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Financial Sector Development, Economic Growth and Individual Welfare in Nigeria

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ABSTRACT: *Over the years, the Nigerian financial sector has been characterized by relative fragility and instability with intermittent incidences of liquidity challenges, bank distress, bail out, declining all share index and eroding investors' confidence. Although several efforts have been made by policy makers and financial sector regulators towards stabilizing and strengthening the financial sector, available evidence suggest that the real sector is yet to reflect the gains of financial sector development. Consequently, researchers have made substantial effort to understand the implication of financial sector development for economic growth and economic welfare. It is against this backdrop that this study investigated the impact of financial sector development on economic and economic welfare. The study used time series data spanning between 1970 and 2015. Four major variables were used to proxy financial sector development namely; bank private sector credit, number of banks branch network, liquidity ratio and lending-deposits ratio. Economic growth was measured by growth of real GDP; discomfort index which measures macroeconomic welfare of citizenry as defined by Okun (1962) was computed by summation of inflation and unemployment rate. Vector autoregressive (VAR) model was used for estimations. The findings indicate that not all the financial sector development indicators under study have significant effect on macroeconomic performance in Nigeria. The results show that financial sector development indicators have positive impact on real GDP growth in Nigeria. However, contrary to expectations, private sector credit and lending - deposit spread had negative effects on economic growth. Similarly, apart from access to financial service, all other financial sector development indicators under study exerted negative effects on discomfort index, which implied that financial sector development was capable of improving economic welfare. The study therefore concluded that financial sector development that guarantees increased liquidity and stability of the financial sector is crucial for sustainable economic growth and increased welfare. The study also recommends that the Central Bank of Nigeria and other financial sector regulators should strive to strengthen the financial sector and ensure increased private sector access to financial services such as bank credit through policy formulation and implementation as a means of improving macroeconomic performance of the nation.*

KEY WORDS: financial sector development, discomfort index, economic growth, VAR

INTRODUCTION

Financial sector encompasses set of institutions, instruments and markets which includes legal and regulatory framework that permit transactions to be made through the extension of credit and intermediaries. In recent years, economists have been preoccupied with evaluating the precise impacts that financial sector activities have on the macroeconomy. The growing interest in the

sector's activities is not unrelated to the reoccurring global financial crisis since mid-20 century vis-à-vis the critical role the financial market plays in the entire sectors of the economy. According to World Bank (2005), the financial sector is a crucial sector of any economy, affecting its business environment, investment, economic prospects, and social dimensions, including poverty. It provides services to the rest of the economy through mobilizing and channeling of financial resources from excess sectors to the deficit sectors. It impacts on macroeconomic performance mainly through growth as it finances investment opportunities that propel increased GDP and job creation. Vulnerabilities in the sector often lead to financial crises, economic slowdowns, and fiscal costs (Levine, 2005). The extent to which the sector is developed and managed determines the level of impacts it has on the economy (Esther, 2005). According to Schmukler (2003) and Okonji, Nnadi and Igbanugo (2018), the availability and efficient uses of a nation's financial resources are evident in its effects on the real sectors and manifests in major macroeconomic performance indicators such as real GDP growth, inflation and employment rate.

During the 1970s and early 1980s, the government of most developing countries, Nigeria inclusive, believed it was economically wiser to pursue a state-led and non-market approach to financial services, as means of guiding the development in the entire economy. Thus, government intervention in the domestic financial sector was predominant. The state intervention in the sector took various forms, which includes interest rate ceiling, market entry regulation, selective credit allocation, capital out-flows and government ownership. The government regulation, restriction and control were more pronounced in the banking sub-sector. With time, it became obvious that the public sector - led financial system limits the operational efficiency of the market and results to financial repression and slower economic growth (Abu, 2009). In this regard, Schmukler (2003) notes that government's heavy intervention in the financial system was highly inefficient and devoid of efficacy of control which slows the rate of development in both the financial and real sectors. For instance, the restrictions and controls imposed on the banks by the government did result in unrealistic interest rates, high inflation, less supply of loanable funds and excess demand for credits in most developing countries. It was also partly responsible for increased number of non-performing loans in banks' balance sheets and risk asset portfolios, as banks were systematically compelled under the state led financial market to grant credits on political rather than commercial considerations. Because of the obvious negative impacts of state - led financial institution, reforms which centered on liberalization and deregulation among others have been widely embraced in recent time as a means of encouraging the growth process and stability of the economy. In other words, since mid-1980s, financial sector reforms have been pursued by most African countries as a means of developing, stabilizing and deepening the financial sector. Earlier, McKinnon (1973) and Shaw (1973) provided the analytical foundation for far reaching financial sector repositioning and development. They reaffirmed the all-inclusive crucial role of the sector in a nations' economic growth, de-emphasized excessive state control in favour of deregulation and liberalization in the operation of the financial sector by analyzing the resultant market distortions (Ewah & Bassey, 2009; Agbakhese, 2012).

The extent to which various financial reforms and various development drives in the financial sector have achieve its objectives and impacts on macroeconomic outcome have therefore remained a debatable issue. While some analysts argue that the ongoing reforms and development in the sector have resulted to increased sectorial performance, economic growth and has helped in repositioning and placing of Nigeria banks and capital market in a competitive leadership position in African economies as Nigerian banks now operate branches profitably in diaspora (Akingbola, 2006); others are of the opinion that the drives have not achieved much as the base of the industry has continued to remain fragile to play a supportive role to the public and private sectors (Okafor, Patience & Ezenekwe, 2009).

Nigerian economic growth has shown profound features. The growth rate of the economy rose from 0.19% in 1961 to 4.9% in 1964 and sharply slumped by -15% in 1967. It however rose by 25% in 1970. Since 1970, Nigeria has experienced negative growth at least once in every decade except in 2000-2010. For the period 1970-1979, Nigeria experienced negative growth rate in 1975 and 1978; in 1980-1989, Nigeria had her worst recessionary experience recording negative growths in 1981-1984 and 1986-1987. In 1990-1999, negative growth was recorded only in 1991 and 1995. In 2000-2009, Nigeria had her most stable high growth with no record of negative growth rate. The period recorded average growth rate of 8.9% with an all-time high growth rate of 33% in 2004. This high growth continued till the recent recessionary experience in 2015/2016. In addition, individual welfare in Nigeria is said to be relatively low. Although economists hardly agree on how to measure welfare, economic discomfort index developed by Arthur Okun is fast gaining traction. Economic discomfort index is an unweighted summation of unemployment and inflation. Okun discomfort index, as a measure of welfare indicates that individual welfare in Nigeria is worsening. However, Schmukler (2003) and Esther (2005) argued that financial sector development is critical for improved and sustained economic growth and welfare. These propelled the need for a detailed reappraisal of the development in financial sector vis-à-vis its effect on macroeconomic outcome in Nigeria. Although there are several empirical studies on the impact of financial sector development on economic growth and welfare, most of these studies used financial depth as the measure of financial sector development. However, following World (2005), there are additional three measures of financial sector development namely financial access, financial efficiency and financial stability. In this study, we used all the four measures of financial sector development as recommended by World Bank (2005).

Nigerian Financial Sector and the Macroeconomy

Figure 2.1 shows the relationship between financial development measured by the ratio of broad money supply (M2), GDP growth rate and and discomfort index in Nigeria from 1970 to 2015. From the diagram, it was noted that GDP growth rate fluctuates intermittently and was at peak in the year 1974, 1981, 1995 and 2015. These were periods of oil boom. The growth rate was negative at some periods such as in1978, 1986 and 1998 which shows a drastic decline in those period. The drastic decline in GDP may be attributed to the fall in price of crude oil at the international market, which also affected the Nigeria economy. During deregulation, GDP growth rate was positive and relatively on the increase, that is between 2004 and 2009. On the other hand, M2/GDP fluctuates

periodically but not as steep as GDP. It maintains a steady increase rate from 2005, courtesy of bank consolidation that started in 2004. It however began to fall from 2010 while GDP was growing at a steady rate. From Fig 2.1, the trend displayed by M2/GDP is alike to that of discomfort index. In all cases the discomfort index rises and fluctuate higher that M2/GDP. The implication of this is that the consolidation in the financial system especially the banking sector led to steady and marginal increase in GDP growth rate, financial sector development and slight decline in discomfort index.

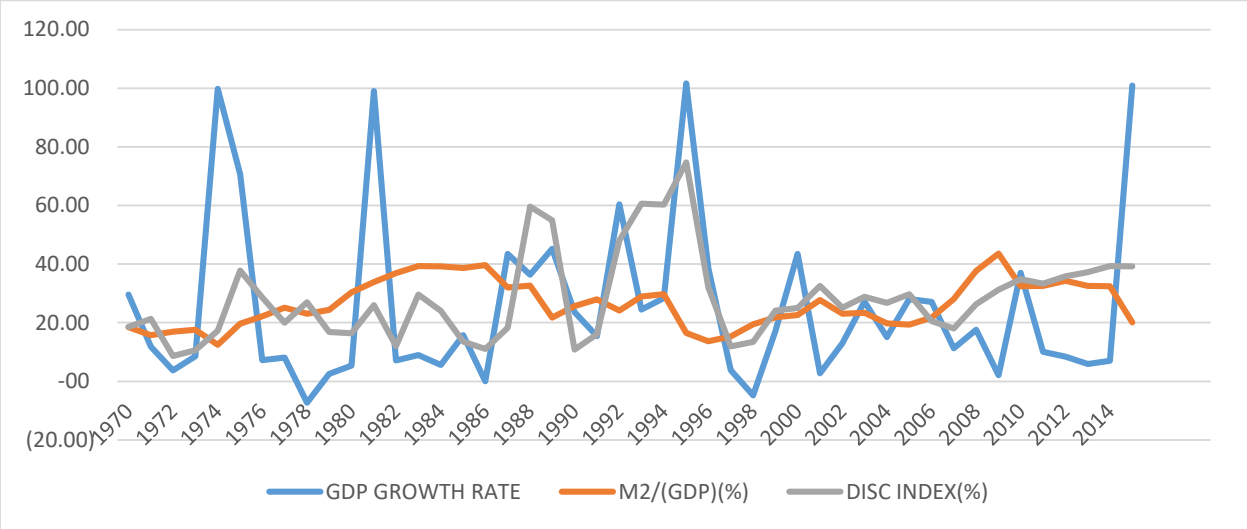


Fig: 2.1 GDP Growth Rate, Discomfort index and Ratio of Broad Money to GDP (1970 – 2016).
Source: Graphed by Author, using data from CBN, (2016).

Figure 2.2 shows the relationship between financial sector development proxied by the ratio of private sector credit to GDP, economic growth rate and discomfort index in Nigeria from 1970 to 2015. The trend above depicts a clear periodic inverse relationship between private sector credit and GDP growth rate. In 1974 and 1995 where GDP growth rate were at peak, credits to private sector were almost at the minimum level as its ratio to GDP were 5.1% and 10% respectively. The trend was same in year 1986 and 2009, where the banks credits were at the peak and growth rate were at bottom. In other word, in 1986 and 2009, when GDP growth rate was at all time low: 0.01% and 2.05% respectively, ratio of private sector credit to GDP were as high as 26.5% and 41.3% respectively. From 2005, growth of GDP was relatively stable as well as credits to private sector. This could be attributed to bank consolidations and financial liberalization policies of 2005. On the other hand, both discomfort index and credits to private sector tend to fluctuate alike but the movement in discomfort index was more pronounce than bank credits. The declining trend displayed by credit to private sector could be link to the incidence of high non-performing loan in the banks. The implication of this development is that the financial sector should be encouraged to increase credit to the private sector while taking step to check bad loans.

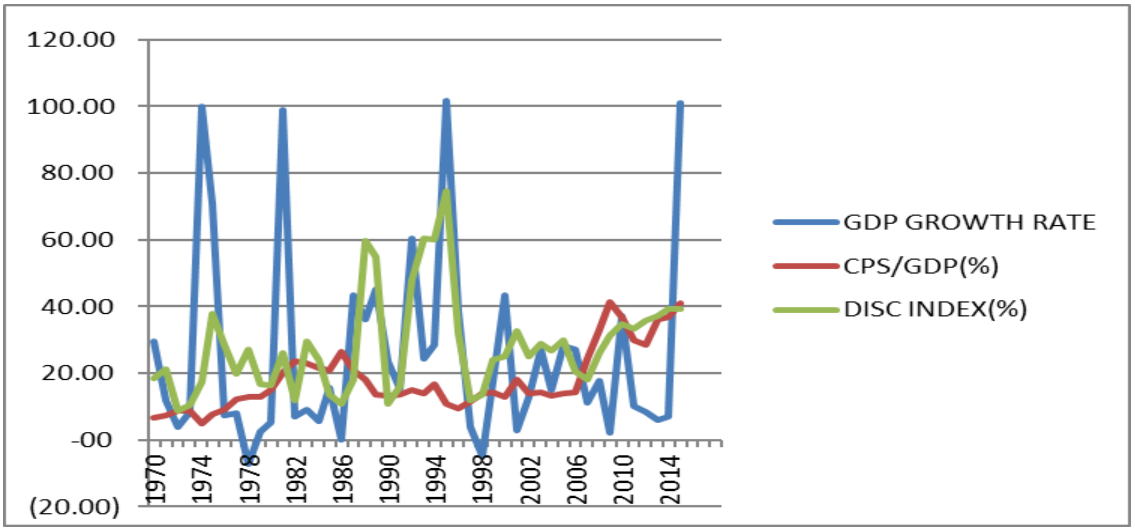


Fig: 2.2 GDP Growth Rate, Discomfort index and Ratio of Bank Private Sector Credit to GDP (1970 – 2015).
Source: Graphed by Author, using data from CBN (2016).

Figure 2.3 clearly depicts an inverse relationship between total market capitalization and GDP growth in Nigeria from the 1970s, through 1980s to the 1990s. For instance, in 1974 when growth rate was relatively at its peak (99.89%), market capitalization was at its minimum (12.5%). Also, in 1986 when GDP growth rate was at minimum (0.01%), market capitalization was in its maximum (39.6%). However, from 1987, the market capitalization growth rate has been inconsistent and has continuously declined through the period until 2001 when it began to rise, reaches its peak in 2007 at 56% growth rate and began to fall rapidly gain. On the other hand, it was obvious from the trend analysis that throughout the period, decline in market capitalization tends to result to increase in discomfort index. For most of the period that market capitalization growth rate was less than 7.5%, discomfort index was above 45%. The decline in the market capitalization from 2008 was because of the global financial crunch.

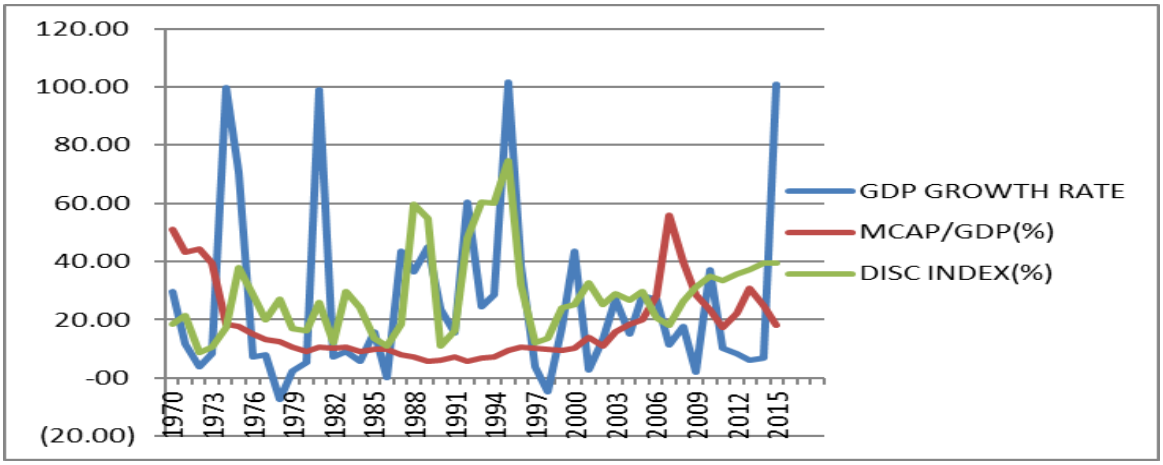


Fig: 2.3 GDP Growth Rate, Discomfort index and Ratio of Market capitalization to GDP (1970 – 2015).
Source: Graphed by Author, using data from CBN (2016).

Figure 2.4 depicts clearly that number of banks network has continuously been on the increase. Its likely impact on GDP growth and discomfort index was more pronounce between 2005 and 2014, when about sixty percent increase in number of banks branch network resulted to a sharp move with an increase in GDP growth rate but decline in discomfort index in 2005 and 2007. This implied that increased access to financial service is likely to bring about an improved growth rate and economic welfare.

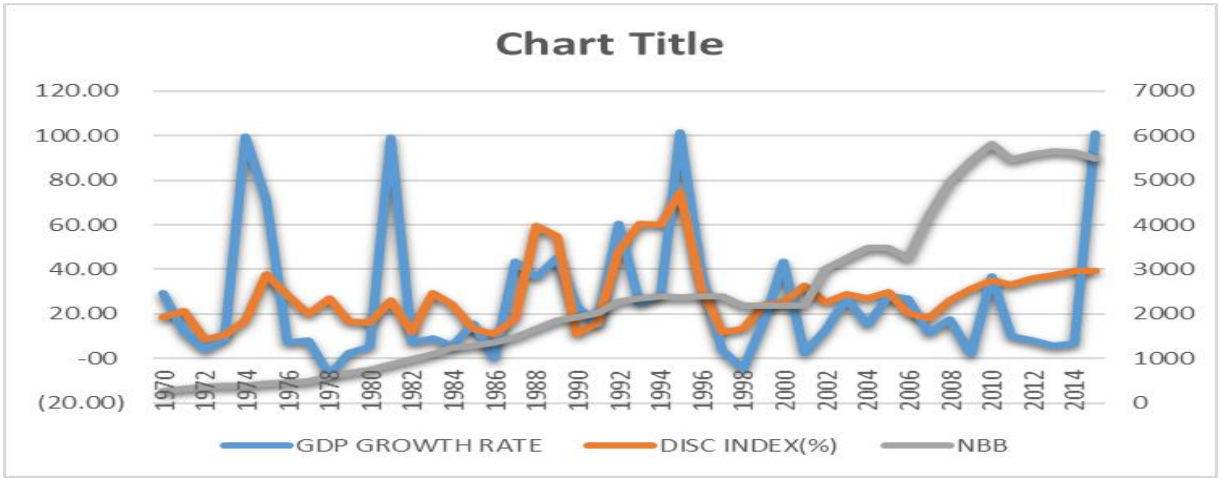


Fig: 2.4 GDP Growth Rate, Discomfort index and number of banks branch: NNB network (1970 – 2015)
Source: Graphed by Author, using data from CBN (2016).

Figure 2.5 reveals the relationship between financial development measured by lending- deposit ratio, GDP growth rate and and discomfort index in Nigeria from 1970 to 2015. From the diagram,

it was noted that lending-deposits ratio and GDP growth rate fluctuates intermittently in a like manner and move in same direction. It was however observed that in most cases, the lending – deposits ratio reached its periodic peaks or minimum about a year before or after the GDP. That suggests relatively positive bidirectional relationship. For instance a drastic drop of GDP growth rate from 17% in 2008 to 2.05% in 2009 preceeded a huge fall in LDR from its peak of 85.66% in 2009 through 2011 till 2013 when it got to its minimum: 37.97%. Suffice to state that a rise in LDR to 68.6% in 2014 resulted to a rise of GDP growth rate of 100.85% On the other hand, the trend with regard to discomfort index and lending - deposits ratio revealed that though both fluctuate alike but in opposite direction. While lending deposit ratio was at peak in 1974, 1984 and 2007, discomfort index was at minimum in those periods. This suggests there are inversely related.

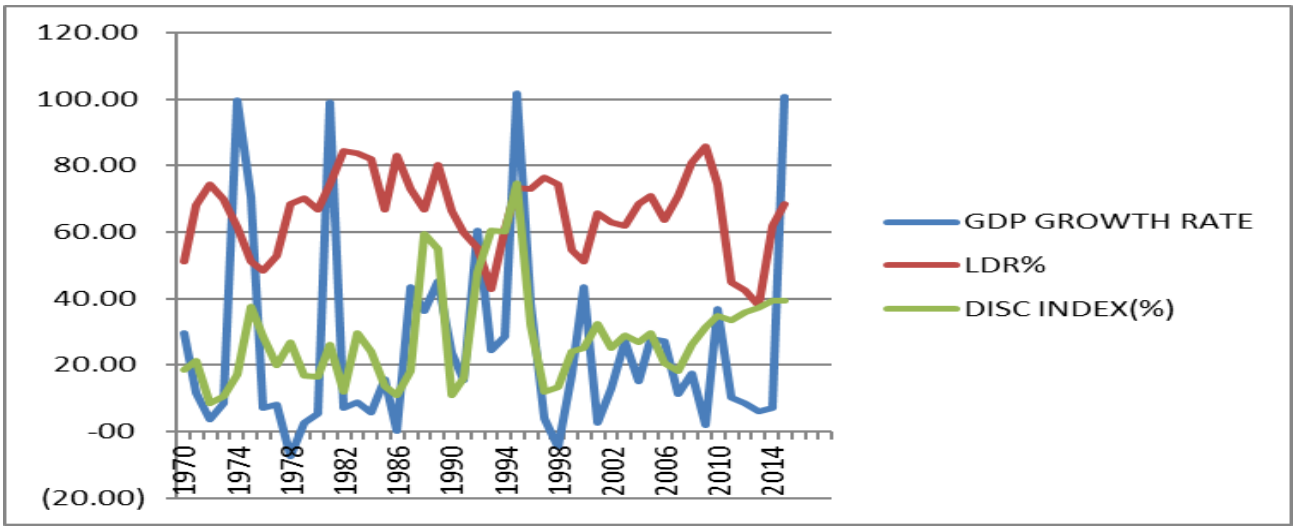


Fig: 2.4 GDP Growth Rate, Discomfort index and Lending – Deposit ratio (1970 – 2015
Source: Graphed by Author, using data from CBN (2016).

Figure 2.6 reveals the relationship between financial sector stability measured by liquidity ratio, GDP growth rate and discomfort index in Nigeria from 1970 to 2015. From the diagram, it could be seen that liquidity ratio and GDP growth rate fluctuates intermittently in a like manner and move in same direction though the slope of the GDP growth rate is steeper. From 1970 to 1973 both indicators declines in same degree as GDP growth rate falls from 29.6% throgh 11.7% in 1971 to 8.53% in 1973 while on the other hand, Liquidity ratio depicts a declining trend of 94.5%, 73.7% and 63.8% in same periods. Also both variables rise to their respective peaks such as in 1974. The same trend was observed throughout the period. This suggests relatively positive relationship between the variables. On the other hand, the figure shows that both discomfort index and liquidity ratio fluctuate alike but in opposite direction. For instance while in 1970 – 1971 and 2013 -2014 LR dropped from 94.5% to 73.7% and from 63.21% to 38.3%, discomfort index had corresponded rise in discomfort index from 18.56% to 21.30% and 37,21% to 39.32% for same periond. A similar trend as revealed in 1983 – 1984 and 1993 -1994, as a rise in LR from

54.7% to 65.1% and from 42.2% to 48.5% respectively were accoplished by a fall in discomfort index from 29.61% to 24.02% and 60.57% to 60.23% in same periods.

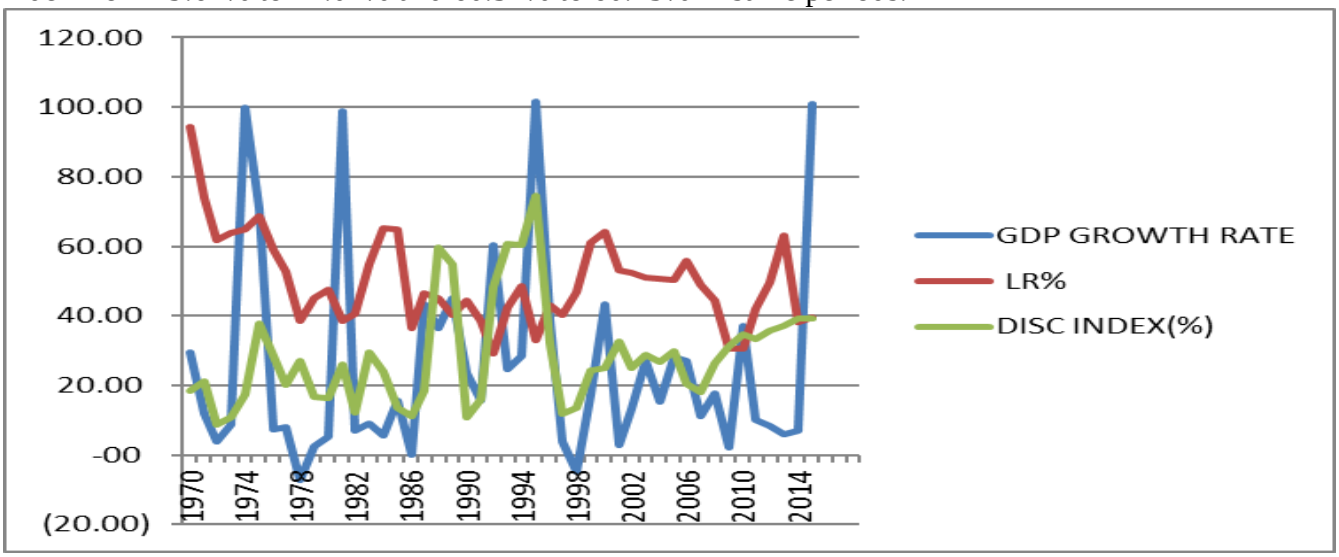


Fig: 2.6 GDP Growth Rate, Discomfort index and Liquidity Ratio (1970 – 2015
Source: Graphed by Author, using data from CBN (2016).

LITERATURE REVIEW

There are many theories that offer explanation of the relationship and linkage that exist between financial market, economic growth and other major macroeconomic indicators. They include: endogenous growth theory, neo classical theory of finance and growth, the structuralist theory of finance and growth, Modigliani - Miller theory of finance and liberalization thesis.

Endogenous Growth Theory.

The endogenous growth theory, also known as the new growth theory is a key component of emerging development theory. The theory was pioneered by Paul Romer, in a seminal work on the modern revitalization of growth theory, published in 1986 in the Journal of Political Economy. Other proponents of the theory include: Robert Lucas (1988), Sergio Rebelo (1991) and Ortigueira and Santos (1997). One importance discourse of the endogenous growth model is its ability to explain unusual international flows of capital deepen wealth disparities between the developing and developed economies. They hold that high rates of return on investment offered by developing economies with low capital – labour ratio are mainly eroded by very low levels of complementary investment in human capital, education, infrastructure, or research and development. Therefore, Government policy that creates incentives and encourage entrepreneurship are thus ultimate drivers of new jobs, investment and innovation. Such policies are capable of raising growth rate if they lead to more intense competition in markets and help to stimulate product and process innovation.

Neo- Classical Theory of Financial Sector and Growth.

The neo – classical theoretical underpinning on the link between financial system and economic performance can be traced back to the work of Bagehst (1873); Schumpeter (1912); Hicks (1969) and recently to Mc-kinnon (1973) and Shaw (1973) in the discussion of finance – growth nexus. According to the neoclassicists, financial development which entails financial sector liberalization, competitive markets, financial innovation and access drives economic growth. On the basis of certain assumptions such as rationality of the economic actors, equilibrium of the markets and perfect information, they posited that liberalized and competitive market is expected to increase capital inflows, economic growth, and savings and interest rates, while garnering increased stability as financial innovation allowed greater distribution of risk (Chang & Grabel, 2004). According to Schumpeter (1912), formal financial sector is crucial and plays an indispensable role in economic growth as it is the main financier of productive investment that accelerates growth. Hicks, (1969) and Bagehot, (1873) emphasized that industrialization in England was mainly financed by funds from the financial system. Mc-kinnon (1973) and Shaw (1973) dealt with financial repression and de-emphasized excessive government control as a basis for better functioning of the financial system.

The Structuralist Theory on Finance and Growth

The structuralist economists emerged in the 1980s in opposition to the neoclassical doctrine on finance and development. Advocates of the structuralists' view include Buffie (1984), Kohsaka (1984), Taylor (1979), and Van Wijnbergen (1983). Unlike the neo-classicalists, structuralists did not subscribe to the assumptions underlying the economic analysis of the McKinnon-Shaw framework on finance - growth nexus. The general premise of the Structuralist view is that in the presence of curb markets which are outside state control, financial liberalization should not be expected to increase growth. Thus, the theoretical underpin of the structuralists thesis lies on the importance of non-institutional finance such as the money lenders and indigenous bankers, which were not considered in the McKinnon-Shaw framework, yet had been deemed to be very important in developing countries. The structuralists argued that there were structural impediments to well-functioning financial markets in developing economies.

Another area of financial sector development postulated by the structuralists bores on improved principal-agent relationship, financial intermediaries, asymmetric information in credit markets and services delivery cost reduction. Shleifer and Vishny (1986) and Stiglitz (1985) studied the principal-agent problems in the context of big corporation with many small owners and argued that it could be financially inefficient for any of the owners to monitor the management. Agbakhese, (2012) contended that free-rider problem arises from the public good character of the costly information acquisition of an individual stockholder who may easily liquidate his financial commitment. And that Banks emerged as a result of information asymmetries between lenders and borrowers. Information asymmetries are likely to impose problem because they may lead to capital misallocations and monitoring costs. Well-developed financial intermediaries aid the success of investment at a minimized monitoring cost (Diamond, 1984).

Modigliani – Miller (M-M) Theory of Finance and Growth

The Modigliani and Miller theory (1958, 1961), as its name appears is credited to two renowned economists in the 1950s, named Franco Modigliani and Merton Miller. It is financial theory which states that the market value of a firm is determined by its earning power and the risk of its underlying assets, and is independent on the way it chooses to finance its investments or distribute dividends, (Modigliani & Miller, 1958). The theory at a time was called the irrelevance propositions and it states that a firm can choose between three methods of financing: (i) issuing shares, (ii) borrowing (ii) spending profits (as opposed to dispersing them to shareholders in dividends). The theorem is surrounded with much complexity and controversies; but its basic idea is that, under certain assumptions, it makes no difference whether a firm finances itself with debt or equity.

Until very recently, the postulate of MM theory had overridden the modern Neo-classical theory of finance and investment. With the assumptions of a fully developed and perfectly competitive capital markets that are devoid of transaction costs, taxation, and with full and symmetric information among others, the Modigliani-Miller irrelevance propositions argued that the stock market valuation of the firm is independent of its financing or dividend pay-out decisions (Titman & Sheridan, 2002). It follows that corporate growth and investment decisions are determined by the real economic factors such as productivity, demand for output, technical progress and relative factor prices of capital and labour; and the market value of a firm is principally determined by the expected earnings and risk of its underlying real assets which is essentially at variance with its capital structure. On a macroeconomics scale, Stiglitz and Weiss (1981) argued that financial constraints on investment decisions of corporate capital structures and financial decisions of the real economy are broad and could be explained from several versions such as asymmetric information, adverse selection, moral hazard, agency and transaction costs and incentive effects.

Empirical Estimation Procedure

Model Specification

Conventionally on the bases of the study objectives, two model specifications were envisaged in the study. One on the functional relationship between economic growth and financial sector development indicators:

$$Yr = r(FD, q) \quad 4.1$$

Where

Where Yr = Real GDP growth rate, FD = the indicators financial development, q = other variables including the control variables;

The other on the relationship between economic welfare and financial sector development indicators:

$$DI = (FD, q) \quad 4.2$$

Where DI = Discomfort index

Following the predictions of the neoclassical and endogenous, we hypothesize real GDP growth rate (Yr) is a function of investment (INV), savings (S), FD and other control variables (U).

Similarly, we also hypothesize that discomfort index is a function of FD, Yr, INV, S, human capital (HC). These are specified in Equations 4.3 and 4.4 as follows:

$$Yr = y(INV, S, HC, FD, U) \quad 4.3$$
$$DI = w(Y, FD, INV, HC, S) \quad 4.4$$

The Equation (4.4) allows a seamless use of the Vector Autoregression Model (VAR) as our proposed estimation technique. This is because VAR in its general form will permit simultaneous evaluation of the impact of financial sector development on the two macroeconomic performance indicators under study: real growth rate (Yr) and discomfort index (DI) using a single model. Also a simple vector auto regression (VAR) framework could allow us to capture the dynamic relationship between macroeconomic performance indicators and several financial sector development variables not specifically stated in the model while avoiding the pitfalls of endogeneity. Thus, in line with empirical evidence of Rousseau (1999), the above specified model will take the following general form.

$$V_t = \sum_{i-1}^{k} A_i V_{t-1} + \varepsilon_t . \quad 4.5$$

Where V_t represents vector of variables in the determination of economic growth and discomfort. A_t are five by five coefficient matrix containing coefficients of all five variables in model; V_{t-1} is vector of the lagged variable; and ε_t is the vector of usual stochastic error term.

Definition and Measurement of Variables

This study was conducted using eight different variables: four measures of financial sector development: Banks branch network, private sector credit, Lending-deposits spread and liquidity ratio; two macroeconomic variables: economic growth and discomfort index and two control variables: investment, and human capital. Number of banks branch network (NBB) was used as a reflection of access to financial services. It indicates the ease at which financial service are made available. Lending- deposits spread (LDR) was used as a proxy for financial institution efficiency. Liquidity ratio (LR) which is the ratio of total specified assets to total bank current liabilities was used as a measure of financial sector stability. Ratio of credit to private sector to GDP (CPS/GDP) captures the financial depth of the financial sector. It is a reflection of direct measure of financial intermediations. Bank credit to the private sector may be seen as a more superior measure of financial development or extent of financial activity in a country as it impacts directly on investment and is responsible for the quantity and quality of investment with a resultant impact on economic growth.

Other variables used in the study are measured as follows. Discomfort index also known as Misery Index was used as a measure of the economic condition or welfare. It was obtained by summing the unemployment rate and the annual rate of inflation as suggested by Arthur Okun (1899 – 1980). Economic growth: GDP (Y) was proxied by real gross domestic product growth rate as adopted by most previous study as it is widely seen as a measure of quality and quantity of economic

growth. The time series data ranging from 1970 to 2015 were sourced from Central Bank of Nigeria Statistical Bulletin and Annual Report and Statement of Accounts, Office of the National Bureau of Statistics and World Bank Development Indicator (WDI).

PRESENTATION AND DISCUSSION OF RESULTS

VAR Estimates

To ascertain the impact of financial development on economic growth and welfare in Nigeria, we estimated a vector autoregression (VAR) with maximum lag of two. The extract of the estimated result is shown in Table 5.1. The value of R^2 in Table 5.1 shows that all the explanatory variables jointly accounted for about 99% of the systemic change in GDP and 80% of the change in discomfort index as measures of economic growth and welfare respectively. The overall significance of the model as measured by F-statistics is significant at the 1% critical level, which implied that financial sector development (FSD) indicators under study do impact on economic growth and discomfort index (wellbeing). The standard error estimation values revealed that the associated problems with the empirical estimation techniques of this nature are minimized.

The estimation results on the impact of financial sector development (FSD) on economic growth (GDP) and discomfort index as a measure of macroeconomic performance were informative as explained below. All FSD indicators under study were seen to have significantly affected economic growth at different critical level in various lag periods. For instance, while credit to private sector (CPS) affects economic growth (GDP) at 5% significant level in lag 2, number of banks branch network, which proxy access to financial service (NBB) was significant in lag1 at 5% critical level. Similarly, lending – deposits spread (LDR) which measures the efficiency of the financial sector in providing the financial intermediary roles and liquidity ratio (LR) which proxies the financial sector stability was also significant at 10% level in lag 1 and 2 respectively. This implied that the both variables positively contributed to economic growth (GDP) for the period under study.

Table 5.2 VAR Estimates of the Impact of Financial Sector Development on Economic Growth

	Dependent Variables	
Explanatory Variables	LGDP	DISC
LGDP(-1)	0.513589[1.21531]*	-3.308209[-0.11123]
LGDP(-2)	-0.081763[-0.19250]	-28.27425[-1.32121]*
LCPS(-1)	-0.274207[-0.58234]	-9.898822[-0.35753]
LCPS(-2)	0.589467[1.29098]*	19.10657[0.71166]
LDR(-1)	0.003539[0.41685]	-0.060974[-0.12213]
LDR(-2)	-0.008578[-1.28644]*	-0.954847[-2.05687]
LGEXP(-1)	0.240246[1.26871]*	4.596555[0.41283]
LGEXP(-2)	0.148612[0.74970]	4.559650[0.39120]
LINV(-1)	0.077999[0.19939]	-5.724065[-0.24885]
LINV(-2)	0.003006[0.01117]	-3.316692[-0.20964]
LM2(-1)	-0.309014[-0.39865]	29.20973[0.64087]
LM2(-2)	-0.520344[-0.77702]	-35.97217[-0.91356]
LMCAP(-1)	0.168759[0.77980]	3.678770[0.28910]
LMCAP(-2)	0.197328[0.89242]	12.57305[0.96706]
LNBB(-1)	0.373482[0.59874]	22.00604[0.59998]
LNBB(-2)	-0.052196[-0.08929]	-15.97793 [-0.46486]
LR(-1)	-0.0019[-0.20150]	-0.028273[-0.05100]
LR(-2)	0.004953[0.49208]	-1.005007[-1.69799]**
DISC(-1)	0.005081[-1.59417]**	0.189599[-1.91190]**
C	2.758308[0.46196]	338.7098[0.96477]
R-squared	0.996571	0.802115
S.E. equation	0.197596	11.61841
F-statistic	174.3889	2.432072

*Note: Note: t-statistics in [ ] */**/*** Significant at the 10%, 5% and 1% levels; and Critical Values = 1.262, 1.64, and 2.14 respectively*
Source: Researchers estimation results 2019, using Eviews 9.5 version.

However, unlike NBB; bank credit to private sector (CPS), LR and LDR possess negative sign against the expected positive apriori expectations. This could be attributed to the high incidence of non-performing credits/loan and the inability of the banks to strengthen its risk management. The result equally revealed that discomfort index affects growth (GDP) negatively as it was statistically significant in lag 2, at 10% critical level with a negative sign. These could be explained by the fact that the high / rising inflation rate coupled with high rate of unemployment could spell decline in real per capita GDP and retard growth.

The overall inference in this regard is that both the financial sector and non - financial variables contribute to economic growth (GDP) though only moderately. It follows that financial sector

development have not adequately impacted on growth (GDP) of the Nigerian economy. Financial instability, poor access to financial service and financial sector inefficiency which often translated into high lending rate distorts credits to productive sectors. Restrictive capital market listing requirement and unethical/sharp practices by the operators among other factors affects the sector's ability to support the real sector. This is similar to the position held by Esther (2005), Odeniran and Udeaja (2010) and Edo (2011).

The results regarding the impact of financial sector development (FSD) on economic welfare as measured by discomfort index (DISC) indicate that nearly all financial sector development (FSD) indicators under study (except NBB) were seen to significantly affect economic welfare "discomfort index" at different lag periods and critical levels but their overall effect was only moderate too. Financial deepening variable: credit to private sector (CPS) affects discomfort index at 10% critical level of significant only in lag 2 with negative sign "apriori expectations". This was expected because increase in bank credit (CPS) is likely to exact declining effect on discomfort index since it will help to create employment and perhaps check the combine effect of rising inflation and unemployment rate and vice versa. In same vein, both lending – deposits spread (LDR) and financial sector stability measured by liquidity ratio (LR) were significant at 5% level in lag 1 and 10% significant level in lag 2 respectively. Out of the four variables that significantly affect DISC, only the lending-deposits spread (LDR) possess the positive apriori expectations. In other words, CPS, LR and NNB have the expected negative apriori expectations. Consequently, credit to private sector; efficiency and stability of the financial sector are capable of influencing the combined effect of inflation and unemployment rate (DISC) on the citizenry in the expected direction.

Results of Variance Decomposition.

At this point, the relative contribution made by each variable toward economic growth and discomfort index is further presented by analyzing the variance decomposition. Variance decomposition for ten-period forecasts with respect to all the variables under study is discussed in this section. Given that unrestricted VAR is recursively sensitive, cholesky ordering was applied in the estimation. Cholesky method explains how the variables are broken down into components of impact on each other in the VAR model.

Table 5.2 Summary of the Result of Variance Decomposition

Period	S.E.	LGDP	LCPS	LDR	LGEXP	LINV	LNBB	LR	DISC
Variance Decomposition of GDP growth rate									
1	0.1978	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.30597		0.38	7.37	5.17	0.06	1.36	0.01	0.32
3	0.3599	84.38	0.39	5.82	5.92	1.47	1.60	0.09	0.34
4	0.4088	85.83	0.34	4.56	4.60	1.33	2.97	0.09	0.28
5	0.4551	85.24	1.06	3.69	3.82	1.19	4.47	0.23	0.30
6	0.4988	82.19	3.089	3.49	3.23	1.23	6.20	0.23	0.35
7	0.5367	79.77	3.78	3.49	3.11	1.39	7.94	0.19	0.33
8	0.5675	77.60	4.42	3.35	3.04	1.70	9.42	0.19	0.28
9	0.5955	75.83	4.96	3.60	2.77	2.67	9.69	0.22	0.27
10	0.6222	74.50	5.18	4.11	2.55	3.68	9.45	0.26	0.28
Variance Decomposition of Discomfort Index									
1	11.618	39.23	0.26	22.91	10.57	8.18	1.92	0.003	16.87
2	12.951	42.26	2.024	18.50	10.24	6.58	3.30	0.003	17.09
3	15.305	34.14	9.73	17.28	7.83	11.49	4.96	1.17	13.11
4	17.977	25.27	7.94	21.03	12.72	9.04	4.44	1.47	18.09
5	20.376	19.67	11.73	16.68	14.31	9.04	8.73	1.22	18.62
6	21.187	19.06	12.00	16.96	14.53	8.99	9.33	1.55	17.58
7	21.706	18.90	11.50	16.62	14.49	9.48	8.90	1.54	18.58
8	22.513	17.92	11.17	15.45	13.66	10.51	9.70	1.88	17.92
9	23.228	16.85	10.51	15.53	14.21	10.54	10.59	2.03	17.75
10		16.65	10.33	16.17	13.96	10.43	10.49	2.06	17.17

Source: *Researchers estimation results 2017, using Eviews 9.5 version* SE *****Standard error of variance

As shown in Table 5.2, in the first period, GDP explains about 100% of its own forecast error variance, which implied that a variation in GDP was not stimulated by any other variables. The contribution of GDP to its own shock in the remaining nine periods follows a decreasing trend while the contribution of financial sector indicators to GDP increases. For instance, in period two, the contributions of GDP, CPS, LDR GEXP, INV, NBB LR and DISC, were: 85.40%, 0.38%, 7.37%, 5.17%, 0.06%, 1.36%, 0.01%, and 0.32% respectively. In period seven, the relative contribution of the FSD indicator to GDP increases to about 20% as variation in GDP attributable to itself reduced to 79.77%. In period 10, the FSD variables contributions to GDP increased to about 25.5% with the following relative percentages: GDP, CPA, LDR GEXP, INV, NBB LR and DISC: 74.50%, 5.18%, 4.11%, 2.55%, 3.68%, 9.45%, 0.26% and 0.28% respectively. A careful look at the table shows that the relative contributions of each of the FSD variables increases as the period increases except for leading - deposits ratio (LDR) and the control variables: human capital proxied by GEXP and discomfort index (DISC). While the LDR possess a declining effect over the periods: 7.37% in period 2; 4.56% in period 4 and 4.11% in period 10; GEXP and DISC demonstrated increasing effect until period 6 and subsequently began to decline. Contrarily, the

relative contribution of CPS to GDP increased from 0.38% to 3.09% and to 5.18% for period 2, 6 and 10 respectively.

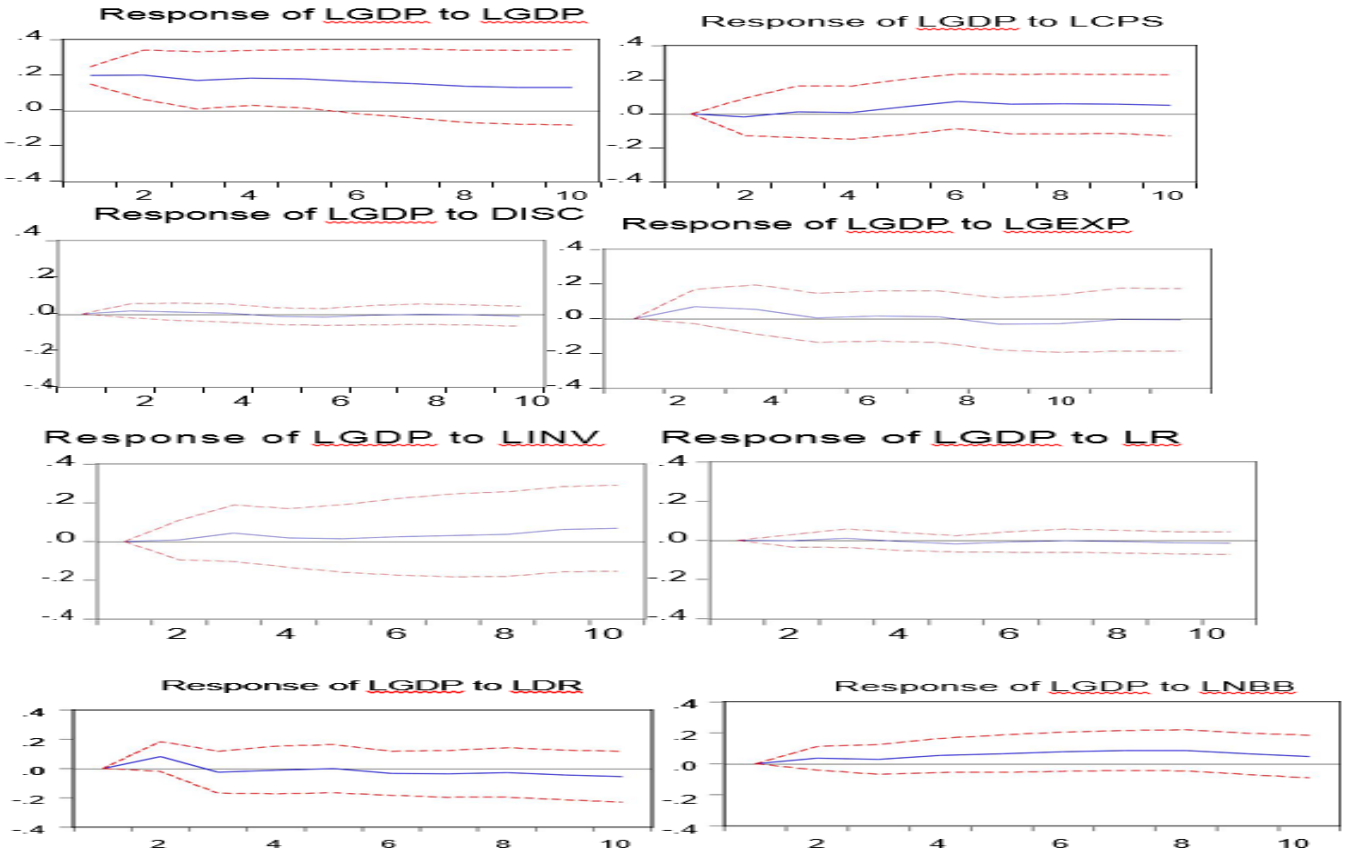
On the impact of financial sector development on discomfort index (DISC); the result of the variance decomposition as presented in Table 4.6, revealed that in the first period, DISC explains only about 16.87% of its own forecast error variance. Conversely, variation in the combined effects of inflation and unemployment (discomfort index) on the citizenry in the period were stimulated by GDP (39.23%), LDR (22.91%), GEXP (10.57%), INV (8.18%), LR (0.03%), and CPS (0.26%). Thus, all the variables: Investment, Human capital and FDS indicators under study impose some level of effect on discomfort index in period 1. The contribution of DISC to its own shock in the remaining nine periods followed a relatively decreasing trend as the relative impact of financial sector indicators to DICS increases. For instance, in period 3, their relative impact of DISC GDP, CPA, LDR GEXP, INV, NBB and LR were: 13.11%, 34.14%, 9.73%, 17.28%, 7.83%, 11.49%, 4.96% and 1.17% respectively. Also, in period six, the relative impacts of the FSD on discomfort index increases from about 43.9 % in period 1 to about 61.71% with CPS and LDR alone contributing about 29% of the variation in DISC. In same vein, the FSD variables relative impact on DISC increased to about 64.17% in period 8, with the following relative percentage: DISC, GDP, CPA, LDR GEXP, INV, NBB and LR: 17.92%, 16.85%, 10.51%, 15.53%, 14.21%, 10.54%, 10.59% and 2.03% respectively. A careful look at the table shows that the relative impact of each of the FSD variables increases as the period increases as there demonstrated increasing effect in nearly all the 10 periods. For instance, the relative impact of CPS to DISC increased from 0.26% to 11.73% and though declined to 10.33% for period 1, 5 and 10 respectively. Also, LDR and LBB relative impact for same periods were 22.91 %, 16.68%, 16.17% and 1.92%, 8.73%, 10.49% respectively.

Suffice to state here that the relative impacts of GDP growth rate, Human capital (proxied by Government expenditure on education) and investment on the combine effect of inflation and unemployment" discomfort index" was greatly significant. The three variables demonstrated tremendous effect on DISC over time; GDP imposes relative impact of 39.23%, 19.67% and 17.92% in period 1, 5 and 8 respectively. The impacts of Investment and human capital measured by government expenditure in same period: 1, 5 and 8 were 8.18%, 9.04%, 10.51% and 10.57%, 14.31%, 14.21% respectively. The scenario also suggests among other things, that changes in the financial sector development indicators as well as the investment and Human capital in Nigerian do not exact immediate effect on discomfort index. Their impacts become more pronounce with time. Generally, it could be seen from the analysis of the table that unlike in the case of variance decomposition of discomfort index "DISC," the standard error for the variance decomposition of GDP are all below 10.0% for all the variables and thus insignificant. Therefore, the results and analysis above could be considered dependable. It equally implied that the independent variables under study have not made much significant impact in their contributions to economic growth (GDP). It follows that there is urgent need for the policy makers in Nigeria to reappraise the financial sector with the aim of medicating against all impediments to financial sector development

as well as to improve investment and human capital development. It is only on that ground that the sector can significantly contribute to economic growth**.**

Results and Analysis of Impulse Response Functions

The impulse response functions (IRF) provides graphical and analytical information on dynamic behavior of a variable following a random shock or changes in other variables. It traces out the effects on current and future values of the endogenous variables of one standard deviation shock to a variable. Thus, it details the time paths of a dependent variable in response to one-unit shock in itself and/or another "independent" variable over time. In this study, the cholesky one standard deviation innovations is used to examine the impulse response analysis of the system. In other words, it provides explanation on how economic growth and discomfort index individually respond overtime to a shock in respective financial sector development "FSD" variables under study. The results as presented in Figure 5.1 show that each variable responds relatively to its own one-standard deviation shock. For instance, one-standard deviation shock to innovations of GDP growth rate led to a continuous decline throughout the period but in all cases remains above its equilibrium level.

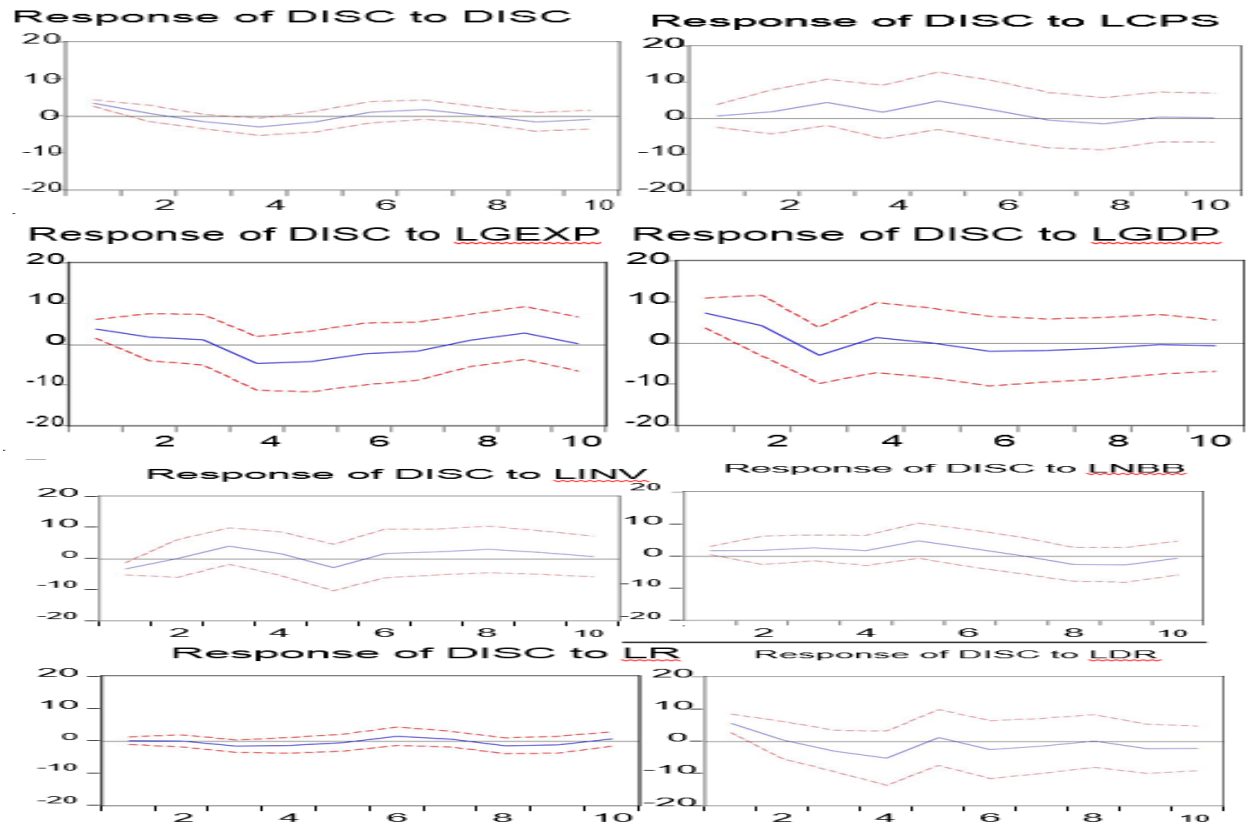


Source: Researchers estimation 2019, using Eviews 9.5 version.

Figure 5.1 Impulse Response of GDP growth to the explanatory variables

With regards to the response of GDP to CPS, a one-unit shock in CPS led to initial slight decline of GDP below its equilibrium until period 3 and 4, when it cuts the equilibrium and rise slightly above it for the rest of the period. It could be said then that the response of GDP to CPS is not very significant which could be attributed to huge value of non- performing loan in the banking sector. More so, the response of GDP to DISC produces intermittent effect along its equilibrium, but on the average was not very significant except for period 5 and 10 when it resulted to pronounced negative effect. On the response of GDP to GEXP, it was observed that a one-unit shock in GEXP led to a positive effect on GDP as it causes steady rise above equilibrium level until period 3, when it starts to decline, reaches the equilibrium line in period 3 and 6. It falls below the line in between period 6 and 8. Though it later rose slightly and again returns to equilibrium level in period 10. For the response of GDP to INV, the initial shock results to little or no effect on the GDP as it remains on equilibrium level till period 2, when it rises slightly above the line. It declined between period 3 and 4, and rose again slightly above its equilibrium level and remains so throughout the periods, indicating that the impact of Investment on economic growth is not so significant within the forecast period. Furthermore, the response of GDP to LDR, shows that a one-unit shock in LDR led to marginal positive jump above its equilibrium line till period 2 when it began to fall, cuts the line in period 3. It returns to the equilibrium between period 5 and 6 and starts falling gain. It remains below the line and did not return to equilibrium level. Also, the response of GDP to a shock in NBB reveals a slight positive effect on former (GDP) as it remains nearly perpetual above its equilibrium level rising steadily until period 9 when it began to drop but did not torch the equilibrium line. This implied that increased leading - deposit ratio could contribute to economic growth significantly. Conversely, the response of GDP to a shock in LR shows that the former (GDP) remains perpetually around its equilibrium as it fluctuates slightly about its equilibrium line.

Figure 5.2 shows that the response of DISC to GDP is very significant, a one-unit shock in GDP led to initial negative effect on DISC as it falls sharply below equilibrium level until period 3 when it began to rise, cuts the equilibrium output in period 4. It thereafter rises positively above equilibrium till period 5, again reaches a peak in the period and began to fall, got below equilibrium line and did not return. The positive incline implied that a decline or shock in GDP could cause increased "combined" effect of inflation and unemployment (discomfort index) on the citizenry over time. Also the response of DISC to CPS is very significant which could be attributed to the fact that credit to private sector could result to increased investment, production and job creation. In fact, from the result, a one-unit shock in CPS led to initial positive effect on DISC as its rises steadily above equilibrium level until period 3, when it began to fall sharply, cuts the equilibrium level in period 7.



Source: Researchers estimation 2019, using Eviews 9.5 version.
Figure 5.2 Impulse Response of Discomfort Index to the Explanatory Variables

It thereafter fell below equilibrium and began rises positively, then returns to equilibrium level in period 10. On the response of DISC to GEXP, it was observed that a one-unit shock leads to much negative effects as it causes huge fall and cuts the equilibrium level in period 3. It fell further steadily until period 5 when it starts rise and reaches the equilibrium level again in period 7. It thereafter fell slightly again and returns to equilibrium in period 10. The analysis indicates that Human capital significantly affects Discomfort index.

Furthermore, discomfort index response to a shock in LR reveals a negligible effect on the former (DISC) as it remains on the equilibrium line until period 2, when it began slightly to fluctuate around its equilibrium level throughout the rest of the period. The response of DISC to a unit shock in LDR and NBB were very pronounced. In other words, the response of DISC to LDR, shows that a one-unit shock in LDR led to sharply steady declined in the former (DISC), cutting its equilibrium line in period 2, reaches its minimum in period 4, when it began to rise until it returns back to equilibrium level in period 5. It furthers rise slightly and fell below equilibrium between period 7 and 10. Similarly, the response of DISC to a shock in NBB shows an initial positive effect on DISC as it rises slowly until period 5 when it got to its peak, began to drop steadily and

cuts its equilibrium level in period 7. It remains below its equilibrium level for the rest of the periods. The continuous decline also implied that improved bank branch network and financial sector efficiency were likely to result in reduced effects of inflation and high unemployment in Nigeria. This implied also that increased leading - deposit ratio could contribute to discomfort index. Conversely, the response of DISC to a shock in LR shows that the former (DISC) remains perpetually around its equilibrium as it fluctuates slightly about it equilibrium line. It suggests that liquidity ratio affects LR on the level of economic welfare is very not significant.

On the bases of above analysis, it could be said on the whole that financial development indicators as well as the control variables under study made only a moderate impact on economic growth (GDP). Their impacts on discomfort level were much pronounced. The implication of the findings is that policy makers must drive the financial market intermediary role to a direction that could propel improved growth and development of the Nigerian economy. They could also reduce the combined effect of rising inflation and unemployment rate (discomfort index level) on the citizenry by ensuring improved financial service delivery, stability, access and financial efficiency.

Policy Implication

The research findings revealed that the contribution of financial sector development (FSD) to economic growth (GDP) in Nigeria was only moderate, as some of the key financial sector indicators used as independent variables was not statistically significant. The significance contribution of credit to private sector (CPS) and bank branch network to GDP was in accordance with economic theory and are in terms with most past studies findings such as Agbakhese (2012) and Somoye (2006). The ability of the financial market to support the real sector does not only manifest in the sector's capacity as evident in the quality and size of the banks' balance sheet but also in the ability of the citizenry to access financial services measured here by number of banks branch network (NBB) as well as the quality and volume of credit (CPS) advance in the economy. Increased access to financial services assists in pooling savings from the public and channels same to the investing sector, which in turn propels increased output and creates employment opportunities. The non-significance of liquidity ratio and leading - deposits spread suggests that greater portion of total deposit mobilized by the DMBs were not properly used to finance the real sector activities and thus does not translate to positive impact on economic growth. It equally suggests financial sector instability.

With regards to research findings on the impact of financial sector development (FSD) on discomfort index, the results obtained indicate that financial stability, access and efficiency could influence the level of the combined effect of rising inflation and unemployment rate on the citizenry in the country "discomfort index". Bank credit to the private sector and access to financial services are capable of expanding the nation's investment level which in turn could results to Job creation. Both elements could assist to reduce the level of economic discomfort of the citizenry. The marginal effects exact by bank branch network as a measure of access to financial services on discomfort index suggest that the financial service in Nigeria is still restrictive, not all-inclusive and has not done much in support of the economy in the area of job

creation. As earlier stated, these positions could be attributed to unstable macroeconomic environment, unnecessary bottlenecks and inconsistency in the financial market.

CONCLUSION AND POLICY RECOMMENDATION

Having extensively examined empirically the impact of financial sector development on macroeconomic performance in Nigeria spanning between 1970 and 2015, the study reached the conclusion that financial sector development significantly affect economic growth and welfare in Nigeria. However, it was evident from the findings that financial sector is still very weak and fragile to support the growth and development level required to improve the economic welfare of the citizenry. This connotes that financial sector in Nigeria is still faced with some challenges that needs to be tackled if the sector is to meet the desired macroeconomic goal of contributing immensely to economic growth and development in Nigeria. It was interesting to note that non-financial variables made some contributions to economic growth. Thus, we proffer the following policy recommendations.

1. There is urgent need to increase bank credit to the private sector. Such credit should be granted based on economic rather that political consideration and at one-digit interest rate as to encourage borrowing. This could be achieved by making policies that will positively change banks' lending behavior and preferences. Government interference should be minimized to prevent crowding out effects.

2. All the nation's banks should be mandated to enlist the services of Credit Search Bureau, that could assist to check the incidence of growing non- performing credit/loan and put to check a situation where same group of individuals owe the banks and refuses to pay back with impunity. The establishment of the Asset Management Company of Nigeria (AMCON) aimed at reducing the burden of the non-performing assets of banks is a good development in the right direction, as it enhances the ability of banks to extend credit to the economy since their balance sheet will house only sound assets and liabilities.

3. The capital market should be reformed as to strengthen the financial market and attract increased participation. More companies should be encouraged to get listed on the floor of the stock exchange market, small and medium entrepreneurs should be allowed to easily access the market for investible funds. Excess restriction and bottlenecks in the market should be reduced. Regulatory agencies and the financial market operators should adequately sensitize the investing public of the immense benefit of sourcing and investing fund through the capital market.

4. The managers of the economy should foster policy that will ensure greater Surveillance and regulatory compliance in financial sector. This will help improve corporate governance while eliminating abuses, unethical and sharp practices. This will help install greater confidence of stakeholders in the sector and improved risk management.

5. The managers of the economy must foster financial sector stability. The weak banks should be supported. The liquidity positions of the bank must be monitored closely as same forms the ability of the bank to meet their financial obligations as the fall due. By so doing the confidence

of the investors, depositors and other stakeholders will be encouraged. It follows that CBN should conduct acid test on the banks more frequency and efficiently.

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