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The Relationship Between Financial Deepening And Economic Growth In Nigeria

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Abstract: *This research studied Nigeria's economic development and finance sector deepening from 1986 to 2022. Autoregressive distributed lag (ARDL) was employed as estimated technique. The study employed Gross Domestic Product (GDP) as a proxy for economic growth which is the dependent variable while percentage of money supply to gross domestic product and percentage of credit to private sector to gross domestic product as independent variable. The causality result revealed that there is a unidirectional relationship from LNGDP to MS_GDP, also, there is a unidirectional relationship from LNGDP to CPS_GDP. The direction of the flow comes from gross domestic product to percentage of money supply to gross domestic product, percentage of credit to private sector to gross domestic product and concluded that there is a unidirectional relationship from gross domestic product to percentage of money supply to gross domestic product, percentage of credit to private sector to gross domestic product. Thus, the central bank should lower interest rates and other economic basics to allow the financial sector, especially intermediaries, to do more business, commercial banks should encourage saving, and the Nigerian economy needs a higher liquidity threshold.*

Keywords: Gross Domestic Product, Percentage of Money Supply to Gross Domestic Product and Percentage of Credit to Private Sector to Gross Domestic Product.

Introduction

Udoh, Jack, Prince, Ekeowa, Ndubuaku, and Samuel (2021) stated that for decades, individuals worldwide have debated whether financial system growth influences the economy. Different nations' financial depth is a major predictor of export success and long-term economic progress, making surplus and deficit units easier to intermediate. Effective financial deepening requires financial system improvements (Bank-Ola, 2022). The relationship between financial depth and economic advancement has long fascinated economists, especially since the emergence of endogenous growth theories (Paul, 2017). Financial intermediation's influence on economic growth is theoretically stated and confirmed by empirical data, although economists disagree on its relevance. As they grow, commercial banks, holding companies, discount houses, bureaux de change, merchant banks, and stock exchanges develop financially (Divine, Omankhanien & Godswill, 2020). Better and more diverse financial goods and services for all ages are crucial (Sackey & Nkurumah, 2012). Another definition of financial deepening is a financial institution's ability to invest funds efficiently. Sanusi (2009) acknowledged that the global financial system has influenced domestic growth. It underpins financial management and resource mobilization and allocation for efficiency. The system's liquidity management architecture enhances people's lives and promotes their economic performance as it improved resource distribution. Two broad schools of thinking have dominated discussions on financial sector complexity and national growth during the past two decades. The first line of argument states that financial deepening can only aid actual activities so much (Divine, Omankhanien & Godswill, 2020). This hypothesis states that domestic market growth boosts financial markets. According to Robinson (1952), the direction enterprises are led impacts how money is spent. On the other side, you might argue that having a strong bank account is vital to initiating growth plans, fostering innovation, and increasing the economy. (Levine, 1973), Mckinnon, 1973), Schumpeter, 1911, & Bagehot, 1873). Haber, North, and Weingast (2008) argue that economies' wealth comes from their sophisticated and robust banking securities, not national success. The Nigerian financial industry has seen many changes since 1986 reforms including the Structural Adjustment Programme. Before 1986, the economy had weak financial systems, heavy regulation, and misallocation of resources, ambiguous economic activity, interest rate restrictions, direct credit programs, and ineffective risk management instruments (Otieno, 2013). The fundamental purpose of this reform was to extend financial programs to improve long-term operations. Nigeria's financial industry has grown, resulting in more bank branches, faster debit and credit card usage, and more financial depth. Instead of making capital more available, a rudimentary financial system forces individuals to use their limited resources and turn to expensive informal sources like moneylenders. According to Özşahin and Uysal (2017), reducing money availability and increasing costs will lead to less economic activity and lower inclusive growth. Financial deepening is an operational improvement and a stimulus for quicker inclusive growth since it raises poor salaries and reduces income inequality (Nwaolisa & Cyril, 2018). Governments in Sub-Saharan Africa (SSA) have typically had to reorganize their economy to achieve sustainable growth, reduce poverty, and improve social indicators like education and health (World, 2019). Nigeria was among several Sub-Saharan African nations that reformed their banking sectors in the 1980s and 1990s to improve financial depth. Interest rates were lowered, directed credit was phased out, indirect monetary policy measures were introduced, banks were reorganized, and monitoring was tightened (Nwanna & Chinwudu, 2016). These changes could not achieve inclusive growth because economic growth was not distributed fairly to eliminate poverty (Central Bank of Nigeria, 2019). Financial deepening enhanced people's finances and the economy's non-financial sectors by increasing financial market efficiency (Ifeanyi & Chinyere, 2015). Financial development reduces income gap and poverty by increasing the availability and diversity of financial services, which promotes fair economic growth. Okafor, Onwumere, and Ezeaku (2016) stated that financial deepening prepares the groundwork for inclusive growth by actively mobilizing savings and idle cash and allocating them to economic agents like households, entrepreneurs, businesses, and the government for investment projects and other income-generating purposes. Nigeria's money supply to GDP ratio was 15.54% in 2007, 22.93% in 2014, 22.18% in 2015, 23.90% in 2016, 25.16% in 2017, 23.31% in 2018, and 23.75% in 2019 (Central Bank of Nigeria, 2019) which suggested the country's financial industry is strengthening. Nigeria's financial industry deepened from 11.12% in 2007 to 17.67% in 2008, 20.55% in 2009, 20.77% in 2016, 19.43% in 2017, 17.63% in 2018, and 17.28% in 2019, according to the Central Bank of Nigeria (2020 Nigeria's GDP per capita was N1,131.147 billion in 2007, N6,951.376 billion in 2008, N857.449 billion in 2009, N1,091.968 billion in 2010, N527.2314 billion in 2011, N963.537 billion in 2012, N2,514.1 billion in 2013, N2,486.22 billion in 2014, N2,739.852189 billion in 2015, N297.9 billion in 2016, N484.415 billion in 2017, N3,203.244296 billion in 2018, and N2,640.290739 billion (World bank, 2019). A halt in financial deepening has caused GDP per capita to decrease despite banking sector reforms. The reduction in GDP per capita may have restricted Nigerians' chances because many live on less than $2.00 per day (World Bank, 2019). Nigeria's financial industry has grown due to improvements made in the recent decade. The system improved regulatory standards, increased institutions and operators, and diversified financial assets from its 2020 beginnings. The observed modifications intended to repair systemic financial vulnerabilities and reduce credit distribution and management rigidities to achieve positive real interest rates through market actor efficiency in intermediation. In this proposed financial system reform, flexible interest rates, market-driven resource allocation, central bank independence, and developed money and capital markets would replace fixed rates, an immature money and securities market, and an inadequate banking system. Ineffective financial deepening attempts are apparent in Nigeria's financial sector's inability to attract international investment and halt money outflow. Due to the sector's poor competitiveness and low internal savings and investments, inadequate financial deepening activities have allowed the Nigerian banking sector's financial shortcomings to remain (Nwafor & Yomi, 2016). Nigeria's financial development and economic growth have received minimal attention, which is problematic given the financial market crisis and its detrimental impacts on the real sector. Financial deepening has been much debated by developmental finance professionals in recent decades. This argument relies on the supply and demand hypotheses. Financial depth is a key success element for supply chain executives. Financial markets enable domestic progress, savings mobilization, and liquidity augmentation (Levine, 1996). The demand-leading theory states that financial deepening is driven by actual sector improvements due to more relevant applications in early growth (Odhiambo, 2011). Past financial market expansion initiatives may have squandered resources that could have gone to other essential purposes. Development boosts the economy by increasing demand for financial services (Lucas, 1988; Robinson, 1952). Since 1986, Nigerian monetary authorities have taken several steps to enhance banking institutions and alleviate financial constraints. Financial system reforms aimed to make Nigeria more competitive, strengthen administrative authorities' managerial duties, improve public-financial relations, and reduce investment choice distortions. As new financial instruments and procedures were developed and modified, financial markets adapted to new demands and conditions. This study will examine Nigeria from 1986 to 2022 to see how financial deepening affects economic growth. This study seeks to relate Nigeria's financial deepening to economic growth.

Literature Review

Financial Deepening

Banks' ability to efficiently and effectively distribute funds for investments is called financial deepening, and economic development specialists employ it (Divine, Omankhanien & Godswill, 2020). Ozturk (2007) defines financial deepening as improving financial tools, markets, institutions, and activities to encourage investment and growth. According to Nnanna and Dogo (1998) and Nzotta (2004), a country's economic prospects improve with a larger money supply-to-GDP ratio. Quantitative measurements of financial market size include the intermediation ratio and monetary ratio. The second group includes short-term obligations and financial metrics like the money supply to GDP ratio. Intermediation ratio indicators include business lending and savings-to-time deposit ratios (Ndebbio, 2004). A financial deepening economy has a growing, important, and ubiquitous financial industry. Monetary policy worries about enterprises and households diversifying their investments since they are more exposed to market volatility (Visco, 2007). Since financial deepening increases financial market competition, Abur, Chiawa, and Torruam (2013) say non-financial sectors benefit indirectly. Financial deepening increases capital mobility between economies, increasing risk. Increased risk capital will spur rapid economic growth. Companies' capacity to satisfy operating cash demands and invest in innovative operations and cutting-edge technologies drives economic growth (Acharya & Xu, 2017). Financial market shortcomings in underdeveloped nations may limit a company's imports. Abo-Zaid and Garín (2016) found that enterprises in a credit-limited and financially inefficient environment cannot get loans beyond their current profitability. Financial deepening includes liquid assets, easy currency conversion boosts economic growth. Economic development depends on investment and other return-generating activities, and financial deepening may mobilise vast savings and idle money. These resources are given to the government, companies, families, and entrepreneurs. According to Chibuike (2017), Nigeria's economy has stagnated despite financial deepening attempts to attract foreign investment and prevent capital flight. The Nigerian banking sector has failed to address systemic financial issues despite several changes. Nigerian investments and savings have not risen since banking sector reforms. The market remains oligopolistic and uncompetitive, with a few large banks owning most credit, assets, and liabilities (Abur *et al.*, 2013). Money market changes indicate financial deepening (Fapohunda, Ogbeide & Ogunniyi, 2019). A rise in the money supply to GDP indicates financial sector deepening, the ultimate objective is to understand how the money supply influences financial markets and economic growth. In the past, raising the money supply helped investors get cash. Investments improve economic activity and productivity, raising GDP. Financial markets capital, money, and other trading instruments boost economic activity and GDP. Money market products include treasury bills, commercial papers, bankers' acceptances, and treasury certificates, whereas capital market instruments include shares and bonds. The money supply affects all of these, encouraging investment, low-risk liquidity, and economic expansion, these factors impact financial system depth. Financial deepening is when the financial system can fund the public and private sectors (Caballero & Krishna-Murthy, 2004). A well-developed financial system enables for rapid economic expansion by providing robust financial infrastructure and short-term financial intermediation. Financial deepening follows effective financial intermediation (Honohan, 2004). Klein and Olive (2008) emphasise that financial depth helps the banking sector reallocate resources for economic development. Mirkin, Kuznetsova, and Kuznetsov (2013) defined financial deepening as the extent to which savings, investments, and redistributive processes particularly those involving financial instruments—match the size and structure of the financial sector. Financial deepening increases competitive capabilities in financial markets, which benefits non-financial industries, according to Ighoroje and Okoroyibo (2020). Financial deepening boosts financial infrastructure demand and service range. An economy's financial deepens when financial institutions efficiently invest savings. Nzotta and Okereke (2009) claimed that financial deepening actively attracts funds and distributes them to consumers, enterprises, entrepreneurs, and the government for investment projects and other goals, supporting economic growth. Financial deepening has been described from several angles. Shaw (1973) opined that a well-designed financial policies and rising markets cause financial deepening. A financial system without repression deepens, say Nnanna and Dogo (1998). Financial deepening happens when non-financial wealth and productivity grow slower than financial assets, according to Shaw (1973). Ndebbio (2004) says financial depth is essential for economic growth. He also said that the financial industry is measured by the monetisation and intermediation ratios. The monetisation relationship includes liquid liabilities like the large money supply to GDP ratio, while the intermediation proportion includes banking practices like bank credit to the private sector and capital market activities like the capitalisation ratio relative to the stock market. Money supply growth as a proportion of GDP indicates financial deepening.

Economic Growth

This word economic growth indicates GDP or real national income growth. GDP is the total of a country's final sales, investment income, wages, rent, and other monetary gains from its population. Iram and Nishat (2009) state that capital is necessary for economic growth, an indication of economic health. Progress might indicate a nation's financial stability. Living standards are affected by economic advancement. Economic growth, which involves quantitative and qualitative changes in the economy and society, leads to a sustained and cumulative increase in real national output. Since economic development raises national income per capita, a quantitative investigation of endogenous component functional connections is needed. It increased national wealth by increasing GDP, GNP, and NI. Production capacity per capita and absolute and economic structure affect wealth (Arestis, Demetriades & Luintel, 2011). Society and the economy benefit when macroeconomic measurements like GDP per capita grow, but not necessarily straightly. Economic growth can be positive, negative, or zero. The economy grows when macro-indicators outpace population increase. When macroeconomic indices, notably GDP, expand at the same pace as population, zero economic growth occurs. Population increase exceeds macroeconomic indices, causing negative economic development. Economic growth is constrained by overpopulation, limited resources, inadequate infrastructure, excessive resource usage, interventionist government, and limited cultural and institutional frameworks (Esso, 2010). Economic growth results from efficient resource usage and improved production capability. People's money may be transferred to society. Even little growth rate adjustments might matter after 10 years. Growing and evolving societies may redistribute income more easily. Sometimes economic expansion is mistaken with volatility. Expansionary fiscal and monetary actions can fill recessionary gaps and boost GDP. Changes in input availability or efficiency cause potential output movements, which drive economic growth. Strong economic growth improves production of products and services, lowering unemployment, increasing job possibilities, and improving the quality of life.

Theoretical Review
Theory of Financial Intermediation

This theory states that financial intermediaries encourage investment and growth by shifting money from net savers (surplus) to net borrowers (deficit). Information asymmetry-induced market failure can be reduced by changing asset risk features. The lending market is imbalanced since lenders don't always know borrowers' investment plans' moral purity, diligence, and collateral. Schumpeter (1911) suggests that effective financial intermediaries may distribute and pool resources to encourage innovation and entrepreneurship, which are important for economic growth. Financial intermediaries help lenders invest and save more, according to Gurley and Shaw (1960). Intermediation improves savings mobilisation, which boosts investment and growth (Bakang, 2015).

Demand Following and Supply Leading Hypothesis

Patrick argued in 1966 that the relationship between financial depth and the economy can be either demand-following or supply-leading, or even both. This notion is known as the demand-following and supply-leading hypothesis. When monetary and economic growth are accelerated by one another, the demand-following hypothesis comes into play. Growth in the financial sector, according to the second notion, is the motor that propels economic expansion. After that, prominent academics had two competing theories about what caused economic growth: some (e.g., Goldsmith (1969), Hicks (1969), McKinnon (1973), and Shaw (1973)) believed that financial sector growth was the sole cause, while others (e.g., Gurley and Shaw (1955), Goldsmith (1969), and Jung (1986)) believed that real sector growth accelerated financial sector growth. Finance drives growth, and economic growth stimulates finance, according to two widely held beliefs (Odedokun (1998); Nieh, Chang, Russel, & Hung (2009); Islam and Osman (2011)). According to King and Levine (1993), Arestis and Demetriades (1997), Hassan, Sanchez, and Yu (2011), and Pan and Wang (2013), the financial sector supports economic growth, so the claim is no longer disputed (Ogun, 2014). The Cadelron-Rossell Model is commonly used to describe how macroeconomic issues affect stock markets. According to the Calderon-Rossell Model, economic growth and stock market liquidity affect stock prices and listings, driving stock market development. Calderon-Rossel created this approach in 1991, and Yartey popularised it in 2008. Since then, stock market literature has used the model as a standard; the theoretical foundation will explain why.

Supply-Leading Hypothesis

According to the supply-leading argument, financial market expansion boosts monetary growth. Financial markets and services stimulate saving and investment, facilitating capital accumulation and use. This theory states that financial institutions can boost economic efficiency, create and increase liquidity, mobilise savings, help with capital accumulation, redirect resources from non-growth areas to growth-inducing ones, and encourage competent entrepreneurship in the new areas. Torruam, Chiawa, and Abur (2013) use Dernirguc-Kunt and Levine (2008), who examined finance literature's analytical approaches, to argue that growth requires financial development. This must convince lawmakers to prioritise financial sector policies and study financial development to make progress. The idea encourages entrepreneurs to be proactive, say Torruam et al. (2013).

Demand Following Hypothesis

According to demand-following theory, financial markets alter when economic activity rises, increasing financial product demand. If financial market cultivation begins too early, Ohwofasa and Aiyedogbon (2013) suggest more productive resource usage during early growth. Economic expansion increases financial growth and demand for financial services. Financial services are in demand since the real sector is growing, stimulating business. The demand-following hypothesis states that real economic expansion inevitably leads to financial deepening.Ireland (1994) and Demetriades and Hussein (1996) reaffirmed this. This opposing view holds that financial market developments are a side consequence of economic growth.

Neo-Structuralists Paradigm

Neostructuralists (Wijnbergen, 1983; Taylor, 1983) disagreed with the McKinnon-Shaw paradigm. Their premise was that financial liberalization's loan reduction lowers investment in unstructured money markets (UMM). Credit has decreased due to organised market deposits replacing UMM loans. Wijnbergen (1982, 1983) anticipates that financial deregulation will delay economic growth by limiting investors' actual credit supply due to deposits in the organised sector. They further stated that the informal sidewalk market is exempt from reserve limitations since it operates differently from banks. This may reduce loan availability. Thus, the curb market may offer better financing. Reserves, interest rates, and bank loans may aid financial deepening, they concluded.

The Neoclassical Growth Model (Solow–Swan Model of Economic Growth)

The neoclassical growth model by Solow and Swan (1957) studies how capital and labour accumulation affects long-term economic growth. If this argument is right, technical development is more important than riches. Neo-classical economic growth assumes a constant returns to scale in labour and replicable capital aggregate output function. Net production after capital depreciation is output. Marginal physical productivity determines labour and capital wages. Pay and pricing are adjustable. Capital is fully employed. As work and capital rise, declining returns are expected. It indicates economies will conditionally reach the same income level if savings, depreciation, labour force expansion, and productivity growth are comparable. Access the model here:

$$Y = f\,(A, K\,L)$$
$$Y = A\,K\,L\alpha\,(1-\alpha)$$

Where, K = Capital, L = Labour

If the technical coefficient is modifiable, the model predicts the capital-labor ratio will approach equilibrium. Long-term per capita growth depends on technical advances outside an economy. A greater savings rate will temporarily boost capital-to-labor ratio and per capita production. At high per capita output, both would resume steady increase. An increase in savings will temporarily raise the capital-to-labor ratio and per capita production. Spending affects long-term per capita production but not growth. Different growth measurement sources emphasized the relative relevance of capital accumulation and technical innovation in measuring economic development. The Neoclassical paradigm views technology as a driver of economic growth, yet external influences dictate technical advancement, a key problem.

Research Method

The empirical model in this study was adapted from Udoh, Jack, Prince, Ekeowa, Ndubuaku, and Samuel (2021) research model which is stated below:

GDP = $f(M_3/GDP, CPS/GDP)$ ……………………… 1

Hence, this model can, for simplicity, be stated in the econometric form of equation as depicted below:

GDP = $\beta 0 + \beta_1 M_3/GDP + \beta_2 CPS/GDP + \mu$………… 2

Where;

GDP = Gross Domestic Product

M_3/GDP = Money supply to Gross Domestic Product in percentage

CPS/GDP = Credit to Private Sector to Gross Domestic Product in Percentage

μ = Error term

β_0 = Constant Parameter

β_1- β_2 = Coefficients of Regression

Data Analysis and Interpretation

This study employed a paired Granger causality test to examine Nigeria's financial deepening and economic growth from 1986 to 2022. The findings and interpretation are the exclusive focus of this study part.

Data Presentation

Raw and log-linearized secondary data from 1986 to 2022 were used in the investigation. Find this data below.

Granger Causality

After the ARDL model, Granger (1988) presented the paired Granger causality test. The Granger causality test can determine if variables are Granger-caused since ARDL can't tell you how they relate. Calculating the F-statistic and probability lets one accept or reject the hypothesis. Bidirectional causality involves two variables influencing each other; unidirectional causality involves one variable influencing another without an equal and opposite reaction; and lack of causality involves no relationship between the variables.

Causality Result

Causality direction	Obs	F-Statistic	Prob.
MS_GDP does not Granger Cause LNGDP	36	0.02006	0.8882
LNGDP does not Granger Cause MS_GDP		5.15761	0.0298
CPS_GDP does not Granger Cause LNGDP	36	0.31180	0.5803
LNGDP does not Granger Cause CPS_GDP		4.89192	0.0340
CPS_GDP does not Granger Cause MS_GDP	36	0.46192	0.5015
MS_GDP does not Granger Cause CPS_GDP		2.25988	0.1423

Source: ***Eviews 9*** **(2023)**

The table above indicates the causality test result conducted to examine whether financial deepening is detrimental to economic growth or not. Evidence from this result revealed a causal relationship between financial deepening and economic growth in Nigeria.

Evidence from the result revealed that there is a unidirectional relationship from LNGDP to MS_GDP, also, there is a unidirectional relationship from LNGDP to CPS_GDP. The direction of the flow comes from gross domestic product to percentage of money supply to gross domestic product, percentage of credit to private sector to gross domestic product.

Summary of the Research Findings

The objective of the study is to empirically investigate the the relationship between financial deepening and economic growth in Nigeria from 1986 to 2022. Evidence from the result revealed that causality result revealed that there is a unidirectional relationship from LNGDP to MS_GDP, also, there is a unidirectional relationship from LNGDP to CPS_GDP.

Conclusion and Recommendations

The study examined financial deepening and economic growth in Nigeria. This research used GDP as the dependent variable and money supply and private sector credit as independent variables. The investigation employed a paired Granger causality test to reveal variable relationships. Study run from 1986 until 2022. Finally, GDP and money supply and private sector credit percentages were shown to be one-way related. To strengthen financial sectors, particularly intermediaries, the monetary authority should liberalise economic basics like interest rates. Deposit money institutions should also encourage public saving. Finally, Nigeria requires a clearer and higher liquidity criterion.

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