Shaw hypothesis particularly "the lack of specific modelling of the link between money and real sector variables" (Anderson and Tarp 2003, p.192).

The basic ideology of the endogenous growth theory relies on the speculation that there will be an increase within the capital stock (both physical and human capital) which will generate positive externalities that enhance the extent of technology specified if the spillovers area unit are robust, they will stop decreasing returns to capital. The implications for growth area unit like those found once technological progress and human capital area unit are analyzed one by one, however by presumptuous that there are decreasing returns to human capital each in final output production and in schooling, the link between human capital and finance on economic process generates some fascinating implications for the shift dynamics (Fischer, 1993).

The interest to through which empirical observation works the finance-growth relationship was rekindled by King and Levine (1993) and found that the event of the money sector is robustly associated with per capita GDP growth and it completely enhance the buildup of physical capital, in addition as improves the effectivity of economies in using physical capital. during a connected development, Levine and Zervos (1998) show that even once dominant for economic and political factors, the buildup of capital and productivity and therefore GDP, are completely foreseen by the event of the banking sector and stock exchange liquidity in 47 countries, over the amount from 1976 to 1993.

Most studies were but implicit on the event characteristics of nations, which can have an effect on the degree of the event of their money sectors. Taking this in to thought Rioja and Valev (2003) studied a diverse team of countries; each industrial additionally as developing country from 1961-1995. Exploiting the General Method of Moment (GMM) approach, they found that in extremely developed countries, the event of the money sector completely effecting productivity. Conversely, the result of finance on output growth in less developed economies is transmitted principally through capital accumulation. this means that in less developed countries money intermediaries have less ability to spot and apportion funds to productive investments additionally as effectively monitor them.

Levine (2005) reviews theoretical and enquiry on the connections between financial set-up and economic process. He finds that whereas subject to numerous qualifications and countervailing views, the preponderance of proof suggests that each financial intermediaries and markets matter for growth which reverse relation (growth leading to money development) isn't the sole correct relationship. He additional asserts that higher money development eases external financial constraints facing companies, which illuminates one mechanism through that money development influences economic growth.

King and Levine (1993) depend upon Goldsmith's work by taking a sample of 77 countries and dominant for different factors that appear to have an effect on long-term growth. They examine capital accumulation and productivity growth channels, construct extra measures of monetary development, and analyze whether or not the amount of capital accumulation predicts long-term growth. First, King and Levine (1993) examine monetary depth for which they take liquid liabilities of the economic system (currency and demand deposits and interest-bearing liabilities of bank and non-bank monetary institutions). Second, they construct a variable that measures the relative degree during which financial organization and commercial bank apportion credit. The authors believe that business banks are

additional likely to produce the 5 totally different monetary functions mentioned earlier and opt for credit to the non-public business sector by banks as a main indicator of monetary development. King and Levine (1993) contemplate 3 indicators of growth: the speed of real per capita value growth, the speed of growth within the capital per person, and total productivity growth that is additionally referred to as the Solow residual. The results indicate that there's a robust positive relationship between every monetary development indicator and therefore the 3 growth indicators. They find that the initial level of monetary development could be a sensible predictor of economic growth in succeeding years.

La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) use legal systems as exogenous factors that contribute to monetary development. They study legal rules protecting company shareholders and creditors and therefore the origin of their rules. The authors find that Common Law countries typically have the simplest legal protection of investors, and the French civil law countries the worst, whereas German and Scandinavian civil law countries are unit settled round the middle on somebody protection. Since finance relies on contracts, La Porta et al (1998) argue that laws that defend the rights of external investors and enforce those rights effectively are higher at promoting monetary development. The studies following La Porta et al (1998) use legal origins as associate degree instrument for monetary development.

La Porta et al (2001) in one more study examine the degree of public possession of banks round the world. The authors found that higher degree of public ownerships is related to lower levels of bank development and high levels of public ownerships are related to lower levels of development.

The studies by Levine (1998), and Levine, Loayza and Beck (2000) use the La Porta measure of legal origin as an instrumental variable following La Porta et al (1998). Levine et al (2000) trace the result of legal origin to laws and so the result of laws to money development. This study uses 2 political economy techniques: generalized ways of moments and a cross sectional instrumental variable reckoner. GMM dynamic panel estimators' techniques are specifically designed to deal with the political economy issues evoked by unobserved country-specific effects and joint endogeneity of the instructive variables in lagged variable quantity models like growth regressions. The authors assemble a panel of 75 countries wherever the information is averaged over 75-year intervals from 1965 to 1995. They estimate the typical rate of growth of real per capita GDP on the extent of economic intervention and a broad set of things that act as conditioning sets. The authors use system and distinction GMM techniques likewise as cross-sectional estimators to research growth. information for 71 countries are averaged resolute work with one observation per country in their cross-sectional study.

Levine, Loyayza and Beck (2000) use cross-sectional estimators as a consistency check on their panel information model. The authors construct a replacement dataset to target the dimensions of the money intervention sector, whether or not the financial organization or financial establishments are conducting the money intervention and target the extent so that the money sector funnels credit to the private sector. The authors discuss 3 sets of conditioning factors: standard conditioning sets, policy conditioning set and therefore the full conditioning information and notice money development and growth square measure absolutely connected beneath all specifications and conditioning variables

Benhabib and Spiegel (2001) examine the connection between a spread of financial development variables on the one hand and economic process, investment, and total factor productivity growth on the opposite. Again, indicators of economic development are completely related to each total factor productivity growth in addition as investment. Benhabib and Spiegel (2001) use a neoclassic growth model and an endogenous growth model for estimating growth equations, wherever financial gain could be a perform of labor, physical capital and human capital. The initial growth is employed to account for the countries' distance from their individual steady states and therefore the GMM technique is employed to account for the endogeneity of physical capital accumulation. For the depth of the money sector, Benhabib and Spiegel (2001), following King and Levine (1993), use (1) the magnitude relation of liquid liabilities of the money sector to value the depth of the money sector, (2) the magnitude relation of the assets of deposit cash banks to domestic assets of the whole monetary system as well as the financial organization, and (3) the banking system's personal sector credit as a share of GDP. Benhabib and Spiegel (2001) notice that two of the measures of economic development indicate important direct correlation with growth. While these authors conjointly notice a positive role of economic development in encouraging physical capital accumulation, their results don't prove sturdy once country fastened effects are enclosed.

Christopoulos and Tsionas (2004) investigate the long-term relationship between financial depth and economic process via panel root tests and panel cointegration analysis. They conjointly use threshold cointegration tests, and dynamic panel information estimation for a panel primarily based vector error correction model. Implementing Johansen's procedure, the authors find an extended run, however not a brief run, relationship among variables. Their results concur with King and Levine (1993) and Levine et al (2000) who notice a unifacial relation among variables within the long-term. Their results recommend that to market growth through financial development the main target ought to get on the long-term instead of the short run.

With respect to the study of Luintel and Khan (1999), however, notice bidirectional causality between money development and economic process in their sample of ten countries, which contradicts the results of Christopoulos and Tsionas (2004). The authors use multivariate vector auto regression to look at long-term relation. Their tries to check the finance-growth relationship through many totally different political economy techniques lead them to favor the existence of a stable semi-permanent relationship. This study is associate early attempt to model variable statistic relation between money development and economic growth.

In a newer study, Barajas, Chami and Yousefi (2013) investigate the impact of financial deepening across countries classified by region, financial gain level, and also the sort of economy. As proxy for economic development, they use non-public credit and stock market turnover wherever the turnover is that the magnitude relation of the worth of total shares listed to market capitalization. Barajas, Charni and Yousefi (2013) use GMM dynamic panel method to estimate the parameters to beat two "deficiencies" of the OLS methodology, namely omitted variable bias and reverse relation. The authors wish to require advantage of the time variation and adopt the plausible assumption that the instructive variables are weakly exogenous. However, to deal with the matter of bias the authors averaged all the data over 5 non-overlapping periods. Their results contradict the assertions of study results claimed by previous authors. Barajas etal (2013) concluded that there's heterogeneity within the impact of economic development on growth across regions, income levels and also the styles of economy.

A few studies looked at financial development and economic growth in Nigeria. For example, Audu and Okomoko (2013) empirically evaluated the impact of financial development on economics growth in Nigeria. An annual series data (1970 to 2012) was used to carry out the study. The co-integration estimates in their study revealed that the selected independent variable used in the study explains long-run relationship between financial development and economic growth between the period under consideration. It was reported from the estimated long-run Parsimonious Error Correction Model (ECM) result that all the variables used in the study were statistically significant. However, it was also revealed in the study that the study that lending rate did not conform with the theoretical expectation but impacts significantly on gross domestic product. Commercial bank credit to private sector has the expected a priori expectation sign and also positively affected financial development and economic growth in the study.

A study on the relationship between banking system development and stock market development (financial system development) and economic growth was carried out by Ibaladin, Mathew and Daniel (2014). With the use of Secondary data relating to financial development were extracted from CBN Statistical Bulletins and used for the study. A Cointegration analysis Technique was used for the data analysis and the results revealed that economic growth can be influenced both in the short run and the long run through market capitalization as a measure of financial development, it also showed a result that suggested that credit to the private sector by banks has a positive impact on GDP; Their result also revealed that value of share traded in stock market, as well as turnover ratio and investments all have positive influence on economic growth; while inflation and government expenditure are strong policy variables in the long run. They concluded that the financial system can be considered as a tool for short run and long run economic growth.

An empirical study on the relationship between financial intermediary and economic growth over the period 1981-2011 was investigated by Eugene (2016) using the auto-regressive distributed lag (ARDL) approach to co-integration analysis. The results show that there was no significant deference between the relationship that exist between financial intermediaries and the economic growth in Nigeria and other oil-dependent economies. The relationship between financial intermediary development and economic growth in Nigeria is found to be insignificantly negative in the long-run and significantly negative in the short-run. Which resulted in the Author highlighting the dominant role of the oil sector in economic activities in Nigeria.

Osuji and Chigbu (2012) investigated the impact of financial development variables on economic growth in Nigeria using data from 1960-2008, and concluded that the government should ensure a robust supervision of the financial sector to enable financial institutions provide the needed funds for the growth and development of the Nigerian Economy. This conclusion was made based on the results of some of their econometric analysis which revealed that Money Supply (MS) and Credit to Private Sector (CPS) are positively related to economic growth of Nigeria. It was also shown in their Johansen test result that Money Supply and Credit to private Sector (CPS) are cointegrated with GDP in Nigeria within the study period.

A reexamination of the relationship between financial development and economic growth was studied by Adeniyi et al (2015), through the means of information content of non-linearities in the finance–growth nexus for Nigeria. Using annual data covering the period 1960–2010, they factored in threshold effects through the financial development (FD) measures. Following these, their results revealed that

first, financial development negatively impacted growth but a sign reversal resulted on accounting for threshold-type effects. Second, using a composite index of FD led to a similar outcome. Third, by employing sample splitting, the coefficients for the pre- and post-reform era are hardly distinguishable casting doubt on the efficacy of financial system reforms. They therefore concluded that broader structural reforms should pervade Nigeria's policy space if the aim of sustained, inclusive and employment-generating growth is to be realized.

Kolawole (2012) employed a co-integration and error correction model econometric analysis to examine the validity of open markets and financial sector development's effect on the economic growth of Nigeria. The study did not establish any link or causation between financial sector development and economic growth.

Adeniyi and Omisakin (2012) examines the causal linkage between FDI, economic growth and financial sector development in Nigeria, Cote' d'Ivoire, Gambia, Ghana, and Sierra Leone within a trivariate framework and error correction model. The finding of the study shows that there is no evidence of any causal linkage between financial sector development and economic growth.

Nwosa et al. (2011) investigate the causal relationship among financial development, FDI and economic growth using the co-integration and error correction model. The study reveals that financial sector development has a statistically significant causal influence on economic growth.

Akinlo and Egbetunde (2010) found that financial development Granger causes economic growth in Nigeria. In another study, Chimobi (2010) examines the causal relationship among financial development, trade openness and economic growth in Nigeria for the period 1970 to 2005 using the co-integration and causality test. The study reveals a bi-directional causality between financial sector development and economic growth.

Despite the absence of human capital as a factor with relationship to financial development in most studies, there are studies that emphasized the effect of Human capital on economic growth in Nigeria.

Abraham and Umar (2011) examined the relationship between economic growth and human development in the context of an error correction model. Gross Domestic Product (GDP) was used as a measure of economic growth while the Human Development Index (HDI) was used to proxy for human development. Secondary data were collected from 1975 to 2008 from secondary sources. Their results revealed that economic growth have a negative and non-significant short run relationship with human development index. However, the coefficient for the long run relationship was however

significant. The study concludes that policies aimed at accelerating growth would have a negative impact on human development in the short run but in the long run, equilibrium will be restored by HDI adjusting to correct the equilibrium error.

The impact of human capital and technology on economic growth in Nigeria was investigated by Chindo et al (2015). Using an annual time series data for the period from 1975-2010 and autoregressive distributed lag approach was implemented with cointegration to examine the study. Two proxies of human capital (secondary and tertiary school enrollments) were used in two separate models. Their cointegration result revealed that all the variables in the two separate models were cointegrated. Furthermore, the results revealed that showed that human capital in form in secondary and tertiary school enrollments have had significant positive impact on economic growth. Additionally, technology was shown to have a significant positive impact on economic growth. In summary, they concluded that both human capital and technology are important determinants of growth in Nigeria. Therefore, improvement of the educational sector and more funding for research and development (R&D) to encourage innovations are needed to facilitate Nigeria's sustained economic growth.

Olusogo et al (2017) employed the ordinary least square regression analysis to examine the impact of human capital development on economic growth of Nigeria, using annual time series date from 1981 to 2015. The empirical results showed that human capital development has significant impact on economic growth, as proxy by the gross domestic product. In line with theory, the human capital development indicators namely secondary school enrolment, tertiary school enrolment, total government expenditure on health and total government expenditure on education exhibit positive and statistically significant impact on economic growth of Nigeria.

Osekhebhen and Uchechi (2014) explored the augmented Solow human-capital-growth model to investigate the impact of human capital development on national output, a proxy for economic growth, using quarterly time- series data from 1999-2012. Their empirical results show that human capital development, in line with theory, exhibits significant positive impact on output level. The results further reveal a relatively inelastic relationship between human capital development and output level. Diamond and Dybvig (1993) emphasized that a well-developed national economy is a vital complement to the development of human resource within the growth method. The connection between money development and human capital, though acknowledged within the theoretical literature remains less explored at the empirical level. The literature suggests that higher educated individual's area unit less risk loath, have high data, and area unit high savers. Therefore, improving instructional levels together with course of study provides new opportunities

to individual authorization. Education conjointly permits individuals to maneuver from informal sector to formal sector opportunities which sanction them access to formal money services. money sector development through credit channels conjointly allows human capital accumulation and influences economic process. Thus, the impact is in both ways in which they are both affected.

Demirguc-Kunt and Maksimovic (2005) argue that money development and human capital modify particular entrepreneurs to undertake innovative activity, that affects growth through productivity improvement, and viewed money and human capital climate as taking part in a very important role in moistening the impact of external shocks on the domestic economy. They conclude that, money systems while not the required institutional development, human development, academic attainment has result in a poor handling or perhaps magnification of risk rather than mitigation.

It was also revealed in a study investigated by King and Levine (1993) that the development of the financial sector is in more ways connected with the per capita GDP growth. as well as enhancing the accumulation of physical capital in a positive note. Also, it adds to the improvement of the efficacy of economies in employing physical capital. In a similar development, Levine and Zervos (1998) ascertain in their findings that even after controlling for economic and political factors, the accumulation of capital and productivity and hence GDP, are positively predicted by the development of the banking sector and stock market liquidity in 47 countries, over the period from 1976 to 1993.

A study with the combination of data of both industrial and developing countries creating a diverse group of countries was researched by Rioja and Valev (2003) from 1961-1995. By estimating via the General Method of Moment (GMM) approach, they found that in highly developed countries, the development of the financial sector positively effecting productivity. Conversely, the effect of finance on output growth in less developed economies is transmitted mainly through capital accumulation. This can be interpreted as in less developed countries; financial intermediaries have less ability to identify and allocate funds to productive investments as well as effectively monitor them.

Evans, Green, and Murinde (2000) who assemble knowledge from 82 countries for a period of 21 years from 1972 to 1992. Their findings show that both money development and human capital create a positive contribution toward the growth method. completely different from others, their model uses a trans log production perform where financial indicators were proxied as M2/GDP and domestic credit to gross domestic product and human capital is proxied by primary and middle school enrollments. Both money and human capital are vital contributors to growth. However, the authors

claim that the results of human capital or cash can't be studied in isolation that is probably going to supply deceptive results, they fail to gauge the interaction among issue inputs while not denying a likely possibility.

Abubakar, Kassim and Yusoff (2015) explore the finance-growth nexus through the channel of human capital accumulation within the ECOWAS region. employing a panel cointegration technique, DOLS, similarly as totally changed method of least squares, the authors conclude that money development contribute considerably to economic process of ECOWAS each directly and through human capital development. However, similar to other studies, financial indicators were proxied by the quantitative relation of broad money to gross domestic product and quantitative relation of bank credit to gross domestic product. Human capital is once more measured by faculty enrollment the least bit levels, and therefore the control variables embrace trade openness, FDI, government expenditure and inflation. Employing panel co integration techniques they estimate long-standing time coefficients and perform panel causality tests. Their results show that the economies will be more better off with the utilization of bank credit (smaller result on growth) and domestic credit (bigger effect). Causality is unidirectional running from GDP to broad cash and from bank credit to gross domestic product however a bidirectional causality relationship exists between domestic credit and gross domestic product and human capital and gross domestic product. Interaction between human capital and financial variables wasn't explored.

Taking a panel of 66 countries and employing panel data methodology, covering a period of 40 years from 1971 to 2010, Keshob Sharma (2016) study examines the impact of financial development, human capital and their interaction on economic growth. As a proxy for financial development, the study used private credit by deposit money banks, as a percent of GDP. In turn, human capital is represented by the percentage of population above 25 years of age with the secondary level of education. As a result, this study reveals that financial development, and human capital are positively significant in explaining growth. However, another measure of financial development, liquid liabilities which was also used as a measure of financial development, is not significant in explaining growth. Despite the introduction of income dummies and region dummies, the results remain robust. Also, the result shows that the rate of convergence and the degree of impact do vary across countries at different income levels and in different regions. In conclusion, human capital was found to have a positive significant impact on growth on countries that had a lower initial level of human capital but not significant in countries that started out with a higher level of human capital.

One of the fewer studies that investigated the impact of financial development, incorporating human capital or rather human development in the same model is Young (1998) who ascertained that, wherever long haul growth is driven by enhancements in product quality that is free of scale, and conjointly doesn't exhibit scale effects and also the economy long haul rate of growth impact is that the presence of human capital. Noting that, the expansion rate of the economy is ultimately determined by the capability to accumulate human capital, since the buildup of human capital drives the incentives for investment.

With respect to series of literatures presented in this study, it can be said that both financial development and human capital are necessary for growth. This is because most studies have revealed how important they both are in determining the growth of an economy. An important thing that is missing in the literature is how human capital and financial development impact growth together in the case of Nigeria, which is where this study is aiming to add to the existing literature. Also, there is an obvious lack of extensive literature emphasizing on the combined impact of financial development and human capital on economic growth.

CHAPTER 3

THEORETICAL FRAMEWORK AND RESEARCH METHODOLOGY

3.1 Theoretical framework

Seeking after an adjusted adaptation of the endogenous growth framework in indicating a model of development that can represent the impact of fund, human capital in the growth process. Here, the investigation is vigorously drawn from the commitments of the "endogenous growth writing" by Romer (1986). One of the numerous bits of knowledge of this writing is that, reserve funds conduct will for the most part impact equilibrium growth rates. By assuming an aggressive economy with indistinguishable firms and household units to such an extent that there is a fortuitous event between per firm and per capita values. this study also accepts that the supply of capital, K_t , anytime is made of both physical and human capital. We let the aggregate level of output produced in the economy at time t , Y_t to follow a linear function of the aggregate capital stock (K_t) as pursues:

$$Y_t = \lambda K_t \dots(1)$$

Where λ , is the estimated condition of innovation or the rate of change of capital contribution to yield. We expect further that, despite the fact that every one of the N firms in the economy faces a consistent return to scale technology, productivity is anyway an increasing function of the stock of capital K_t . Due to this possibility, it is assumed that each firm's yield is given as pursues:

$$\gamma_t = \Omega K_t^\beta \dots\dots(2)$$

Where Y_t is firm-explicit yield, K_t is firm-explicit capital stock and Ω is a parameter that reacts to the capital stock $\Omega = \lambda K_t^{1-\beta}$. In this system, it is further assumed that the stock of physical capital deteriorates at the rate of π per period. Along these lines, gross investment, which is characterized as the rate of development of the capita stock (after adjusting for capital depreciation) is given as:

$$I_t = K_t + 1 - (1 - \pi) K_t \dots\dots(3)$$

Accepting a closed economy with no administration intercession, a vital condition for capital market harmony manages that gross reserve funds (S) parallel gross venture (I). Be that as it may, since an extent of funds $(1-\alpha)$ spills from the procedure of monetary intermediation, capital market equilibrium

necessitates that $I_t = \alpha S$. Subsequently, $1 - \alpha + \alpha = 1$. From the aggregate production function (1), the growth rate of output in period $t + 1$ is given as:

$$g_{t+1} = [y_{t+1}/y_t] - 1 = [K_{t+1}/K_t] - 1 \dots (4)$$

by rearranging equation (3), the given result is $K_{t+1} = I_t - (1 - \pi) K_t$. substituting this equation in (4) above, we have:

$$g_{t+1} = (I_t + K_t - \pi K_t + K_t)/K_t = I_t / K_t - \pi \dots (5)$$

Also by rearranging equation (1) above, it gives $K_t = Y/\lambda$. Therefore, by substituting in equation (5), growth of output at time $t+1$ will become:

$$g_{t+1} = (\lambda \alpha S)/Y - \pi \dots (6)$$

Hence, by invoking the capital market equilibrium that $I_t = \alpha S_t$, equation 6 above reduces to:

$$g_{t+1} = \lambda \alpha * (S/Y) - \pi \dots (7)$$

from equation (6) and (7), that steady state solution can be deduced to be:

$$g_t = \lambda(I/Y) - \pi = \lambda \alpha \beta - \pi \dots (8).$$

Where $\beta = S/Y$ (i.e the savings rate). With regards to the endogenous development structure (Pagano, 1993; and Barro, 1989a), condition (8) predicts that monetary advancement influences development by either raising α or quickening the social efficiency of capital λ ; or it can impact the sparing rate β .

3.2 Choice of Variables

3.2.1 Dependent Variable

The dependent variable in the model is of real per capita GDP. The World Development Indicator (WDI) database of the World Bank reports growth rate of total GDP at market values.

3.2.2 Financial Development

Although there's substantial and typically contradictory proof on the role of financial development on economic process, there's no distinctive measure of monetary development employed in the literature that would be thought of the simplest. Researchers have relied on measures of the dimensions of the banking system as a proxy. This study considers several measures employed in the literature.

Starting with an instance of four qualities of budgetary organizations and markets: (a) monetary profundity which explains the extent of the money related establishments and markets; (b) how much people can and do utilize budgetary foundations and markets which is termed as GET TO; (c) proficiency illustrated as the effectiveness of monetary foundations and markets in giving monetary administrations; and (d) solidness which is the security of money related establishments and markets. These four attributes are estimated both for money related foundations and monetary markets that likewise incorporate value and security markets. This prompts a 4 by 2 lattice for markers of money related advancement Cihak et al. (2012). Notwithstanding, the study conceded that these four attributes independently might not fully explain every aspects of monetary frameworks. Monetary profundity isn't in itself a component of the budgetary framework but instead an intermediary of the general degree of administrations given by the monetary framework.

For profundity of money related establishments, Cihak et al (2012) support proportion of credit to private division to GDP, and for profundity of financial markets they incline toward securities exchange capitalization in addition to extraordinary household private obligation securities as a level of GDP.

Access is estimated by number of financial balances per thousand grown-ups (organizations) and percent of market capitalization outside of the main 10 biggest organizations (markets). Productivity is demonstrated by net intrigue edge and turnover proportion separately though for soundness the creators list z-score and unpredictability of stock value record. These are a portion of the every now and again utilized proportions of monetary frameworks in the writing in spite of the fact that the writers too give a rundown of different measures for every normal for the budgetary improvement.

A considerable lot of the investigations reviewed in the first part utilize a proportion of broad money (M2 or M3) as a pointer of money related improvement (King and Levine, 1993; Abubakar et al., 2015). Other basic estimates utilized are proportion of local credit to Gross domestic product, business bank credit to GDP, and fluid liabilities of the monetary area to GDP (Benhabib and Spiegel, 2004; Evans, Green and Muride, 2000; and Ahlin and Pang, 2008). Be that as it may, Luintel and Khan (1999) utilize the deposit, however not the money, some portion of M2 as a level of ostensible GDP

lagged one period. This might be a closer intermediary to money related advancement than M3 to GDP which, as guaranteed by Luintel and Khan (1999), measures just adaptation which thus may not precisely show the span of the monetary area in the developing countries.

In light of the need to touch base at the most significant marker of financial development, this study will utilize two of such measures: (a) domestic credit to the private sector as a share of GDP and (b) broad money supply in the economy as a ratio of GDP.

Private credit progressed by the deposit money banks and other money related organizations rejects credit issued to government offices and open endeavors. It might be a decent portrayal of the profundity of the money related framework as it mirrors the getting requirements of household units and firms given economic situations (Beck and Levine, 1999). Household credit to the private division is a comparable measure for the movement of money related delegates with the exception of it originates from the accounting report of the monetary system including the national bank which in many developing nations can stretch out credit to the administration or on the other hand public entities. This ideology was likewise utilized by Levine and Zervos (1998) and Levine Lozaya and Beck (1999).

All the variables utilized in this study are taken from the World Development Indicators (WDI) as accessible from its website. I expect the financial development measures to have a positive effect on growth.

3.2.3 Human Capital

One fundamental motivation behind this investigation is to discover the effect of human capital on development rate unmistakable from the development impact of financial development. Education data can show parts of human capital sensibly well. Kendall (2012) utilizes education proficiency rates for human capital for the situation of India. Be that as it may, education proficiency rates measure just fundamental educational accomplishments and aptitudes. In a different gathering of nations utilizing educational proficiency rate would be wrong; in developing countries for instance a simply educated individual would be close the base of the dispersion of the human capital. Abubakar, Kassim and Yusoff (2015) utilize human capital as estimated by aggregate enrollment proportion (essential, auxiliary and tertiary) taken from UNESCO measurements. Benhabib and Spiegel (2001) utilize the logarithm of normal long periods of tutoring for grown-ups more than 25 years old.

This study implements human capital as the level of secondary school enrollment. This information is acquired from the Barro-Lee dataset (2013). The decision between stock measure (periods of

schooling) and stream measure (enrollments) of human capital has likewise been bantered in the writing. This examination utilizes a stream measure. I expect that the human capital variable will have a huge positive effect on development

3.2.4 Conditioning Information

Diverse molding data, that is control factors, as utilized in growth studies was employed by Levine, Loyaza and Beck (2000) through an arrangement of three molding data: (a) The straightforward molding data set, (b) the strategy molding data set, and (c) the full molding data set. The straightforward set incorporates the steady, the logarithm of starting per capita GDP and introductory educational fulfillment. The strategy set incorporates the straightforward set in addition to proportions of government size, inflation, and receptiveness to global exchange. The full molding data set incorporates the strategy set in addition to proportions of political steadiness and ethnic assorted variety. This thesis utilizes the strategy molding data set. Following standard practice, this study has employed the use of inflation measured by by Gross domestic product deflator, and the population growth rate. (World Bank WDI).

3.3 Model Specification

As indicated by Barro (1989), the development of real GDP is considered to rely upon a few factors. For the reason for this study, the connection among finance and development can be enlarged from the Barro-growth regression of financial development measures which takes the frame in this way;

$$Growth = \alpha_0 + \beta_1[Finance] + \gamma_i[Conditioning\ set] + \mu_t \dots(9)$$

Where β_1 the coefficient of the measures of financial sector development/indicators and γ_i is the coefficients of the set of control variables.

With respect to the choice of variables presented above, it is difficult to identify proxies for measuring financial sector development and growth. This study therefore includes the human capital, proxied as secondary enrolment on finance to capture the simultaneous effect of finance and human capital on growth of output via (the interactive terms of financial development and human capital).

In this study, our measures of financial development indicators are purely banking. Therefore, the selection of banking development indicators as appropriate proxies to financial development (FD) justifies the choice of financial development in Nigeria.

This study uses two financial development indicators mainly banking development indicators and includes broad money, and domestic credit to private sectors by banks. The regression model is therefore specified with the RGDP as dependent variable, measured as real GDP per capita on an annual basis adjusted for inflation. The explanatory variables comprise both the financial sector indicators and the control variables as follows:

Financial Sector indicators

- The overall financial depth of the financial system (measured as the ratio of broad money to GDP). **(BDM)**
- Domestic credit to private sector by bank as a share of GDP, which is the value of loans made to the private sector used as a measure of financial sector development. **(DMC)**.

The Control/Conditioning variables include;

- Inflation by annual growth of GDP implicit price deflator **(NFL)**.
- Population growth rate **(PGR)**
- Capital which is the most essential in any growth model is proxied by the Gross capital formation as a share of GDP **(K)**
- The human capital is measured as secondary school enrollment rate **(HC)**. Hence,

Table 3. 1 Description of Choice Variables as defined by World Development Indicator

Variable	Definition	Source
RGDP	GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	WDI
BDM	Broad money is the sum of currency outside banks; demand deposits other than those of the central government;	WDI
DMC	Domestic credit to private sector by banks refers to financial resources provided to the private sector by other depository corporations	WDI
K	Gross capital formation (formerly gross domestic	WDI

	investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.	
HC	This is the total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.	WDI
INFL	Inflation as measured by the annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole.	WDI
POPG	Annual population growth rate for year t, expressed as a percentage .	WDI

Source: WDI

$$FD = BDM, DMC \quad (10).$$

From equation (9) on page 30, we therefore specify the model for this study in a more explicit form thus:

$$\ln RGDP_t = \alpha_0 + \beta_1 \ln[FD]_t + \beta_2 \ln[K]_t + \beta_3 \ln[HC]_t + \beta_4 \ln[NFL]_t + \beta_5 \ln[PGR]_t + \mu_t \quad (11)$$

3.4 Research Methodology and Data Analysis Technique

Most time series informations are non-stationary, consequently utilizing the OLS method may infer that the outcome acquired would be spurious as in the factors may appear to have causation when there is no causation and the relapse is negligible. however, to eliminate this possibility, time series information requires being de-drifted in a relapse investigation. In this way, we apply the possibility of differencing utilizing the Unit root tests. Based on the Error Correction Model Mechanism (ECM) indicated by Johansen (1988), it is necessary for the variables to be of the same order of integration, for the testing of URT, the Augmented Dicky Fuller (ADF) was used. The variables are expected to pass the Unit Root Test at levels 1(0) or first difference 1(1) before they can be entered for empirical estimation

3.4.1 Unit Root Tests:

The Augmented Dickey-Fuller (ADF) unit root test and the Phillip-Perron (PP) unit root test is used and both tests have the same null hypothesis that unit root exist (Dickey and Fuller, 1979) and (Phillips and Perron, 1988). The Augmented Dickey Fuller (ADF) test regression of a unit root is given by

$$\Delta x_t = \mu + \beta t + \delta x_{t-1} + \dots + \sum \delta_i \Delta x_{t-1} + \delta_m \Delta x_{t-m} + \mu_t \quad (12)$$

$$\Delta x_t = \mu + \delta x_{t-1} + \dots + \sum \delta_i \Delta x_{t-1} + \delta_m \Delta x_{t-m} + \mu_t \quad (13)$$

Equation (15) contains a trend term, while equation (16) does not contain a trend time, and the lag terms are introduced in the model as additional repressors to account for heteroskedasticity and autocorrelation. But for the Phillip Perron, the lag m , is omitted to adjust for the standard error in order to correct for auto correlation, heteroskedascity and problem of endogeneity.

The PP test equation is specified as:

$$\Delta x_t = \mu + \beta t + \delta x_{t-1} + \dots + \sum \delta_i \Delta x_{t-1} + \delta_m \Delta x_{t-m} + \mu_t \quad (14)$$

Null Hypothesis $H_0 : \delta = 0$, the series has a unit root (non-stationary) that is $I(1)$ against the Alternative Hypothesis $H_1 : \delta < 0$ the series has no unit root (Stationary) that is $I(0)$, if the calculated value of the tests statistic is less than the critical value at 0.05 of one tailed test, we reject H_0 and accept H_1 . That is the series is $I(0)$, stationary otherwise the series is $I(1)$, non-stationary.

3.4.2 Co-integration Tests

We test whether the dependent variable exhibit long run equilibrium-relationship with the explanatory variables or are co-integrated using the Co-integrating Regression Augmented Dickey–Fuller (CRADF) test. This test uses residuals form of a co-integration regression, we estimate the model using OLS estimation by minimizes the sum of the squares residuals; (Engel and Granger, 1987) considers this test as one of the preferred test of co-integration and became known as Co-integration Regression Augmented Dickey Fuller (CRADF) test. The Co-integration Augmented Dickey Fuller (CRADF) test regression equation is given as:

$$\Delta e_t = \alpha_1 e_{t-1} + \delta_1 \Delta e_{t-2} + \dots + \delta_m \Delta e_{t-m} + \mu_t \quad (15)$$

From equation (14) Δe terms are included to eliminate any autocorrelation so that $\mu_t \sim IID(0, \delta^2)$ (Mackinnon, 1991). We carry the CRADF test thus:

$H_0 : \alpha_1 = 0$ and e_t are $I(1)$, the series are not co-integrated

$H_1 : \alpha_1 = 0$ and e_t are $I(0)$, the series are co-integrated

If the calculated value of the test statistic is less than the critical value, then the null hypothesis of no cointegration is rejected; the series are co-integrated, m is the number of lagged terms is selected in the same way as for the unit root tests. We use (Mackinnon, 1991) critical values to make a decision on the test statistic and not the individual unit root values of the ADF test.



CHAPTER 4

Results and Discussions

4.1 Summary Statistics

The summary statistics in table 1 below reveals the average growth of output (RGDP) as 7.4%, the broad money (BDM) which is the depth of financial deepening averaged around 3.2% could be considered low which in its essence reveals that significant proportion of the financial assets are held outside the formal financial sector. Domestic credit to the private sector by banks stood at 2.6%, which may reveal that substantial credit doesn't go to the public sector, a notion of crowding out of the private sector in the development process and thus demonstrates the underdeveloped nature of financial intermediation in the Nigerian economy.

The double-digit inflation rate 2.4% indicates weak macroeconomic management and has high standard deviation (1.7%) which is riskier and more volatile. The overall physical capital formation as a share of GDP averaged around 2.4%, indicating that high proportion of income is spent on consumption rather than investment and thus impact negatively on long run economic growth. The growth rate of population averaged around 0.9% which may pose challenges to output growth if not properly checked and hence affect long run growth. Human capital development averaged around 3.4%.

Table 4.1 Descriptive Statistic

Variables	LNRGDP	LNBDM	LNDMC	LNK	LNHC	LNINFL	LNPOPG
Mean	7.371448	3.162684	2.644522	2.441465	3.403563	2.433369	0.947160
Median	7.251826	3.089371	2.581771	2.463572	3.309128	2.585312	0.947416
Max	7.848970	3.767370	3.646717	3.526973	4.076198	4.728064	0.998815
Min	7.048496	2.582544	2.162516	1.698733	2.833717	0.010000	0.911553
Std. Dev.	0.263533	0.266008	0.322178	0.417343	0.289451	1.332906	0.026913
No of Obs	35	35	35	35	35	35	35

4.2 Correlation Result

The correlation matrix is conducted among the financial variables and reported in table 2 below, there is positive correlation among the financial variables. The correlation RGDP and the stock of physical capital (K) is positive and fairly strong (0.21) and also the correlation between RGDP and human capital (H) measured as secondary school enrolment is positive and strong (0.88). The correlation between Real GDP and the financial indicator variables are positive but fairly strong, this result supports the view that financial intermediation in Nigeria is still quite underdeveloped as evidenced in the result of the descriptive statistics in table 1. Hence, the hypothesis that positive correlation exists among financial development, human capital, and economic growth is supported. The correlation between RGDP and Inflation (NFL) is negative and very weak (0.23), which implies that high inflation reduces the growth of output for the Nigerian economy. The correlation between real GDP and population growth rate is positive and strong (0.73) and the correlation between Real GDP. The values of the correlation are fairly moderate indicating absence of multi-collinearity.

Table 4.2 Correlation Results

Variable	LnRGDP	LnBDM	LnDMC	LnK	LnHC	LnNFL	LnPGR
LnRGDP	1						
LnBDM	0.0445	1					
LnDMC	0.3555	0.7524	1				
LnK	0.2673	0.4380	0.1277	1			
LnHC	0.8372	(0.0471)	0.2898	(0.0010)	1		
LnNFL	(0.3022)	0.3433	0.1021	(0.1261)	(0.2386)	1	
LnPGR	0.7377	0.3156	0.4026	0.5335	0.5130	(0.2065)	1

4.3 Regression Result:

The Table below, presents the regression result with no interaction between financial development and human capital development. All the variables of financial development are statistically significant at 10% with respect to the level of their t-statistic and are rightly signed. The coefficients INF have been found to be negative and statistically insignificant, this implies that inflation reduce the growth of output in Nigeria. The coefficients of the stock of physical capital have been positive and significant at the 10%. The coefficients of PGR have been positive and significant at the level of its t-statistic. The coefficients of the human capital accumulation measured as secondary school enrolment have been positive and statistically significant at 5% level. This tends to lend credence that human capital development may increase output growth. The r squared result suggest that 86% of

$$\ln r g d p = 2.583 - 0.265 \ln b d m + 0.200 \ln d m c + 0.110 \ln k + 0.511 \ln h c - 0.016 \ln i n f l + 3.304 \ln p o p g$$

Table 4.3 Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBDM	-0.265315	0.153616	-1.727129	0.0952
LNDMC	0.200069	0.116569	1.716316	0.0971
LNK	0.110473	0.068105	1.622095	0.1160
LNHC	0.510820	0.085511	5.973704	0.0000
LNINFL	-0.016318	0.015795	-1.033137	0.3104
LNPOPG	3.303871	1.069208	3.090017	0.0045
Cons_	2.583559	0.838141	3.082488	0.0046

Prepared by the Author

4.4 Stationary Test Results:

The ADF unit root test is performed under the null hypothesis that unit root exist against the alternative hypothesis that unit root does not exist. The ADF unit root test in table 3, below shows that all the variables are not stationary in level but stationary at first difference, implying that all the variables are integrated of order one, denoted as I(1).

Table 4.4 Result of the Augmented Dickey Fuller (ADF) Unit Root Test

Variable		Constant	Constant and Trend	Conclusion
lnRGDP	Level	0.449010	-2.099467	I(1)
	First Difference	-4.345378**	-4.902231*	
lnBDM	Level	-3.260361	-3.362829	I(1)
	First Difference	-4.543761**	-3.985176*	
lnDMC	Level	-1.994583	-3.596657	I(1)
	First Difference	-5.140769**	-5.040039**	
lnK	Level	-1.418366	-1.201816	I(1)
	First Difference	-3.545288**	-6.691391**	
lnHC	Level	-0.212817	-0.356734	I(1)
	First Difference	-4.898685**	-4.195549**	
lnINFL	Level	-5.499486	-5.811183	I(1)
	First Difference	-7.775904**	-7.692374**	
lnPOPG	Level	-4.733845	-0.710870	I(1)
	First Difference	-7.031027**	-4.221550**	

Prepared by the Author

The Phillip-Perron test in table 4, below also confirms the existence of unit root at first differencing. The graphs of the series as shown in appendix clearly indicate that the series are non- stationary in levels, but stationary at first difference.

Table 4.5 Result of the Phillip- Perron Unit Root Test

Variable		Constant	Constant and Trend	Conclusion
lnRGDP	Level	-0.182758	-2.098100	I(1)
	First Difference	-4.331227**	-4.851044**	
LnBDM	Level	-2.151220	-2.248992	I(1)
	First Difference	-7.162658**	-7.170544**	
LnDMC	Level	-2.445025	-2.360852	I(1)
	First Difference	-8.847058**	-8.849473**	
LnK	Level	-2.863023	-2.334870	I(1)
	First Difference	-4.984800**	-5.750967**	
LnHC	Level	-1.034353	-5.020778	I(1)
	First Difference	-5.242590**	-8.188613**	
LnNFL	Level	-5.488759	-5.810991	I(1)
	First Difference	-21.12681**	-28.14623**	
lnPGR	Level	-2.219361	-2.864866*	I(1)
	First Difference	-4.282005**	-2.509698	

Prepared by the Author

(**) denotes 5%, significance level and I (1) = order of integration. Each variable is tested using the Schwarz Information Criteria (SIC). For all series, the presence of a unit root cannot be rejected at 0.05 level of significance indicating that all the series are integrated of order one I(1).

4.5 Johansen Cointegration Test

Having established that the series in the analysis are all I[1] variables, possessing time variant properties, we move on to determine if they are cointegrated. The results from the multivariate cointegration test are presented in Table 7 and 8 below. As can be seen from the table, both the λ -max

and the trace test statistics indicate that there is at least two significant cointegrating vector among the variables since the hypothesis of no cointegrating vector of up to two (i.e. $r=2$) is to be rejected. The implication of this is that a long run relationship exists among the variables.

Table 4.6 Johansen Cointegration Result

Null Hypothesis	Trace		Null Hypothesis	Maximum	
	T statistics	Critical Value		T statistics	Critical Value
$r = 0^*$	213.3724	125.6154	$r = 0^*$	96.04061	46.23142
$r \leq 1^*$	117.3318	95.75366	$r \leq 1^*$	41.72518	40.07757
$r \leq 2^*$	75.60660	69.81889	$r \leq 2^*$	35.24073	33.87687
$r \leq 3$	40.36587	47.85613	$r \leq 3$	16.90899	27.58434
$r \leq 4$	23.45688	29.79707	$r \leq 4$	15.56386	21.13162
$r \leq 5$	7.893023	15.49471	$r \leq 5$	7.836159	14.26460
$r \leq 6$	0.056864	3.841466	$r \leq 6$	0.056864	3.841466

Prepared by the Author

Table 4.7 Johansen Normalization estimate

LNRGDP	LNBDM	LNDMC	LNK	LNHC	LNINFL	LNPOPG
1.000000	0.474013	-0.279173	0.020497	-0.720230	-0.072476	-4.410197
	(0.06335)	(0.04087)	(0.04059)	(0.03936)	(0.00820)	(0.38174)

Prepared by the Author

P-value in parentheses

As shown on Table 8; lnRGDP is the independent variable. Hence, normalization took place from the real GDP per capita variable. From the table shown above, it is evident that in the long run, broad money(lnBDM) has a negative impact on lnRgdp, where domestic credit to private sector by

bank(lnDMC) has a positive on lnRGDP, capital stock denoted by lnK has a negative effect on the realGDP per capita, while lnHC, lnINFL and lnPOPG all indicate a positive impact on real GDP per capita, on average, *ceteris paribus*. The coefficients are statistically significant at the 1% level. In conclusion, the null hypothesis of no cointegration is rejected against the alternative of a cointegrating relationship in the model.

This can be represented as:

$$\ln r g d p = 0.474 \ln b d m + 0.279 \ln d m c + 0.020 \ln k + 0.720 \ln i n f l + 4.410 \ln p o p g$$

4.6 Vector Error Correction Model Estimates

In estimating the dynamic relationships between financial system development and economic growth in Nigeria, both the short run and the long run results are reported. This can help us evaluate the long run or steady state conditions as well as the short-term behavior of real per capita income growth arising from changes in financial system. The results of the ECM and the long run models of the two co integrating equations are reported in Table below.

In the long run equation, all the coefficients of all the variables are negatively signed, and are significant at the 5 and 10% level, although that of broad money supply is positively signed. This suggests that in the long run, given that positive changes in the financial system *ceteris paribus*, there will be growth enhancing effects from the sector.

In the short run estimates, it was shown that the previous period deviation (speed of adjustment) from long run equilibrium is corrected in a present period at an adjustment speed of 25%. A percentage change in both financial development indicators are associated with a 0.13% and 0.015% increase in the real GDP per capita respectively during the first lag on average *ceteris paribus* in the short run. These coefficients are positive and suggest that in the short run the behavior of instruments in the financial market have a positive impact on real income levels. While, the coefficient of capital stock and human capital indicator has a negative impact on the RDGP in the short run at first lag with an association of 0.02% and 0.09% decrease in the RGDP Apparently, these are the essential variables that can predict the short-term behavior of per capita income growth in Nigeria. While some variables were able to maintain their signs during the second lag, others changed. The coefficient for broad money is associated with a 0.011% decrease in RDGP as opposed to its first lag. The stock of capital predicts a 0.022% increase in the RGDP with respect to the second lag which is in contrast with the

previous period. Also, the coefficient of human capital which has a negative impact on RGDP in the first lag, is shown to have a 0.07% increase on RGDP in the second lag. While domestic credit, inflation and population all maintained their previous signed status. The coefficient of the error correction term has the expected negative sign and is significant at the 1 percent level. This shows that long run adjustment following any short-term disequilibrium will be achieved.

Table 4.8 Long run VECM ESTIMATE:

Variable	Coefficient	T statistics	Prob
LNRGDP(-1)	1.000000		
LNBDM(-1)	0.396950	18.7486	(0.02117)
LNDMC(-1)	-0.240142	-20.7934	(0.01155)
LNK(-1)	-0.063837	-4.43944	(0.01438)
LNHC(-1)	-0.804710	-70.5907	(0.01140)
LNINFL(-1)	-0.066064	-24.1103	(0.00274)
LNPOPG(-1)	-2.946001	-24.5959	(0.11978)
C	-2.126235		

Prepared by the Author

Table 4.9 Short run VECM ESTIMATE

Variable	Coefficient	Standard error	T statistic	Prob
C	0.009437		0.62781	(0.01503)
D(LNRGDP(-1))	0.452677	0.073470	1.48906	(0.30400)
D(LNRGDP(-2))	0.270231		0.49615	(0.54465)
D(LNBDM(-1))	0.139676	0.205066	0.77753	(0.17964)
D(LNBDM(-2))	-0.107785		-0.77504	(0.13907)

D(LNDMC(-1))	0.015744		0.16066	(0.09800)
D(LNDMC(-2))	0.064362	0.247037	0.62566	(0.10287)
D(LNK(-1))	-0.028046		-0.38435	(0.07297)
D(LNK(-2))	0.022110	0.203595	0.33468	(0.06606)
D(LNHC(-1))	-0.098282		-0.44101	(0.22285)
D(LNHC(-2))	0.070152	0.102051	0.24156	(0.29042)
D(LNINFL(-1))	0.001803		0.07045	(0.02559)
D(LNINFL(-2))	0.021479	1.589755	1.59358	(0.01348)
D(LNPOPG(-1))	-0.639206		-0.09091	(7.03150)
D(LNPOPG(-2))	-0.171377	0.001648	-0.02119	(8.08853)
ECM(-1)	-0.248733		-0.50807	0.48957

Prepared by the Author

4.7 Hypothesis Testing

The results from the long-run equation shown above, suggests that all the coefficient of both the financial sector development and the development of level of human capital are quite significant at the level of 5%. This therefore suggests that the null assumption that the financial development indicators in this study has no significant influence on the growth of the Nigerian economy hence, the null hypothesis is rejected., and the alternate accepted. Human capital indicator is also statistically significant at the 5% level allowing for the rejection of the null hypothesis and accepting the alternative. Gross capital formation has been significantly stable thereby showing its effect on the economic growth in Nigeria at the level of 5% therefore we reject the null hypothesis and accept the alternative. Finally, of the two control variables, only inflation can be said to explain any significant influence on the economy at 5% level, while population growth shows otherwise exceeding the 5% significant level, we therefore do not reject the null hypothesis and accept the alternative.

CHAPTER 5

FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Findings

The results reveal that broad money (BDM) has a negative significant impact on economic growth in the long run and a positive impact on economic growth In the short run first lag (with the impact more pronounced) which can be explained as a result of the country's overdependence on oil; that the level of credit to the private sector proxy by DMC, by banks, has a strong positive impact on economic growth both in the long run and in the short run which follows the apriori expectation; that capital stock proxy by gross capital formation share of GDP (K) has a positive significant impact on the economic growth both in the long run and short run; that human capital proxy by gross share of secondary school enrollment (H) has a positive and significant impact on the economy in the long run but a negative and significant impact on the growth of the economy in Nigeria in the short run, meaning that secondary school enrollment rate hasn't played an active role in the economic growth in Nigeria during the period covered by the study possibly as a result of corrupt governance and misappropriation ; that inflation and population are strong policy variables in the long run. This finding hence conforms with the study of Ibaladin, Mathew and Daniel (2014) Abraham and Umar (2011) Keshob Sharma (2016)

5.2 Conclusion

In this study, we sought to investigate the effect of financial development and human capital on economic development in Nigeria. A dynamic framework was devised for the analysis using the OLS and ECM model with data sourced for both the financial measures and human capital variables covering the period 1981 to 2016. Empirical findings show that the financial indicators are capable of promoting both short run and long run growth effects in Nigeria.

The OLS result reveals that the two financial indicators have a mixed impact on the growth of the economy; where broad money has a negative significant effect on the growth of the economy at 10%, domestic credit to private sector by banks has a positive significant impact on the development of the economy at 10% level. Furthermore, capital stock has a positive but insignificant impact on the economy, while human capital shows a positive and a significant attribution to the growth of the economy at 5% level.

Two implications are evident on the variables from the short run results. First that broad money has an impact in stimulating short term economic growth at first lag but has a negative sign at the second lag; that the capital stock K as revealed in the result has an impact in stimulating short term economic growth in the second lag but not at the first lag.

The result reveal that none of the financial development measures and the human capital variables is significant in the ECM estimates. Second, the results further reveal that domestic credit appear to be more relevant for short run income growth purposes both at the first and second lags. The result of the study supports the existence of positive correlation among financial development, human capital, and economic growth.

5.3 Recommendation

After a revision of the empirical analysis, the implication is that policy makers should model effective development policies that encourage financial assistance to help groom ideas and innovations, as well as extra attention to the educational sector and it is also important to note that effective financial intermediation will be extremely beneficial in promoting economic growth in Nigeria. Therefore, a structured policy that will enhance an effective distribution of credits credit to both the private sector and the households will ease credit constraints and encourage human accumulation capital, hence, gives room for the growth of GDP in Nigeria. Thus, accumulation of human capital should not be only a public sector affair, but rather, individuals should be empowered and allowed access to financial resources, such that they can fund human capital accumulation through RnD or empowerment programs so as to also give a room to uneducated citizens. Given the low degree of human capital development as well as the apparent decline in economic performance in Nigeria; these findings are significant, in that they established the connection among financial development, human capital accumulation and real GDP growth. Therefore, it provides policy makers, with policy options and tools to stimulate economic growth by establishing proper financial policies to encourage human capital accumulation, through the easing of credit constraints and thereby enhancing access to credit.

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APPENDIX

Appendix 1: Descriptive Statistics result

Variable	LNRGD P	LNBDM	LNDMC	LNK	LNHC	LNINFL	LNPOP G
Mean	7.37144 8	3.16268 4	2.64452 2	2.44146 5	3.40356 3	2.43336 9	0.94716 0
Median	7.25182 6	3.08937 1	2.58177 1	2.46357 2	3.30912 8	2.58531 2	0.94741 6
Maximum	7.84897 0	3.76737 0	3.64671 7	3.52697 3	4.07619 8	4.72806 4	0.99881 5
Minimum	7.04849 6	2.58254 4	2.16251 6	1.69873 3	2.83371 7	0.01000 0	0.91155 3
Std. Dev.	0.26353 3	0.26600 8	0.32217 8	0.41734 3	0.28945 1	1.33290 6	0.02691 3
Skewness	0.64897 6	0.07342 4	1.29633 8	0.57221 5	0.75646 1	- 0.409950	0.14224 9
Kurtosis	1.84663 6	2.66249 0	5.32524 0	3.14291 5	3.03823 2	2.50167 9	1.65958 2
Jarque- Bera	4.39677 3	0.19757 0	17.6877 1	1.93979 7	3.34015 6	1.34248 3	2.73825 2
Probabilit y	0.11098 2	0.90593 7	0.00014 4	0.37912 1	0.18823 2	0.51107 4	0.25432 9
Sum	258.000 7	110.694 0	92.5582 8	85.4512 7	119.124 7	85.1679 3	33.1506 0
Sum Sq. Dev.	2.36129 1	2.40585 6	3.52915 2	5.92196 7	2.84858 5	60.4057 5	0.02462 7
Observati ons	35	35	35	35	35	35	35

Appendix 2: OLS Regression Result

Dependent Variable: LNRGDP

Method: Least Squares

Sample: 1981 2015

Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBDM	-0.265315	0.153616	-1.727129	0.0952
LNDMC	0.200069	0.116569	1.716316	0.0971

LNK	0.110473	0.068105	1.622095	0.1160
LNHC	0.510820	0.085511	5.973704	0.0000
LNINFL	-0.016318	0.015795	-1.033137	0.3104
LNPOPG	3.303871	1.069208	3.090017	0.0045
C	2.583559	0.838141	3.082488	0.0046

R-squared	0.865362	Mean dependent var	7.371448
Adjusted R-squared	0.836510	S.D. dependent var	0.263533
S.E. of regression	0.106557	Akaike info criterion	-1.463425
Sum squared resid	0.317920	Schwarz criterion	-1.152355
Log likelihood	32.60994	Hannan-Quinn criter.	-1.356044
F-statistic	29.99406	Durbin-Watson stat	0.650638
Prob(F-statistic)	0.000000		

Appendix 3: Johansen Cointegration Test Result

Sample (adjusted): 1983 2015

Included observations: 33 after adjustments

Trend assumption: Linear deterministic trend

Series: LNRGDP LNBDM LNDMC LNK LNHC LNINFL LNPOPG

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.945542	213.3724	125.6154	0.0000
At most 1 *	0.717591	117.3318	95.75366	0.0007
At most 2 *	0.656271	75.60660	69.81889	0.0160
At most 3	0.400940	40.36587	47.85613	0.2097
At most 4	0.376017	23.45688	29.79707	0.2244
At most 5	0.211371	7.893023	15.49471	0.4769
At most 6	0.001722	0.056864	3.841466	0.8115

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.945542	96.04061	46.23142	0.0000
At most 1 *	0.717591	41.72518	40.07757	0.0323
At most 2 *	0.656271	35.24073	33.87687	0.0342

At most 3	0.400940	16.90899	27.58434	0.5878
At most 4	0.376017	15.56386	21.13162	0.2514
At most 5	0.211371	7.836159	14.26460	0.3956
At most 6	0.001722	0.056864	3.841466	0.8115

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Appendix 4: Johansen Normalization Test Result

1 Cointegrating Equation(s):	Log likelihood		248.2061			
Normalized cointegrating coefficients (standard error in parentheses)						
LNRGDP	LNBDM	LNDMC	LNK	LNHC	LNINFL	LNPOPG
1.000000	0.474013 (0.06335)	-0.279173 (0.04087)	0.020497 (0.04059)	-0.720230 (0.03936)	-0.072476 (0.00820)	-4.410197 (0.38174)

Appendix 5: Vector Error Correction Model Result

Cointegrating Eq: CointEq1

LNRGDP(-1)	1.000000
LNBDM(-1)	0.396950 (0.02117) [18.7486]
LNDMC(-1)	-0.240142 (0.01155) [-20.7934]
LNK(-1)	-0.063837 (0.01438) [-4.43944]
LNHC(-1)	-0.804710 (0.01140) [-70.5907]
LNINFL(-1)	-0.066064 (0.00274) [-24.1103]

LNPOPG(-1) -2.946001
(0.11978)
[-24.5959]

C -2.126235

Error Correction:	D(LNRGD P)	D(LNBD M)	D(LNDM C)	D(LNK)	D(LNHC)	D(LNINF L)	D(LNPOP G)
CointEq1	-0.248733 (0.48957) [-0.50807]	1.019447 (1.36645) [0.74605]	-0.192614 (1.64612) [-0.11701]	0.944921 (1.35665) [0.69651]	0.963474 (0.68001) [1.41685]	10.26588 (10.5933) [0.96909]	0.028913 (0.01098) [2.63340]
D(LNRGDP(-1))	0.452677 (0.30400) [1.48906]	-1.126050 (0.84851) [-1.32709]	-1.438461 (1.02217) [-1.40726]	-0.056073 (0.84243) [-0.06656]	-0.641145 (0.42226) [-1.51836]	-8.224473 (6.57800) [-1.25030]	-0.004614 (0.00682) [-0.67678]
D(LNRGDP(-2))	0.270231 (0.54465) [0.49615]	0.122433 (1.52021) [0.08054]	1.944111 (1.83135) [1.06157]	-0.443384 (1.50931) [-0.29377]	-0.332286 (0.75653) [-0.43922]	-5.893397 (11.7853) [-0.50006]	-0.017477 (0.01221) [-1.43080]
D(LNBDM(-1))	0.139676 (0.17964) [0.77753]	0.133874 (0.50140) [0.26700]	0.724533 (0.60402) [1.19951]	0.084318 (0.49781) [0.16938]	0.039570 (0.24952) [0.15858]	0.759837 (3.88707) [0.19548]	-0.011421 (0.00403) [-2.83475]
D(LNBDM(-2))	-0.107785 (0.13907) [-0.77504]	-0.551672 (0.38816) [-1.42123]	-0.371493 (0.46761) [-0.79445]	0.356919 (0.38538) [0.92615]	0.031152 (0.19317) [0.16127]	2.448397 (3.00920) [0.81364]	-0.007502 (0.00312) [-2.40546]
D(LNDMC(-1))	0.015744 (0.09800) [0.16066]	0.168318 (0.27353) [0.61535]	-0.094160 (0.32951) [-0.28575]	-0.131411 (0.27157) [-0.48389]	-0.124183 (0.13612) [-0.91229]	-1.796330 (2.12052) [-0.84712]	0.006673 (0.00220) [3.03597]
D(LNDMC(-2))	0.064362 (0.10287) [0.62566]	0.166670 (0.28713) [0.58047]	0.264312 (0.34589) [0.76414]	-0.323641 (0.28507) [-1.13531]	-0.128918 (0.14289) [-0.90222]	0.038483 (2.22593) [0.01729]	0.002948 (0.00231) [1.27773]
D(LNK(-1))	-0.028046 (0.07297) [-0.38435]	-0.066969 (0.20367) [-0.32881]	0.018322 (0.24536) [0.07467]	-0.209657 (0.20221) [-1.03682]	-0.058745 (0.10136) [-0.57958]	-1.526248 (1.57894) [-0.96663]	-8.60E-05 (0.00164) [-0.05257]
D(LNK(-2))	0.022110 (0.06606) [0.33468]	0.055811 (0.18439) [0.30268]	0.003560 (0.22213) [0.01603]	-0.638474 (0.18307) [-3.48764]	0.007052 (0.09176) [0.07686]	0.781168 (1.42947) [0.54647]	0.002479 (0.00148) [1.67290]
D(LNHC(-1))	-0.098282 (0.22285) [-0.44101]	0.187480 (0.62202) [0.30141]	0.053626 (0.74933) [0.07157]	0.712094 (0.61756) [1.15308]	0.404765 (0.30955) [1.30760]	0.649248 (4.82214) [0.13464]	0.011940 (0.00500) [2.38900]

D(LNHC(-2))	0.070152	0.291731	-0.893707	0.868755	0.170457	3.538084	0.014343
	(0.29042)	(0.81060)	(0.97651)	(0.80479)	(0.40340)	(6.28411)	(0.00651)
	[0.24156]	[0.35989]	[-0.91521]	[1.07948]	[0.42255]	[0.56302]	[2.20217]
D(LNINFL(-1))	0.001803	-0.025979	-0.121022	0.049191	0.042715	-0.436170	0.001636
	(0.02559)	(0.07143)	(0.08605)	(0.07092)	(0.03555)	(0.55377)	(0.00057)
	[0.07045]	[-0.36369]	[-1.40639]	[0.69361]	[1.20161]	[-0.78764]	[2.85060]
D(LNINFL(-2))	0.021479	0.050697	0.008629	0.001186	0.028799	-0.494699	0.000756
	(0.01348)	(0.03762)	(0.04532)	(0.03735)	(0.01872)	(0.29164)	(0.00030)
	[1.59358]	[1.34762]	[0.19041]	[0.03175]	[1.53827]	[-1.69625]	[2.50053]
D(LNPOPG(-1))	-0.639206	-9.429896	11.72011	-25.07499	-10.43235	-101.2200	1.044361
	(7.03150)	(19.6259)	(23.6427)	(19.4852)	(9.76681)	(152.148)	(0.15770)
	[-0.09091]	[-0.48048]	[0.49572]	[-1.28688]	[-1.06814]	[-0.66527]	[6.62266]
D(LNPOPG(-2))	-0.171377	10.97392	-10.55821	36.02051	11.71595	149.2842	-0.310386
	(8.08853)	(22.5763)	(27.1969)	(22.4143)	(11.2350)	(175.020)	(0.18140)
	[-0.02119]	[0.48608]	[-0.38821]	[1.60703]	[1.04280]	[0.85295]	[-1.71105]
C	0.009437	-0.003755	0.013076	-0.042810	0.030761	0.124662	-0.000260
	(0.01503)	(0.04196)	(0.05054)	(0.04166)	(0.02088)	(0.32527)	(0.00034)
	[0.62781]	[-0.08949]	[0.25870]	[-1.02768]	[1.47322]	[0.38326]	[-0.76977]
R-squared	0.354674	0.561893	0.580875	0.614457	0.430730	0.645725	0.972433
Adj. R-squared	-0.250318	0.151167	0.187946	0.253010	-0.102962	0.313592	0.946589
Sum sq. resids	0.086366	0.672834	0.976433	0.663217	0.166630	40.43712	4.34E-05
S.E. equation	0.073470	0.205066	0.247037	0.203595	0.102051	1.589755	0.001648
F-statistic	0.586246	1.368048	1.478319	1.699992	0.807077	1.944174	37.62688
Log likelihood	49.23229	16.38585	10.42733	16.61618	38.71740	-49.15023	170.7520
Akaike AIC	-2.077018	-0.024115	0.348292	-0.038511	-1.419838	4.071889	-9.672000
Schwarz SC	-1.344150	0.708753	1.081160	0.694357	-0.686970	4.804757	-8.939132
Mean dependent	0.017225	-0.013514	-0.006276	-0.010785	0.023842	-0.049069	0.001267
S.D. dependent	0.065705	0.222578	0.274138	0.235565	0.097171	1.918840	0.007130