IPRPD
International Journal of Business & Management Studies
Volume 01; Issue no 02: August 31, 2020

COVID 19: THINKING INVESTMENT AND LIQUIDITY RESILIENCE

Dr. Oluitan Roseline O.[1]

Dr. Arewa Ajibola[2]

Dr. Eke Patrick O. [3]

Dr. Soyebo Yusuf A.[4]

[1 2 3 4]*Department of Banking & Finance,Faculty of Management Sciences,Lagos State University, Ojo, Lagos, Nigeria. E-mail: usefaith4eva@gmail.com*

Received: 27/07/2020
Accepted for Publication: 25/08/2020
Published: 31/08/2020

Abstract

This paper examines the impact of investments and liquidity resilience on economic recovery in view of the rampaging impact of COVID 19 to the world. The severity of the pandemic is unwholesome to the global economy, while the future is uncertain of which the paper conjectures. For Nigeria, this aberration may be attributed to gaps in social and economic investments. Many economies have become protective of their strength to be able to withstand the shock and variability associated with this pandemic. This study examines the readiness of the country to withstand emerging shocks and postulates on resilient measures that will assist the country to manage such situations better and place it on a better pedestal in the comity of nations.

Keywords: Investment; Liquidity; Economic Recovery; COVID-19

1.0 INTRODUCTION

Economies without institutionalized economic buffers and financial instruments would always and easily experience the business and economic cycles. The world is presently going through a pandemic i.e. COVID 19 that is contagious and has claimed many lives. In response, many economies were shut down to prevent further spread. A landmark economic implication of this pandemic is the speed of global interconnectedness of human risk factors, and fragility to crises. The associated economic and financial impacts may need to be examined from the perspective of the importance of investment and liquidity for sustainable economic recovery. Herein lies the importance of the financial institutions to ensure adequate and appropriate financial intermediation within the economy. Early economists support the view of the existence of causation between financial development and economic growth. What remains contestable is the direction of causation. This implies that both economic growth and financial development are capable to exert positive impact. This position is not different for Nigeria.

The main function of a financial system is to direct savings to prospective investors, such that, where the economy lacks the requisite investment capital, the financial system may fill the gap (Oluitan, 2012a). The finance intermediation process of mobilization, allocation, and utilization may yet need re-evaluation for optimal support for the economic system to achieve expanded development. Ideally, development should be seen as a process of expanding the real freedom that people enjoy (Sen, 1999). In particular, the level of buoyancy and ease of accessing the credit market

matters for the investment market in the short-run, not only for social welfare, stability, and economic growth but the long-run risk-taking for development.

The weakness of the banking system may lessen the capacity of the economy, and hence aggravate the adverse impact of the pandemic. For instance, the World Economic Forum (WEF, 2019), reveals that the lack of a strong financial system has strongly decelerated global productivity to competitiveness index deficit of 4.0, and developing (frontier) economies are the most culprit. The report reveals that on average, frontier economies distanced from the global average with 40 points. The index captures the set of institutions, policies, and factors that determine the level of productivity, and thus the determinants of long-term growth (WEF, 2019).

Nigeria's rating scored 48.3 and overall ranked 116 out of 141 economies in descending order. In terms of financial depth for growth, Nigeria ranked 131 out of 141 economies, a dismal domestic credit to private sector ratio of 129 out of 141 economies; financing of SMEs: 127/141; venture capital availability 133/141; market capitalization ratio to GDP: 95/141; insurance premium ratio to GDP: 125/141. Presented in chart 1 below is the fair rating of Nigeria among global population competitive peers in terms of a critical element of financial depth- the bank branch per 100,000 adults. The chart suggests that Nigeria has been relatively underperforming in meeting the economy's financial capacity, as it could only provide dismal 4.3 in 2018, relative to Brazil with 18.985, Indonesia 16.243, India 14.564, Pakistan 10.243 and China 8.85 (World Bank, 2019).

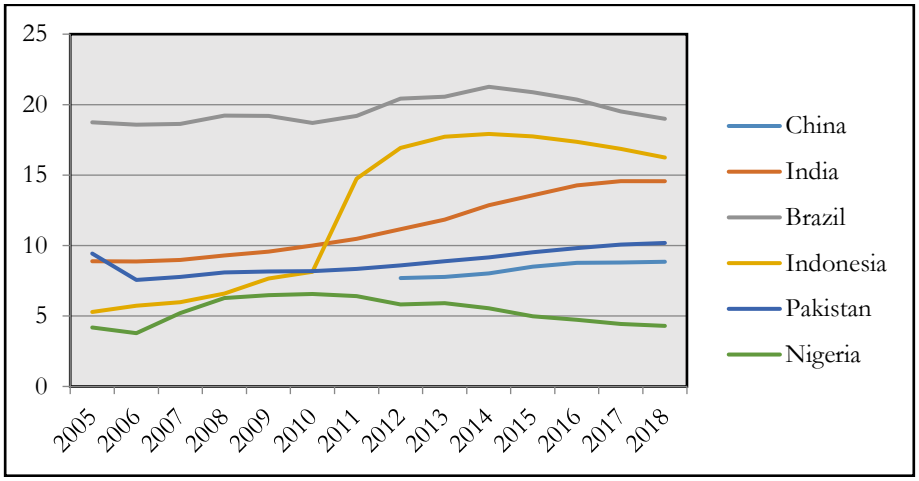


Chart.1: Bank Branch Per Capita for six most populated global developing economies

Source: the authors, 2020, figure were obtained from the World Bank Indicators data base on www.worldbank.org. No available data for China from 2005 to 2011.

Specifically, the Nigerian banking system does not seem to operate to meeting the credit needs of Nigeria's financial market, particularly the SMEs model (Mabogunje, 2020). While the significance of the SMEs is well known, they are often short-out from the credit market, as banks usually consider them higher-risk borrowers. Parker (2010) listed three factors that prompt banks to claim to withhold lending to SMEs-

- Being custodians of SMEs checking accounts, they have a greater knowledge of their transaction history.
- The operating capacity of the SMEs might be small relative to the Bank's acceptable minimum, and
- The bank has professional loan officers that specialize in small-business lending with the requisite experience to evaluating the firm's loan usage potency.

Nevertheless, the interest-rate factor is more problematic. Due to monetary tightening by the authorities, banks are forced to increase lending rate hence only highly profitable and the big borrowers can afford. This situation shuts out the essential sectors of the economy as revealed by the chart on the sectorial credit allocation by banks in Nigeria for 2017 and 2018.

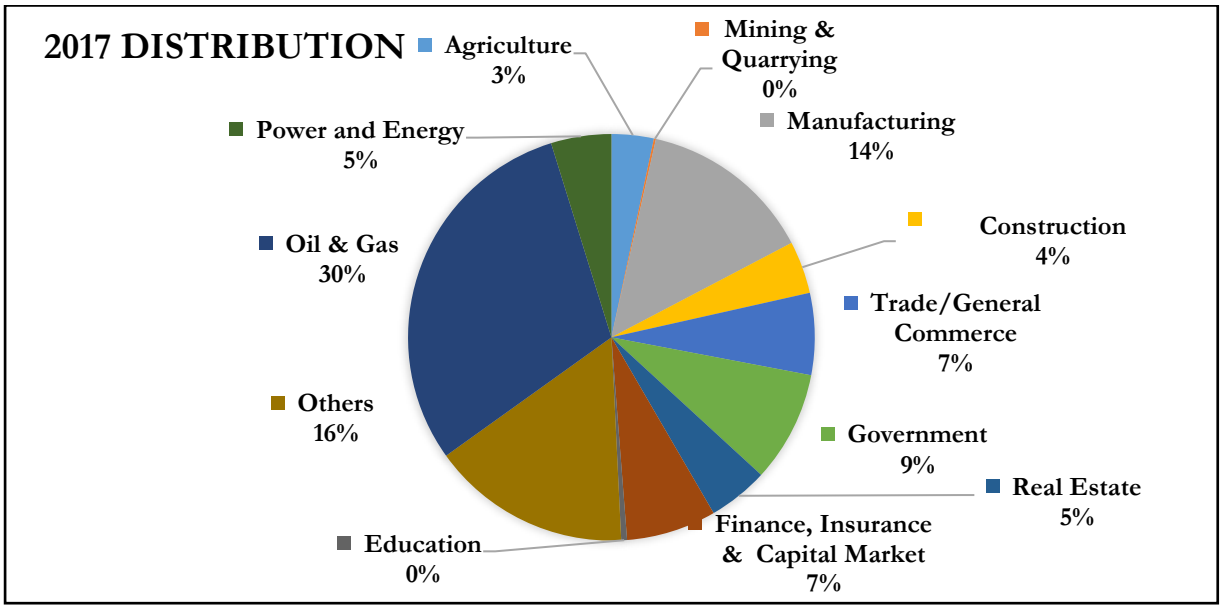


Chart 2

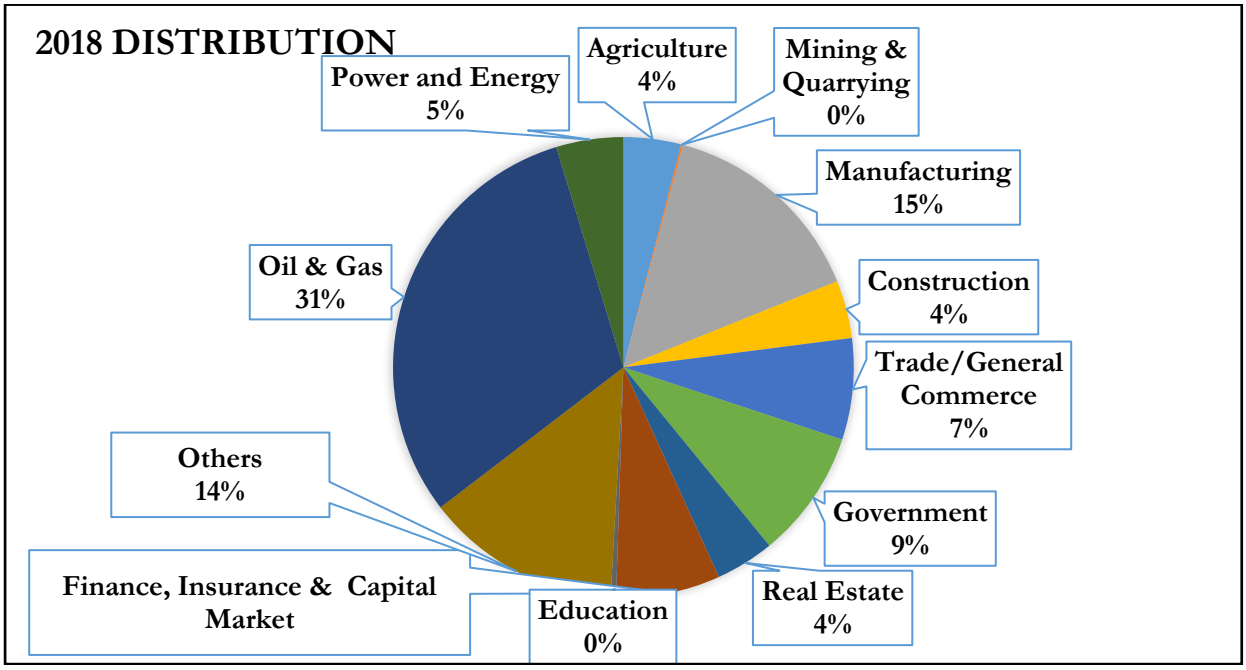


Chart 3

From the above charts, the chunk of bank credit goes to Oil and Gas sector closely followed by Manufacturing. The oil sector according to Oluitan (2012a) does not exhibit an appropriate impact on economic growth as the model shows some setback. However, Crowley (2008) observes a negative impact between oil export and economic growth. The above may posit some investment issues due to the country's reliance on oil export and equally banks overbearing finance of the oil and gas sector.

Since the emergence of COVID 19, oil prices have plummeted significantly to about $20 per barrel contrary to the budgeted amount of over $50 per barrel. In addition to this, the country has had to reduce the proposed oil output from 2,300 barrels per day to about 1,300 barrels per day. Despite this situation, the emergence of the pandemic has brought in unexpected expenditure as all COVID 19 patients are treated free of charge. To prevent further spread, the country witnessed total lockdown with a huge amount spent on palliatives and medical services/supplies. This implies that the country is bedeviled with twin problems of the pandemic and huge budget deficit financing with unstable income. Most economies are already in recession hence appropriate and adequate measures must be initiated to forestall the impact of the economic vices on the populace and also ensure timely

recovery. This paper examines the impact of investment and liquidity resilience to facilitate quick economic recovery hence will conduct a vector error correction method for 39 years (i.e. 1980 to 2018)

2.0 LITERATURE REVIEW

2.1 Conceptual Framework

Investment can be defined as the total volume of capital acquisition made in an economy at any given time which includes both domestic and private sources. In essence, investments made within an economy could be funded from two sources namely domestic and foreign. According to the Keynesian view, investment relates to the aggregation to capital that assists to increase the level of income and production, by increasing the level of production and also the purchase of capital goods (Jhingan, 2003). It can thus be described as a deferred consumption that is diverted to capital acquisition.

Savings is a measure of liquidity and it is the part of income that is not consumed nor spent on taxes. It is opined that households either spent their income to acquire bonds in companies and these companies spend such funds on investment purposes or they deposit such funds in their bank accounts and banks use the funds to support investment through intermediation process. It, therefore, postulates that savings and investment are twin in nature and essential within the economy.

Economic growth is defined as a positive change in the national income or the level of production of goods and services by a country over a certain period of time. This is often measured in terms of the level of production within the economy (Oluitan, 2012a). Other possible measures include total factor productivity, factors of production such as technological change, human capital index and these are termed the Schumpeterian approach, other measures of growth range from real per capita GDP; the rate of physical capital accumulation, etc (Odedokun 1998; King & Levine 1993; Allen & Ndikumama 1998). The duo of investment and savings are capable to increase the level of production of goods and services and if appropriately channeled should maintain a positive relationship.

2.2 Theoretical Framework

2.2.1 Supply Leading and Demand Following Hypothesis

The existence of a relationship between finance and growth seems incontestable as many researchers have worked on the issue and positively confirmed it. What is debatable is the direction of causality. Similar to the argument on savings-investment and growth, whichever source finance is garnered for investment purposes, it translates to an increase in the level of production which supports growth. The direction of causality has been described by Patrick (1966) as supply-leading and demand-following hypothesis. When the causal relationship runs from finance to growth, it is termed supply-leading because it is believed that the activities of the financial institution increase the supply of financial services which creates economic growth. Similarly, when the growth within the economy results in an increase in the demand for financial services or investment and this subsequently motivates financial development, then it is termed a demand-following hypothesis. The variant view is the bi-directional causation that proposes that causation runs from both finance and growth simultaneously. Whichever way it is viewed, it suggests that finance and growth are able to impact each other.

2.2.2 Neoclassical Theory of Savings and Investment

This theory posits that the distribution of wealth between enterprises and households is important to ensure proper and adequate savings and investment. It argues that savings are essential to ensure adequate liquidity that promotes investment to enhance the productive base of the economy. This is achieved through deferred consumption of the disposable income to generate savings that are used

to support investment. It suggests that both savings and investment are positively correlated and is also a function of household disposable income.

This theory is criticized because it assumes full employment for market equilibrium to generate growth within the economy. According to Flassbeck (2008), 'the assumption of full employment prevents a fall in demand brought about by an increase in the savings rate, which amounts to saying that employment cannot fall because it is assumed that it cannot fall. In the closed economy version of the model, higher savings lead to an immediate reduction in the interest rate and they react by increasing firms' investment despite falling profits since they supposedly have perfect foresight and anticipate higher growth in the future,. This implies that firms increase investment even as involuntary inventories rise and their capacities are not fully utilized. It is hard to think of a real-world entrepreneur who would behave in this way'. Nonetheless, the theory serves as a major pedestal upon which studies of this nature are premised.

2.2.3 Endogenous Growth Theory

This theory propounded by Pagano (1993) posits that the potential effects of savings and investment on economic growth are a linear function of capital accumulation. It argues that if financial institutions are efficient in the process of intermediation within the economy, their activities could impact economic growth through three channels namely:

- Reduction in transaction costs
- Channel increased savings to firms for productive investments,
- Improve the allocation of capital and the rate of savings.

Endogenous growth theory explains long-run growth as emanating from economic activities that create new technological knowledge frontiers. It promotes long-run economic growth at a rate determined by forces that are internal to the workings of the economy which provide opportunities and incentives to create technological knowledge. It opines that the long-run rate of economic growth which is measured by the growth rate of output per person depends on the growth rate of total factor productivity (TFP), which is determined in turn by the rate of technological progress. This theory challenges the neoclassical view by proposing channels through which the rate of technological progress and the long-run rate of economic growth can be influenced by economic factors.

2.2.4 Business Cycle Theory

The business cycle theory posits that a nation's investment expenditure is often the most volatile (Parker, 2010). Since it constitutes the highest source of the gross domestic product (GDP) of the big global economies, every nation's measure of economic performance may be determined by the quality and quantity of its private and government investments. It suffices that the annual gap in the real GDP growth rate may result from the quality of private and public investment decisions in any economy. Therefore, investments perform a cardinal role in the short and long-run development of any economy. No nation attains the transformation of its people in education, health, and other social welfare needs without the right amount of investments (Todaro and Smith, 2009). The investment process is important to business and economic cycles. The key theoretical approaches to investment demand gap are the business cycle theory, of which Keynes (1936) used the General Theory of Employment, Interest, and Money to address. The study opines that cyclical fluctuation and unemployment crises in post-war economies were caused by fluctuations in investment expenditures, rather than the doctrine of automatism.

The business of any investment involves risk-taking, while advancement in finance-economic growth in any economy is about being definitive on risk-sharing attitude by its institutions and individuals. The level of risk and uncertainties in the credit market affects the level of investment (Valiante, 2016). In a period of health war, as it is with COVID 19, the doctrine of availability of credit for investments and credit rationing may have to be addressed in bank-based economies. During post World War II depressions in western economies, the apparent inelasticity between the price of credit and demand provided the platform for the doctrine of credit availability, as monetary

policy became weak as an economic stabilization policy (Matthews and Thomson, 2014). The experience was enough for John Maynard Keynes to insist that fiscal policy remains the antidote to kick-start any economy post-economic crises and maintain economic stabilization.

Furthermore, investment demands may be influenced by saving behavior, tested in the life-cycle hypothesis, an innovation by Modiglinni and Brumberg (1954). The theory assumes that income-earning individuals maintain a fairly constant level of consumption from year on year, irrespective of income changes, hence build life-long savings. Thus, the main purpose of savings is to accumulate savings for investment and hence guarantee late-life spending (Pressman, 2006).

The theories that motivate public investments see reasons why the public interest for survival needs to be maintained, which includes the growth of the society and economy, and to help other economies from crises (Bhatia, 2008). Of recent, contrary to the philosophy of the post Keynesians as highly promoted by Samuelson, (Samuelson and Nordhaus, 2004) expansionary fiscal policy (Pressman, 2006) provides for an increasing trend in public expenditure. The doctrine has not favoured the new classical economists such as Lucas (1981), Sargent (1986), and the monetarists (Friedman, 1953) that rated market mechanism as a better guide to the workings of the economy and for efficient resources allocation.

In contemporary time, the reasons for increasing public expenditures, that has accounted for huge public debt, may be justified in the well-known 'law of ever-increasing state activities' by Wagner (1893) and the Wiseman and Peacock (1961) activity dynamics otherwise called the step-wise form of state expenditure occasioned by unforeseen state challenges. Lucas (1981) however believed in a greater role for the private sector as a rational expectation approach to macroeconomic management could dictate.

Nevertheless, this ideological debate is still open in the literature, as to what extent, government public expenditure policy could salvage economic recovery and enable sustainable growth.

2.2.5 Investment and Economic Growth

Theory backed policies for investment undertaken and economic outcomes have been related to the struggle for growth and development. However, over time, there are many theories guiding philosophy centres on the extent of government role, the extent of the market, the extent of reliance on the external sector, and the internally inspired growth. Policy tools were employed globally, perhaps starting from the five-stage growth process model credited to Roslow (1956). The neoclassical (exogenously) inspired growth model led by Solow (1956) and Swan (1956) may have transformed some else while developing economies into stardom, leading to non-conditional convergence (Obstfeld, 2009) at a fast rate (Eke, 2018). However, the neo-classicalism failures in other economies have generated intense debate among leading economists. The contention has brought-forth the innovations of the new-growth (endogenous) theory led by Lucas (1988), and Romer (1990) for conditional convergence (Obstfeld, 2009); and neo-Keynesian school theorizing of Samuelson (Samuelson and Nordhaus,2004), and Stiglitz (2000a), whose contention against the market system and monetarism is the problem of information imperfections. Other growth traditions include arguments of the Marxian school, Social exclusion, and social capital theories (Davis and Sanchez-Martinez, 2014). In summary, given the diverse needs of poverty-ridden developing economies, none of the schools can be regarded as conclusive, since no theory is sufficient in itself as fit-for-all (Davis and Sanchez-Martinez, 2014).

2.2.6 Investment and Liquidity Risks

The relationship between investment and liquidity reveals the importance of quality investment outcome to market liquidity. Furthermore, the availability and size of liquidity may be related to the quality and sophistication of investment instruments, on one hand, the economy's level of financial structure, and the real income of consumers of the financial products (Ojo, 2010). These relationships may be of vicious cycles, where the three variables- investment instruments, liquidity, and consumers' per capita income reinforces each other.

In many developing economies, real per-capital income is very low, and even below the World Bank standard for poverty reduction (Fantom and Serajuddin, 2016), such that, their saving habit is weak, often at the short-end of investment requirement. Except for some financial investments that are on the short-end investment curve, many saving-investments customers want their savings to be liquid. However, technologically prone real growth and development projects and enterprises rely on medium to long-term funds from the financial system. Paradoxically, many developing economies are bank-based financial system, and except for enterprise savers, many active household savers often wish to draw on their savings-investment. This apparent structural weakness and saving-growth capital conflicts have weighed on financial intermediation process development and, hence, the investments, growth, and development of many bank-based developing economies (Levine, 2001; Ojo, 2010). Theoretically, the development of investment culture and indeed liquidity in the financial system is a function of the level and quality of information. Information quality may influence the patronage of investment instruments by the investing public (Stiglitz, 2000a) and improve the banking public.

2.2.7 Nigeria's Investment Policy Review

The Nigerian Fiscal Responsibility Act of 2007 is one of the latest bold policies by the government to establish prudent management of Nigerian resources. The Act has provisions within the nation's medium-term fiscal policy framework to engineer greater accountability and transparency in fiscal operation towards ensuring long-term macro-economic stability. The Act operates through a Commission that enforces the promotion of the nation's economic objectives, and related matters. Specifically, some salient public investment regulation function of the Commission includes:

- Promotion of the nation's economic objectives as detailed in section 16 of the Nigerian Constitution;
- Application of standard global good practices for allocation and management of public expenditure, revenue allocation, debt control, and transparency in fiscal matters (FR Act, 2007).
- Other public investment-related functions of the Commission include undertaking fiscal and financial studies, analyze, diagnose and disseminate the findings for the public interest.

Analogously, an implication that the nation's financial system and the economic system have been less configured or integrated, undiversified, and with less allocation efficiency may be the bane for the management of the nation's cash cow. The nation's major source of revenue and foreign exchange power has been from the oil and gas sector (PWC, 2016; Oluitan, 2012a). Although the sector contributes about 15 percent to Nigerian GDP and less significant to employment, the returns from the sector may economically be regarded as the major driver of public investments in the economy, as it generates above 70 percent of government revenue and more than 90 percent in foreign exchange earnings (PWC, 2016). However, pervasive evidence subsists that no significant financial spillover impact on major GDP drivers of the economy such as agriculture and manufacturing sectors has been achieved (Eke and Ojo, forthcoming). It may indicate that the oil and gas sector merely serves the best interest of foreign economies, apparently, the technology-importing economies. Ironically, a proposed Petroleum Industry Bill, for efficient management of the assets and operations of the sector is yet to be enacted after about 15 years with the nation's parliament, evidence of poor investment climate (WEF, 2015).

Poor investment culture may be regarded as acts of economic corruption, as it has tremendously limited the level of liquidity in the economy (Valiante, 2016). In the private sector, private investment expenditure for earning income is governed by the Investment Act, 2007, and other subtle investment regulations such as the CBN Act, 2007 and the Bank and other financial institutions Act, 1991. The governance effectiveness of these institutions are however weakly functional (WGI, 2018) and hindered by incompetence and gross-political interference.

2.3 Empirical Review

Evidence of interrelationship between investment, liquidity, and economic recovery in both country level and cross-country studies are analysed hereunder. It also identifies probable gaps in the studied literature. In a country-level study, Epaphra and Massawe (2016) test the interrelationship between Tanzania's private investment, public investment, foreign direct investments (FDI), and economic growth using the empirical methodology of granger causality and Johansen co-integration from 1970 to 2014. Both private investment and FDI influenced economic growth. However, the result reveals that the relationship between private and public investment is weak, which suggests that public investment may be mitigating the strong investment–growth nexus of private investment.

Adegboye and Alimi (2017) examine the composition of total investment and their relationship with financial sector development in Nigeria to investigate if the composition matters for investment behavior/outcome. The empirical result, studied using ARDL from 1981 to 2015 reveals that long-run co-integration exists among the variables. However, a complementary relationship does not exist between the private and public investments, but a crowd–out impact of public investment on private investment. Moreover, significant positive nexus exists between financial development and private-public investments. Ogunrinola and Debora (2015) examine Nigeria's stock market liquidity and economic growth from 1980 to 2012 using Johansen co-integration. The study reveals that there was cointegration between market liquidity and economic growth, however, stock market liquidity was not a significant determinant of economic growth. The study indicates that market liquidity study gap persist in Nigeria

In a related empirical study on financial inclusion and its impact on financial efficiency and stability covering 31 Asian economies from 2004 to 2016, Le, Chuc, and Taghizadeh-Hesary (2019) find that financial inclusion negatively influences efficiency, but improves the level of financial sustainability. It indicates that policies that improve financial competitiveness with financial availability would guarantee the stability of the financial system.

Oluitan (2012a) examines financial development and economic growth using nine different models to estimate the relationship for Nigeria from 1970 to 2005. The study shows that the model for the inclusion of real oil exports growth with real private sector credit growth, real gross domestic product growth, and real oil export growth were significant at 1%; 1%, and 5% respectively. The ECM coefficient is also significant at 5%. However, the model fails the LM test for serial correlation which serves as a major setback for it. This result is contrary to the findings of Crowley (2008) because total oil exports were not significant in the study. The other model that replaces oil export with non-oil exports presents a rather unstable result as only the real private sector credit growth and real total non-oil growth were significant at 10% and 5% respectively. The ECM coefficient is equally significant at 1% and the model satisfies all OLS requirements. The result is similar to the findings of Crowley (2008) because total non-oil export growth was significant in his study. Despite the drastic reduction in the value of non-oil exports from 42.4% in 1970 to 1.7% in 2005, this study still finds it significant.

Cheung et al (2012) adopt both time series and cross-sectional regression techniques to examine the relationship between investment and growth among 188 countries from 1950 to 2007. The outcome surprisingly reveals a weak relationship between investment share in GDP and purchasing power parity per capita, particularly among top advanced economies. Carlin and Mayer (2003) examine the relationship between the financial institutional structures and investment and growth among the advanced OECD countries from 1970 to 1995 using various regression techniques that include OLS and instrumental variables. It finds a strong relationship between the financial structure, the industrial characteristics, and the growth and investments of different industries.

Almsafia and Morzuki (2013) use multiple regression techniques to examine the relationship between foreign direct investment (FDI), domestic (private and public) investments, and economic growth in Malaysia from 1994 to 2013. The result reveals that both private and public investments spur economic growth, while FDI has an insignificant contribution to growth in Malaysia.

In justification for this study, evidence from these reviews suggests little attention has been given to the study of liquidity in the investment and growth nexus. Moreover, the emergence of the current pandemic and the antecedent economic recession necessitates the need to examine this

relationship with a view to posit antidote for a quick and positive economic turnaround. Furthermore, different measures/variables have been applied in the reviewed studies on investment and growth nexus. Likewise, different empirical methods are applied to ensure the robustness of the methodology and reliability of the postulations.

3.0 THEORETICAL FRAMEWORK AND METHODOLOGY

3.1 Theoretical Framework

Evidence from many investment theories have varied impact on productivity and growth. An eclectic theoretical framework is provided below. The framework reconciles the main technical views of Keynesian investment multiplier, neoclassical growth functions, endogenous and business cycle propositions.

3.2 Data and Estimation Technique

As earlier stated, this study uses times series data sourced from the Central Bank of Nigeria, the National Bureau of Statistics, and the World Bank for 39 years. It conducts a Vector Error Correction Method (VECM) of estimation and Impulse Response Function (IRF) along with other precursory methods such as Unit root and Cointegration to estimate the relationship. This method allows us to evaluate the investment and liquidity channels over the years and to posit possible choices that could assist the country to withstand shocks and variability hence resilient in solving the emerging crises and ensuring fast economic recovery.

3.3 Model Specification:

Following the approach of Epaphra and Massawe (2016), we express the following specification for our study.

$$GDP_t = con + a_1 FDI_t + a_2 \mathrm{CPS}_t + a_3 SAVINGS_t + a_4 PRIV_t + a_5 PUIV_t + a_6 MPR_t \ldots 1$$

Where real GDP (GDP), Foreign Direct Investment (FDI), Credit to the Private Sector (CPS), Total Savings (SAVINGS), Private Investment (PRIV), Public Investment (PUIV) and Monetary Policy Rate (MPR) are the variables in consideration.

$$GDP_t = con + b_1 FDI_t + b_2 SAVINGS_t + b_3 PRIV_t + b_4 PUIV_t + b_5 MPR_t + b_6 AGRI_t + b_7 MANU_t + + b_8 SERVICES_t + e_t \quad \ldots 2$$

Where real GDP (GDP), Foreign Direct Investment (FDI), Total Savings (SAVINGS), Private Investment (PRIV), Public Investment (PUIV) and Monetary Policy Rate (MPR) Distribution of Credit to the Agricultural Sector (AGRI), Distribution of Credit to the Manufacturing Sector (MANU) and Distribution of Credit to the Service Sector (SERVICES)

Apriori

The apriori expectation is GDP; FDI; CPS, SAVINGS; PRIV; PUIV > 0 while MPR < 0 – Model 1 and
GDP; FDI; SAVINGS; PRIV; PUIV; AGRI, MANU, SERVICES > 0 while MPR < 0 – Model 2

3.4 Presentation of Results

The results of our investigation cover Unit root and Cointegration tests, VECM and IRFs for the selected variables. The results are presented in the following tables and figures.

Variable	ADF-stat	5%-Critical Value	P-Value	Order of Integration
GDP	-3.39446	-2.945842	0.01780	I(1)
PUIV	-6.27197	-2.945842	0.00000	I(1)
PRIV	-6.09407	-2.945842	0.00000	I(1)
CPS	-3.40246	-2.945842	0.00100	I(1)
SAVINGS	-4.47146	-2.945842	0.00100	I(1)
SERVICES	-6.71204	-2.945842	0.00000	I(1)
MANU	-5.14068	-2.945842	0.00020	I(1)
AGRI	-6.95055	-2.945842	0.00000	I(1)
MPR	-3.42052	-2.945842	0.00000	I(1)
FDI	-5.47407	-2.945842	0.00000	I(1)

Table 1: Unit Root Test

Note all the variables of interest are real GDP (GDP), foreign direct investment (FDI), credit to the private sector (CPS), total savings (SAVINGS), private investment (PRIV), public investment (PUIV), monetary policy rate (MPR), distribution of credit to the agricultural sector (AGRI), distribution of credit to the manufacturing sector (MANU), and distribution of credit to the service sector (SERVICES),

The table reveals that the ADF statistic for each variable (@ first difference) is larger than their corresponding 5% critical value in absolute term. Meaning that all the variables are stationary at first difference, and so they are I (1) variables. This class of variables cointegrate together, which we confirm further by conducting Johansen test.

Hypothesized no CE's	Eigen-value	Trace-stat	5%-Critical value	P-value
None *	0.727729	88.99604	69.81889	0.0007
At most 1	0.478489	43.46251	47.85613	0.1217
At most 2	0.289249	20.67663	29.79707	0.3781
At most 3	0.174731	8.726465	15.49471	0.3913
At most 4	0.055672	2.004872	3.841466	0.1568

Table 2 - Cointegration Test for Variables in Equation 1

Note the system variables are real GDP (GDP), foreign direct investment (FDI), credit to the private sector (CPS), total savings (SAVINGS), private investment (PRIV), public investment (PUIV) and monetary policy rate (MPR).

None of the Eigen value is larger than 1, meaning that the system is stable. In addition, the null hypothesis of no cointegration is rejected, while the hypothesis of only one cointegrating vector cannot be rejected, thereby providing evidence of long run relationship between economic activities, foreign direct investment, public investment, private investment, monetary policy rate and credit to the private sector.

Hypothesized no CE's	Eigen-value	Trace-stat	5%-Critical value	P-value
None *	0.929857	268.6657	125.6154	0.0000
At most 1 *	0.882581	175.6629	95.75366	0.0000
At most 2 *	0.673478	100.6927	69.81889	0.0000
At most 3 *	0.575462	61.51865	47.85613	0.0016
At most 4 *	0.443608	31.53225	29.79707	0.0312
At most 5	0.213738	11.01237	15.49471	0.2107
At most 6	0.07149	2.596078	3.841466	0.1071

Table 3 - Cointegration Test for Variables in Equation 2

Note the system variables are real GDP (GDP), distribution of credit to the agricultural sector (AGRI), distribution of credit to the manufacturing sector (MANU), distribution of credit to the service sector (SERVIE), private investment (PRIV), public investment (PUIV) and foreign direct investment (FDI).

As shown in the table, we reject the null hypothesis. However, the hypothesis that there are four cointegrating vectors cannot be rejected, making us to claim that cointegrating relationship exist between real GDP, distribution of credit to the agricultural sector, distribution of credit to the manufacturing sector, distribution of credit to the service sector, private investment foreign direct investment and public investment in Nigeria.

	Coefficient	Std. Error	t-Statistic	Prob.
C	1875.534	435.7354	4.304295	0.0004
GDP(-1)	1.077236	0.217568	4.951251	0.0001
GDP(-2)	0.900582	0.270817	3.325427	0.0038
FDI(-1)	395.3232	189.7245	2.083669	0.0517
FDI(-2)	152.4511	159.6286	0.955036	0.3522
CPS(-1)	-6.899993	1.284957	-5.369825	0.0000
CPS(-2)	-4.454851	1.010684	-4.407756	0.0003
SAVINGS(-1)	4.966405	1.173741	4.231260	0.0005
SAVINGS(-2)	2.074266	0.814375	2.547067	0.0202
PVT. INV(-1)	0.021666	0.003176	6.820907	0.0000
PVT. INV(-2)	0.009606	0.003844	2.498984	0.0224
PUB. INV(-1)	7.330098	1.979488	3.703026	0.0016
PUB. INV(-2)	7.446002	2.437109	3.055260	0.0068
MPR(-1)	-157.1740	71.85275	-2.187446	0.0421
MPR(-2)	-102.7190	68.49998	-1.499549	0.1511
ECM	-0.658172	0.138282	-4.759633	0.0002
R-squared	0.965836	Mean dependent var		3339.666
Adjusted R-squared	0.937367	S.D. dependent var		3649.578
S.E. of regression	913.3658	Akaike info criterion		16.77734
Sum squared resid	15016266	Schwarz criterion		17.49562
Log likelihood	-269.2147	Hannan-Quinn criter.		17.02229
F-statistic	33.92518	Durbin-Watson stat		2.052331
Prob(F-statistic)	0.000000			

Table 4 - Long-run Stability and Short-run Relationship Evidence from Equation 1

Note all the variables of interest are real GDP (GDP), foreign direct investment (FDI), credit to the private sector (CPS), total savings (SAVINGS), private investment (PRIV), public investment (PUIV) and monetary policy rate (MPR).

3.5 Interpretation and Findings

The long-run coefficient (ecm) -65.81 percent provides evidence of stability in the long run and information that 65 percent disequilibrium can be corrected within a year. Meaning that economic activities react to short-term shocks in foreign private investment, credit to the private sector, total savings, private investment, public investment, and monetary policy rate at the rate of 65 percent. Expectedly propose that the disequilibrium from this COVID-19 pandemic will be corrected at the speed of 65 percent within a year. Foreign direct investment, savings, private investment, and public investment maintain a short-run positive impact on economic growth and they are significant at 5 percent. Credit to the private sector and monetary policy rate have a short-run negative and significant impact on economic activities.

Specifically, the lag of the dependent variable shows a significant impact with a large coefficient. More significantly is FDI whose coefficient for the two lags is hugely large and significant. It shows that FDI is a very potent source of investment for increasing the productive base of the economy. Savings which is the proxy for liquidity equally has an appreciable impact on GDP. This follows literature that specifies deferred consumption as the source for generating investible funds.

This result affirms its importance within the Nigerian economy. Private investment though exhibit positive relationship has a very tiny coefficient of 2% and less than 1% respectively for the two lags. This is not ideal as most developed economies are privately led. In Nigeria, the impact is very poor hence we are yet to be poised for a privately led economy that engineers growth. Contrary to private investment, public investment has a huge coefficient. It also confirms that the country is a public led economy. All the citizens look unto government to engineer growth. This situation cannot bring about much-needed development neither can it sustain growth that could possibly result in resilient investment activities which are the thrust of this paper. Unless and until we redirect the economy to being private-led while the government serves as the unbiased umpire, we shall continue to dream of sustained growth.

Akin to the observation on public investment is the result of credit to the private sector. The outcome shows a negative impact on GDP which suggests that financial intermediation in Nigeria exhibits a negative impact on the productive base of the economy. Earlier in this paper, we discussed the sectoral sources of fund utilization and the chunk of this goes to the oil and gas sector. It should be noted that this sector only produces crude oil largely managed by expatriates hence their income goes out of the economy as FDI to their respective countries. More importantly, the oil extracted is sent to other countries for value addition before we eventually buy such. This implies that the process of value addition to our crude positively impacts the counties where they are processed and negatively impact ours hence the observed trend.

The findings are not limited to oil and gas alone, the argument suffices for the agricultural sector where most of the products are exported as raw materials and value addition takes place in another country. All these are anti-growth policies that must be reversed without further delay. What has been observed with this COVID-19 pandemic is that food and services such as health, security, online services are resilient sectors that are not adversely affected by the crisis. As earlier stated, some countries have now disallowed food imports from their country. So what happens to a country that is not self-sufficient with food production?

The MPR has a negative sign and follows our a *priori* expectation. What is still important is that the banks must ensure that MPR serves as a potent benchmark for deciding their lending rate. Since the government reduced the MPR last year, many banks are yet to reduce their lending rate while the savings rate has been reduced in accordance with the Treasury Bill rate stipulation. As of February2020, some banks were still charging up to 25% as the lending rate. This is not patriotic and should be avoided as it only brings in the concept of asymmetric information that results in bad loans eventually. Specifically, the Central Bank of Nigeria at the point of reducing the MPR should have stated a lending rate ceiling for the banks to operate with. Leaving only the lending rate to the forces of demand and supply does not assist the economy. The above observation informs us to examine some of the potent sectors on growth and the result is presented below. Specifically, the oil and gas sector is excluded due to unavailability of complete data hence the estimation is limited to agricultural sector, manufacturing, and services sectors respectively (see table 5) below

	Coefficient	Std. Error	t-Statistic	Prob.
C	-74.73913	323.9718	-0.230696	0.8194
GDP(-1)	1.141843	0.108772	10.49761	0.0000
FDI(-1)	52.51960	192.7077	0.272535	0.7874
SAVINGS(-1)	1.267843	0.622220	2.037614	0.0523
PRIV-1)	0.007516	0.004019	1.870209	0.0732
PUIV(-1)	3.717486	2.570990	1.445936	0.1606
MPR(-1)	-68.76935	80.72026	-0.851947	0.4023
AGRI(-1)	16.32090	10.68907	1.526877	0.1393
MANU(-1)	2.023231	4.029276	0.502133	0.6200
SERVICES(-1)	0.004069	1.305545	0.003116	0.9975
ECM	-0.079567	0.029433	-2.703272	0.0122

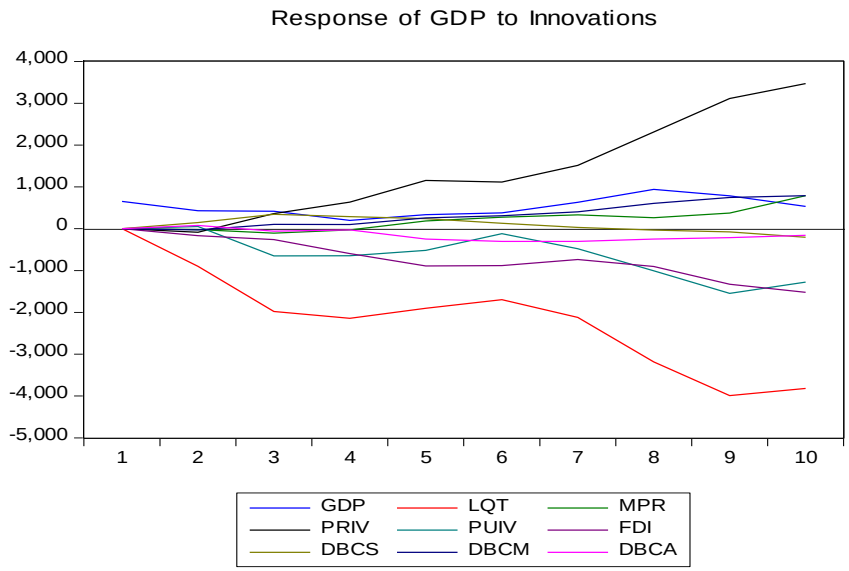
Table 5 - Long-run Stability and Short-run Relationship Evidence from Equation 2

Note all the variables of interest are real GDP (GDP), foreign direct investment (FDI), total savings (SAVINGS), private investment (PRIV), public investment (PUIV) and monetary policy rate (MPR), distribution of credit to the agricultural sector (AGRI), distribution of credit to the manufacturing sector (MANU) AND distribution of credit to the service sector (SERVIES),

Table 5 above shows that the parameter of the long run-term (ecm) is significant with the proper sign (-). This suggests that long-run stability and cointegration hold among the underlying variables. Secondly, economic activities respond to temporal breaks in foreign direct investment, savings, private investment, public investment, distribution of credit to agricultural and manufacturing, and service sectors (in times of crisis like COVID 19). We have evidence that distribution of credit to agricultural, manufacturing, and services sectors have a positive impact on economic activities, though not significantly impacting growth and the short-run dynamics are significantly worsened in this period of COVID 19. The monetary policy rate has a negative impact on economic growth.

Specifically, the lag of the dependent variable is significant at 1% and with a large coefficient of 1.141843. Savings exhibit a similar trend as it is significant at 5% and with a coefficient of 1.267843. The third significant variable is a private investment which is weakly significant at 10% and with a tiny coefficient of 0.007516. This suggests that private investment is capable of exerting a significant impact on growth if adequately supported. All the sectors included in the study were not significant. Thus, there is a need for a strong domestic policy to stabilize the positive influence in times of social or economic crisis. The distribution of credit to agriculture and manufacturing as well as private investment and public investment have positive long-run multiplier effects on economic activities. Suggestively, these are the long run resilient factors that policymakers should turn the policy light on and consider them as catalysts to growth and economic rectification in this COVID-19 era. We can now proceed to examine the response of each of these variables to their own shocks or the shocks of others.

3.6 THE IMPULSE RESPONSE POSITION



The line graphs presented in the figure above report the response of GDP to its own shocks. The response of private investment (PRIV), distribution of bank credit to the service sector (DBCS), liquidity (LQT), public investment (PUIV), distribution of bank credit to the manufacturing sector (DBCM), monetary policy rate (MPR), foreign direct investment (FDI), and distribution of bank credit to the agricultural sector (DBCA) to shocks of real economic activities. GDP responds positively to the shocks of economic activities persistently for FDI, public and private investments, distribution of bank credit to the manufacturing sector, distribution of bank credit to service sectors

and distribution of bank credit to the agricultural sector but responds inversely to the shocks of real GDP for monetary policy rate.

4.0 CONCLUSION

This paper has examined the effect of investment and liquidity on economic growth for thirty-nine years in Nigeria. The study uses the VECM method and impulse response function to estimate the relationship. We observed that all the variables were significant except for the second lags of FDI and MPR. The study posits that FDI is very important to drive growth in Nigeria. Savings were also observed to exhibit a positive and significant relationship with growth hence a potent tool being a source of liquidity that banks can leverage on for intermediation purposes. Both private investment and public investment were highly significant but we observed that the coefficient of private is very tiny while that of public investment is huge. This suggests that the government sources of investment remain the major driver for the economy in addition to FDI. Little wonder that many look unto the government for the provision of many services and jobs. There is a need to reverse this situation because available evidence supports private-led economies as those that can ensure sustained growth and withstand economic vagaries and instability. The government needs to refocus and restrategise to be an unbiased umpire through policy direction. It should also provide an enabling environment for private institutions to thrive and be globally competitive through which they can increase the productive base of the economy.

Credit to the private sector in the estimation was negative though significant at 1% and with a huge coefficient. Earlier in the paper, we discussed the sectoral allocation of credit by banks and observed that the largest chunk of about 31% of bank credit goes to the oil and gas sector. This sector has proven not resilient to shocks and instability with the crash of prices of crude in the global market. Suffice to say that crude oil extraction in Nigeria is dominated by foreign companies who use expatriates that eventually transfer their income as FDI to their respective economies. Apart from that, these foreign companies equally send forth their income which serves as a further drain on the economy while the major setback relates to the fact the extracted crude is sent to other countries for value addition hence what serves as a raw product from Nigeria adds value or increases the productive base of the countries where values are eventually added. This is an investment malady that finds support under the natural resource curse argument.

The monetary policy rate in the estimation showed a negative sign with the first lag significant at 5%. This suggests borrowers' apathy with the inverse relationship. The Central Bank of Nigeria must ensure and maintain an appropriate spread between MPR and lending rates. The efforts of the government in reducing the treasury bill rate in the country is appreciated, but since its reduction in 2019 to a single digit, the savings rate was reduced by the banks while they maintained their hitherto lending rate. This will be unproductive for the private sector to thrive and be globally competitive.
In summary, investment and liquidity are potent tools for economic growth and also resilient for the current downturn in the economy if appropriately directed. The government must ensure policies that direct investment to the resilient sectors of the economy, which will support the much-desired diversification of the economy.

5.0 RECOMMENDATION

The paper recommends as follows: -

- The government should redirect investment from oil and gas to other sectors. With the shock occasioned by this COVID-19 era, oil and gas have proven not resilient.
- Efforts should be made to process the raw products found in this country. Every raw product exported from Nigeria adds value to the country of transformation. This precursor extends beyond oil and covers agricultural products too.
- Private investment should be encouraged through enabling policies and provision of infrastructure so as to tilt the economic balance from a public-led country to a private-led economy.
- The lending rate should be reduced to a single digit by the banks. The current reduction to savings rate without corresponding reduction to lending rate is unwholesome
- The government should encourage FDI to aid the liquidity of the economy. As support, efforts should be geared to prevent further devaluation of the currency to make investment attractive
- Credit given by banks should be made to support the resilient sectors. Private establishments require long term funds for their businesses. The Central Bank should assist banks who presently have mostly short-tenured funds to support the economy with long term investible funds. Specifically, our banks should be positioned to assess globally available long term funds that support investment. Most funds at the disposal of banks are short-tenured hence to dispense such for long term purposes will result in portfolio mismatch.
- The Central bank must engage in a holistic guarantee of funds disbursed by banks to these sectors. A partial or sub-guarantee only ends with avoidance by the banks.
- The government should conclusively pursue the minimum wage agenda and other social security programmes that will reduce poverty and also increase the savings rate of the public
- Banking service should be endeared to the public for acceptance so as to reduce the level of the unbanked populace. Suffice to say that a huge chunk of the populace is unbanked hence keep their money in areas that miss out on the intermediation process. An increase in the number of banking populace makes more funds available for investment purposes.
- Above all, the security level within the country should be improved so that foreigners will feel comfortable investing in the country. Ditto for other investment climate criteria like ease of doing business, level of corruption, etc.

Works Citation

Adegbite, E. O. (2016). Financial System's Dynamics and Economic Growth in Nigeria. Being a lead paper delivered at the 6th Annual Conference of the Department of Finance, University of Lagos, Nigeria, February, 2016.

Adegboye, A. A. & Alimi, R. S. (2017). Public – Private Investment Nexus in Developing Economies: Does Financial Sector Development Matter for Nigeria? Online at https://mpra.ub.uni-muenchen.de/80908/ MPRA Paper No. 80908, posted 22 Aug 2017 05:52 UTC: 1-16

Allen, D. S., & Ndikumana, L. (1998). Financial Intermediation and Economic Growth in Southern Africa. Working Paper Series 1998-004, the Federal Reserve Bank of ST. Louis.

Almsafir, M. K. and Morzuki, Z. M. (2015). The relationship between investment and economic growth in Malaysia. *Journal of Empirical Economics,* Research Academy of Social Sciences 4(2):116-126.

Babajide, A. A., Adegboye, F. & Omankhanlen, A. E. (2015). Financial inclusion and economic growth in Nigeria. *International Journal of Economic and Financial Issues,* 5(3): 629-637

Bhatia, H. L. (2008), *Public Finance*, 26th Edition, Vikas Publishing House PVT Ltd: 218-246

Boot W. A. A. and Thakor, A. (1997). Financial System Architecture. *Review of Financial Studies,* 10(3): 693-733

Carlin, W. & Mayer, C. (2003). Finance, investment, and growth. *Journal of Financial Economics* 69: 191–226

Cheung, Y., Dooley, M. P., & Sushko, V. (2012). Investment and growth in rich and poor countries. National Bureau of Economic Research, 1050 Massachusetts Avenue Cambridge, MA 02138. Retrieved from http://www.nber.org/papers/w17788, cited on May 16, 2020

Crowley J. (2008). Credit Growth in the Middle EAST, North Africa and Central Asia Region. IMF Working Paper No: 08/184

Davis, P. and Sanchez-Martinez, M. (2014). A review of the economic theories of poverty. National Institute for Economic and social Research, Discussion Paper No. 435: 1-65

Diamond, D. W. (1993). Seniority and Maturity of Debt Contracts. *Journal of Financial Economics*, 33, 341-368.

Dornbusch, R., Fisher, S. and Startz, R. (2011). *Macroeconomics*. Eleven Edition McGraw-Hill. International Edition: 346-375

Eke, P. O. (2018). Interest rate Macrostructure, Corporate Bond Market Development and Industrial Output in selected African Economies. Ph.D Thesis, Covenant University, Ota, http://eprints.covenantuniversity.edu.ng/12955/1/Binder1.pdf.

Epaphra, M and Massawe, J. (2016). Investment and Economic Growth: An Empirical Analysis for Tanzania. *Turkish Economic Review,* 3 (4): 578-609

Fantom, N. and Serajuddin, U.(2016). The World Bank's Classification of Countries by Income. Policy Research W/P 7528, World Bank Development Economics Data Group:1-52.

Fiscal Responsibility Act (2007). Federal Republic of Nigeria. *Fiscal Responsibility Act*, 31, July 31,2007

Flassbeck, H. (2008), Savings, Investment and Growth: Theory and Reality; G-24 Policy Brief No 35

Friedman, M. (1953). *Essays in positive Economics,* University of Chicago Press.

Goldsmith, R. (1969). *Financial Structure and Development*. CT, Yale University Press, New Haven.

Ige, C. S. (2007). Investment Based Economy or Rogue Economy: Which Way Nigeria? Public Lecture Series 13, May, Covenant University, Ota

Jhingan, M. L. (2014). Macroeconomic theory, 12th Revised and Enlarged Edition: 190

Jorgenson, D.W. (1963). Capital Theory and Investment Behaviour. *American Economic Review* 53 (2):247-259.

Keynes, J.M (1936), *General Theory of Employment, Interest Rate and Money,* (New York Harcourt Brace & World)

King, R. G., & Levine, R. (1993). Finance and Growth: Schumpeter Might Be Right. Quarterly Journal of Economics, 108, 717-738.

Koyck, L. M. (1954). Distributed Lags and Investment Analysis.

Le, T.,Chuc, A. T., & Taghizadeh-Hesary, F. (2019). Financial inclusion and its impact on financial efficiency and stability: empirical evidence from Asia, *Bosa Instanbul Review* 19-4: 310-322

Levine (1991). Stock Markets, Growth and Tax Policy", *Journal of Finance,* 46 (4): 1445-65

Lucas, R. (1981). Studies in Business Cycle Theory. Cambridge Massachusetts, MIT Press.

Mathews, K. & Thompson, J. (2014). *The Economic of Banking,* 3rd Edition. John Wiley & Sons Ltd, United Kingdom: 35-58, 115-128.

Modiglinni, F. & Brumberg, R. (1954a). "Utility Analysis and the consumption Function: An interpretation of Cross-section Data", in *Post-Keynesian Economics,* ed. Kenneth Kurihara, New Brunswick, New Jersey, Rutgers University Press: 388-436

Obstfeld, M (2009). International finance and growth in developing countries: what have we learned?, IMF Staff Papers, 56(1), 63-111. doi. 10.1057/imfsp.2008.32

Odedokun, M. O. (1998). Financial Intermediation and Economic Growth in Developing Countries. Faculty of Commerce, University of Swaziland, Swaziland.

Ogunleye, G. A. (2010). *Perspectives on Nigerian financial safety-net.* An NDIC Book. Retrieved from https://ndic.gov.ng/wp-content/uploads/2015/01/Perspectives-On-the-Nigerian-Financial-Safety-net-NDIC-2.pdf accesed July 16, 2020

Ogunrinola, I.I. & Debora, M. B.(2015) Stock market liquidity and economic growth in Nigeria (1980 to 2012). *Journal of Economics and International Business Management* 3(1): 1-13

Ojo, J.A.T. (2010). *The Nigerian Maladapted Financial System, Reforming Tasks and Development Dilemma*, First Edition, The CIBN Press Limited: 154-174

Oluitan, R. O, (2012a). Bank Credit and Economic Growth: Evidence from Nigeria. International Business and Management Journal, 5(2) 99-107

Oluitan, R. O, (2012b). Financial Development and Economic Growth in Africa: Lessons and Prospects", Business and Economic Research, 2(2) 54-64 .

Parker, J. (2010). "Theories of investment expenditures". Economics 314 Coursebook. Retrieved from https://www.reed.edu/economics/parker/s10/314/book/Ch15.pdf, cited May 5, 2020.

Patrick, H. (1966). Financial Development and Economic Growth in Underdeveloped Countries. Economic Development and Cultural Change, 14, 174-189.

Pressman, S. (2006). *Fifty Major Economists*. Second Edition. Routledge, London and New York: 250-255

PWC (2016). Nigeria beyond Oil, retrieved from https://www.pwc.com/ng/en/assets/pdf/nigeria-looking-beyond-oil-report.pdf, cited May, 16, 2020

Romer, P.(1990). Endogenous Technological Change. *Journal of Political Economy,* 98 (5): 71-102.

Roslow, W. (1956). The Stages of Economic Growth, Cambridge Press.

Samuelson, P. and Nordhaus (2004). *Economics,* 18th Edition, New York

Sargent, T. J. (1986). *Rational Expectations and Inflation.* New York: Harper and Row, 1986.

Sen, A. (1999). *Development as freedom*, New York, Knopf

Stiglitz, J. E. (2000a). The Contribution of the Economics of Information to Twentieth Century Economics. *Quarterly Journal of Economics*, 115, November: 1441-78

Todaro, M. P. & Smith, S.C. (2009), *Economic Development,* Tenth Edition, Addison-Wesley, Pearson Education: 109-272

Valiante, D. (2016). Europe's Untapped Capital Market: Rethinking financial integration after the crisis, CEPS Paperback, London: Rowman & Littlefield International.

Wagner, A. (1893). *Finanzwissenschaft*, Leipzig, 3rd edition, part 1: 16

WEF (2019) The Global Competitiveness Report, retrieved from World Economic Forum, www.weforum.org/gcr, accessed May 16, 2020: 430-432

Wiseman, J. & Peacock, A.T. (1961). *The growth of Public Expenditure in the United Kingdom, 1890-1955*, Princeton University Press

World Bank (2019). Commercial Bank Branch (per 100,000 adults). Retrieved from www.worldbankindicators.org. cited May 16, 2020

World Economic Forum (WEF) (2015). Industry agenda: accelerating emerging capital markets development corporate bond markets, retrieved from *www.weforum.org/gcr* accessed April 21, 2020.

Worldwide Governance Indicators (WGI) (2018). Retrieved from *www.govindicators.org*, accessed April 20, 2020.