

THE LONG-TERM IMPACT OF MONETARY POLICY AND ELECTRICITY CONSUMPTION ON INCLUSIVE GROWTH IN NIGERIA

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ABSTRACT

The monetary policy and electricity consumption play a vital role in any economy. This study determined the extent to which monetary policy impacts electricity consumption on inclusive growth in Nigeria. Specifically, evaluated the impact of monetary policy on inclusive growth in Nigeria and examined the long-run relationship between electricity consumption and inclusive growth in Nigeria. The study employed the cointegration test, which was used to determine the long-run effect of monetary policy and electricity consumption on inclusive growth in Nigeria. At the end of the study, we found that the trace test indicates four co-integrating variables while the maximum eigenvalue indicates two co-integrating variables at a 5% level of significance. The result, therefore, suggests that there exists a long-run relationship between monetary policy, electricity consumption, and inclusive growth in Nigeria. The study also discovered that the coefficient of the error correction mechanism (ECM) is positive 0.036742 and significant at the 0.05 percent critical level. This shows that about 3 percent of disequilibria in Nigeria's inclusive growth in the previous semi-half of the year are corrected for in the current semi-half. The significance of the ECM is an indication and confirmation of the existence of a long-run equilibrium relationship between monetary policy, electricity consumption, and inclusive growth in Nigeria. The study recommended that monetary policy has the potential to stimulate Nigeria's economy, but its benefits can only be fully realized if complementary fiscal policies are implemented and structural constraints are removed. The study also suggested that, given the long-run effect of electricity consumption on inclusive growth, the government should intensify efforts at revamping the electricity sector through investment in new power generation plants.

Keywords: Electricity Consumption, Inclusive Growth, Monetary Policy, Money Supply, Monetary Policy Rates.

1.0 INTRODUCTION

Achieving and maintaining economic growth and development with the ultimate goal of improving the welfare of its population is one of the issues that any contemporary economy faces. This might not be possible when the country is faced with serious electricity challenges. Development economics has responded to this by suggesting a paradigm change from pro-poor growth to inclusive growth. Growth is excellent and sustained high growth is better, but the greatest is sustained high growth with inclusivity (Aluko, Odewale, and Adefeso 2024). With an estimated 227 million people (Worldometer 2024). However, despite robust GDP development (both productivity and per capita GDP), poverty did not significantly decrease in Nigeria; rather, there has been a high level of poverty in Nigeria (Rena, Olawale, and Ismail 2024). Therefore, Nigeria has not had enough growth in the past ten years to be accompanied by a decrease in unemployment and widespread poverty. This makes it very evident that the current rate of economic growth is insufficiently inclusive and requires attention.

The economy's growth, demographic shifts, urbanization, and socioeconomic development have all contributed to the sharp rise in electricity demand. With the growth of the economy, shifting demographics, increasing urbanization, and socioeconomic development, the electricity demand has been rising quickly. Poverty has continued despite some successes in financial growth over the

years; living conditions and poverty in rural areas have gotten worse. It is evident that Nigeria's economic growth has not been inclusive or broad-based, and it has not always resulted in better living conditions for the vast majority of Nigerians. People now have unequal access to resources and wealth in general as a result of the growth pattern. This clearly shows that there is a strong correlation between monetary policy, electricity, and inclusive growth in most developing countries, especially Nigeria (Eseyin, & Ogunjobi 2022; Ajibola, & Saibu 2016). A country's ability to effectively industrialize depends on its electricity supply. This energy form is of exceptional quality, and it is unparalleled in terms of its adaptability, versatility, and controllability. Electricity is also the preferred energy source in many applications due to its cleanliness, simplicity, familiarity, and ease of use. A broad, quick rate of growth across an economy's sectors that benefits and is contributed to by a diverse range of people, including the impoverished, is known as inclusive growth. It focuses on strategies to accelerate growth by making greater use of laborers who are either excluded from the growth process or locked in low-productive activities. Increased productivity and the creation of new job possibilities are necessary for inclusive growth (Eseyin, & Ogunjobi, 2022; Ajibola, & Saibu 2016).

The goal of inclusive growth is to increase the economy's size and growth rate while leveling the playing field for investment and creating more chances for productive employment. Sustainable growth is the main issue here, and for growth to be sustainable, it must be wide-ranging and cross-sectoral, resulting in structural change for economic diversification. Additionally, a sizable portion of the labor force in the nation should be included. This is extremely important since speeding the reduction of poverty depends on how growth is generated. The focus of the inclusive growth strategy is not only on employment growth but also on productivity growth since productive employment is prioritized over income redistribution; the idea is to educate someone on how to catch a fish instead of giving him one. Accordingly, inclusive growth is a growth strategy that is pro-poor (Eseyin, & Ogunjobi 2022; Ajibola, & Saibu 2016).

Thus, the problem to be examined in this paper is the incapacity of economic policies to ensure balanced and inclusive growth to assure high employment and equitable opportunities, and constant electricity, which will decrease the widespread poverty in the economy. Monetary policy and electricity consumption are indicators that can tackle the Nigerian issues of insufficient growth and pervasive poverty. It is thought that effective monetary policy management and stable electricity can lead to inclusive growth in an economy, which will lower unemployment and pervasive poverty and ensure equitable opportunity for all (Lawal & Rabi, 2024).

One of the instruments available for managing the macroeconomy is monetary policy, and with the high level of electricity consumption, small and medium-scale enterprises can do better. It seeks to restrain the expansion of monetary aggregates and supports other policy instruments in achieving the macroeconomic objectives of sustainable output growth, low inflation, and balance of payments viability. It is widely accepted that monetary policy enhances the accomplishment of macroeconomic goals by coordinating with other policy instruments. As a result, monetary policy plays a key role in macroeconomic management and enhances the growth and development of both established and emerging economies by supporting other policy tools, particularly fiscal policy (Ifeakachukwu & Fagite, 2024). The increase in electricity consumption identifies the high purchasing power of electricity by the public (both for household and corporate consumption), which shows that people's incomes are also high enough to increase GDP, thus leading to a positive correlation between energy consumption and GDP.

It is important to note that monetary policy and electricity consumption play an important role in growth that is inclusive growth through its primary objective. The main goal of monetary policy

is to maintain price stability. When overall domestic prices stay as low and steady as possible to promote long-term economic growth, the price stability goal is achieved. For any economy to achieve inclusive growth, the functioning of the monetary policy and electricity consumption cannot be overemphasized. This is because the Central bank plays a key role in economic growth and development through its monetary policy tools (Ogbonnaya, Ugwu, Truelove, Oko, and Uzochi 2024). The reserve requirement, open market operations, discount rate, and interest on reserves are the four primary monetary policy tools available to central banks. Additionally, the majority of central banks have access to many more instruments. These extra instruments may consist of special financing initiatives, inflation targeting, and forward guidance (Michael, Grace, Valentine, & Ideba 2024). In the past, variables such as money supply, interest rate, liquidity ratio, and monetary policy rates have been used to measure monetary policy impact.

A) The Research Questions

The research questions that guide this study are;

- 1) How do money supply and liquidity ratios impact inclusive growth in Nigeria?
- 2) What is the long-run relationship between electricity consumption and inclusive growth in Nigeria?

B) The Objectives of the Study

This study seeks to achieve the following objectives;

- 1) evaluate the impact of monetary policy on inclusive growth in Nigeria; and
- 2) examine the long-run relationship between electricity consumption and inclusive growth in Nigeria.

The contributions of every study lie in the value and benefits that such studies will bring to society, researchers, government, and policymakers. The impact of monetary policy and power usage on inclusive growth in Nigeria is the main focus of this study. Economic interest rates, such as those for business and home loans and savings account interest rates, are influenced by monetary policy. People's choices to invest or spend are influenced by changes in interest rates, which eventually have an impact on inflation, employment, and economic growth. The government and central bank will be able to establish the ideal money supply and interest rates needed to accomplish inclusive growth in Nigeria with the aid of this study. The policy recommendations will help policymakers to know the appropriate monetary policy rate and electricity that is needed to boost businesses and SMEs in Nigeria. The study will also contribute to the body of literature, especially to those who will research in this area in the future.

2.0 LITERATURE REVIEW

A) Conceptual Review

Some of the conceptual reviews that are relevant to this study are:

Inclusive Growth

Definition of Inclusive Growth:

The models developed by Kuznet (1955) and Solow (1956) are the foundation of the policy discussion surrounding the economic relationship between poverty, inequality, and growth (Geng, Wu, Zhang, Xie, Mahmood, & Ali 2024). This is followed by disagreements between the free-market policies promoted by monetarists and Keynesian state involvement. The application of policy debate and deliberations, which culminated in the Washington Consensus (WC), led to a movement in development theory towards the trickle-down notion, which was influenced by the growth of monetarists and neoclassical economists in the mid-1970s and late 1980s (Lukash, 2021). The World Bank and International Monetary Fund (IMF) were compelled to use Pro-Poor Growth (PPG) to address the issues of poverty and inequality when the Washington Consensus

failed in the early 1990s, and institutional economies put pressure on them. As the United Nations has highlighted, the worldwide commitment to the Millennium Development Goals and the subsequent transition to inclusive economic growth demonstrate this change in the global policy discussion (Hayden, 2024).

Lukash (2021) asserts that the term "inclusive" has been used to describe growth episodes since at least the turn of the century when Kakwani and Pernia (2000) used it to emphasize the content of pro-poor growth as that which allows the poor to actively participate in and benefit from the growth process. Growing concerns about the unequal distribution of the advantages of economic progress have drawn attention to inclusive growth as a strategy for economic development. When growth generates economic possibilities and guarantees equal access to them, it is inclusive (Osabohien, Igbal, Osabuohien, Khan, & Nguyen, 2022).

Despite the lack of a consensus definition, the phrase "inclusive growth" is frequently used synonymously with a number of other concepts, such as "broad-based growth," "shared growth," and "pro-poor growth." As stated by Aluko, Odewale, and Adefeso (2024b), inclusive growth refers to ensuring that economic class, gender, sex, disability, and religion do not hinder growth. Saher, Tabak, Lyeonov, and Vasa (2024) state that for growth to be sustainable over the long term, it must be inclusive of the majority of a nation's workforce and should be broad-based across all sectors. Successful growth requires a focus on inclusivity, particularly on equality of opportunity access to resources, markets, and an impartial regulatory environment. According to the definition given by Saher, Tabak, Lyeonov, and Vasa (2024), Xu, Ahmad, Luqman, Uddin, Aljuaid, and Gu (2019) defined inclusive growth as long-term, sustained economic growth that is inclusive of a significant portion of a nation's labor force and broad-based across sectors, thereby reducing unemployment. Policies that support inclusive growth typically place a strong emphasis on lowering barriers to expansion, generating opportunities, and leveling the playing field for capital. Ekong, Orebiyi, and Iriabije (2024), claim that the concept of Inclusive Growth (IG) recognizes that economic growth alone is insufficient to ensure improvements in social welfare. While a country may experience robust economic growth, the benefits may not be equitably distributed among its citizens, leading to inadequate improvements in overall well-being. Inclusive growth seeks to elevate the standards of living and welfare of the entire population. Ekong et al., (2024), emphasize two dimensions of inclusive growth: economic growth and the equitable sharing of its benefits across society. Ifeakachukwu and Fagite, (2024), define inclusive growth as economic growth that provides wider access to sustainable socio-economic opportunities for a broader population while protecting vulnerable groups, all within an environment of fairness, equal justice, and political plurality (Edeki, Arowosegbe, Akinlabi, & Khalique 2024). Central to inclusive growth are goals such as sustainable economic growth, poverty reduction, income and opportunity equality, improved income distribution, equal access to healthcare and education, and the creation of gainful employment for marginalized segments of society.

Conceptual Review of Inclusive Growth by Organizations

The debate around inclusive growth emerged and has been led largely by public and policy debates in emerging countries. These approaches are briefly reviewed below.

The World Bank Approach

According to the WB approach, growth must occur quickly, throughout all economic sectors, and include a sizable portion of the labor force in a nation. It connects the macro and micro factors that influence economic growth. It is in line with the findings of the Commission on Growth and Development, which show that inclusiveness—embracing social protection, equality of opportunity, and equity—complements an effective growth plan. The fact that inclusive growth

takes a long-term view, once the focus is on productive jobs rather than temporary income redistribution, is another tenet of this strategy. The WB notion aligns with the strict definition of growth that benefits the poor. The method analyzes the causes of persistently high growth and its limitations using the ex-ante growth diagnostic. Through more efficient use of labor, particularly that which is locked in low-productivity sectors and excluded from the process that generates growth, such research seeks to suggest strategies to accelerate growth. Accordingly, labor-absorbing growth and rising productivity among those who are currently employed are characteristics of inclusive growth (Ngepah, 2020).

The Asian Development Bank Approach

The ADB method is more comprehensive. It highlights gender, ethnicity, and race in addition to the aspect of widespread involvement in and contribution to the growth process that defines inclusive growth. When defining inclusive growth as accompanied by equality of opportunity, the ADB restates this expansive definition of inclusion. As a determinant of inclusive growth, the ADB notion goes on to incorporate environmentally sustainable growth. Despite being comprehensive, the all-encompassing method renders inclusive growth analytics unfeasible since it requires evaluating how all individuals contributed to the growth. The ADB model is based on growth that is more pro-poor than the WB. The following is a clear expression of this contrast: Growth leads to a decrease in total distribution disparity, which could be referred to as [inclusive growth]. Because the growth impact outweighs the inequality effect, poverty may decline if there is growth and a rise in inequality. Because poverty has decreased, growth in this instance is "pro-poor," yet it is not "inclusive" because inequality has increased ([25] p.7). (2020, Ngepah).

The OECD Approach

According to Ngepah (2020), the OECD's strategy for inclusive growth is based on three main pillars: multidimensionality, distributional concerns, and policy effect. The pillar of multidimensionality proposes a shift away from GDP-based indicators of growth and GDP per capita-based indicators of related welfare and toward other significant aspects of people's well-being, such as social relationships and contentment, that enable them to engage in the economy and society productively. According to Ngepah (2020), the distributional pillar necessitates that evaluations of distribution incorporate the distributions of multidimensional welfare in addition to (per capita) income.

The African Development Bank Approach

With inclusive growth at the core of its long-term goal, the AfDB's growing concern for inclusive growth became apparent. The realization that Africa now contains six of the ten most unequal nations in the world, despite strong economic growth, coincided with this. The foundation of its inclusive growth strategy is the general agreement that equitable economic growth is essential for long-term poverty alleviation in Africa. Economic growth that gives more individuals, regions, or nations access to sustainable socioeconomic possibilities while safeguarding the weak is known as inclusive growth, according to the AfDB. This is achieved in an atmosphere of equality, justice, and liberty. The AfDB adopts a definition that is similar to the World Bank's. To achieve inclusive growth, it acknowledges the shortcomings of the pro-poor growth strategy and suggests actions that focus on all facets of the economy and society (Ngepah, 2020).

Monetary Policy

As a macroeconomic stabilization strategy, monetary policy plays a key role in achieving macroeconomic objectives such as low unemployment, stable prices and exchange rates, economic growth, and a favorable balance of payments. It entails actions intended to accomplish certain macroeconomic policy goals by regulating and controlling the amount, cost, availability, and direction of money and credit in an economy. Because of this, monetary policy is an essential component of macroeconomic management, and its efficacy is critical to maintaining output growth, long-term macroeconomic stability, and overall economic performance (Njeze, 2023). The government could use fiscal and monetary policy to influence output and employment. Maintaining domestic price and exchange rate stability is the major objective of monetary policy since it is a necessary prerequisite for achieving external viability and sustainable economic expansion (Degbedji, Akpa, Chabossuou, & Osabohien 2024).

In essence, a stable macroeconomic climate will spur production and job expansion, raising the general public's standard of living. The basic Keynesian model is where the question of whether fiscal or expansionary monetary policy will contribute to an increase in output begins. In general, output will rise in response to either expansionary monetary policy or a rise in government spending, which will encourage investment through a lower interest rate. According to one theory, the money supply is the primary way that monetary policy decisions affect the economy (Njeze, 2023). Therefore, monetary policy decisions affect the economy by affecting the cost and accessibility of borrowing. According to the first approach, the main way that monetary policy decisions impact the economy is by influencing overall expenditure, which has a direct impact on the output of goods and services and, consequently, on rates of inflation and unemployment. According to the second perspective, monetary policy actions have an impact on a variety of financial and nonfinancial variables, which in turn have an impact on economic agents' decisions and expenditures. This further explains these relationships. In this setting, the impact of monetary policy operations is initially seen in financial variables like the monetary base and discount rate, which are directly linked to bank reserve holdings and that the central bank can rather precisely regulate (Salik & Oladipo, 2024).

Since rapid growth is essential for reducing poverty, the nature of the link between monetary policy and output growth is a significant policy topic. The quantity theory of money, which relates money stock to the value of output that finances it, is one of the most widely used descriptions of the nature of this relationship (Tajudeen & Adesina, 2024a). In their investigation of the relationship between money and output, Rena, Olawale, and Ismail (2024b) discovered a long-term correlation between money, prices, output, and real output in Nigeria. According to Jinghan (2004), monetary policy and output growth have a straightforward and direct relationship: expansionary monetary policy boosts and raises output in an economy while all other factors remain constant. Through the use of additional resources in the economy, expansionary monetary policy increases output. In two ways, monetary policy fosters long-term economic expansion. First and foremost, monetary authority may be charged with preserving a balance between the nation's total money demand and its overall productive potential (Akpa, Okafor, Osabuohien, & Bowale 2024). To fulfill this significant duty, a flexible monetary policy is required, to limit bank credit when overall demand threatens to drive up prices and foster an unsustainable boom to increase credit when overall demand is insufficient and prices and employment in the economy decline (Rena et al., 2024b). The current state of the economy and monetary policy determines the choice of monetary policy's

course. Therefore, by slowing the expansion of the money supply during an economic boom, the government could choose to implement a non-accommodating monetary policy. The opposite occurs when the government wishes to stimulate economic activity. In other words, when it determines that money is required to lubricate the economic machinery for growth and development, the monetary authority can expand the amount of money available to the economy. This encourages economic agents to take out more loans for personal consumption or investments (Ogbonnaya et al., 2024b).

Electricity Consumption

Plots showing average monthly consumption in various regions illustrate electric power consumption, which is the quantity of electrical energy used over a given period. Seasonally, it fluctuates, peaking during the summer when there is a greater need for cooling systems like air conditioners. According to Hui, Aulia, Ijaz, Mohammed, and Xiao (2024), the plots of average monthly consumption in various locations demonstrate that electric power consumption is the quantity of electrical energy utilized over a given period. It fluctuates according to the season, peaking in the summer when there is a greater need for air conditioning and other cooling systems. Electricity consumption refers to the amount of electricity used at a site (measured in kWh) by the site's metering equipment owned by the network operator. Electricity is measured in Watts, which is named after James Watt, the inventor of the steam engine (Eseyin and Ogunjobi, 2022). A Watt is the electrical power equivalent to one ampere at one volt of pressure. A watt is a tiny quantity of power. Certain gadgets just need a few watts to function, while others need more. Larger devices' power consumption is measured in kilowatts (kW), or 1,000 Watts, while smaller devices' power consumption is typically measured in watts. Megawatts (MW) and gigawatts (GW), which are multiples of kilowatts, are common units of measurement for electricity-producing capacity. One MW is equivalent to 1,000 kW, or one million watts, while one GW is equivalent to 1,000 MW, or one billion watts.

Watthours are used to quantify electricity consumption over time. A Watthour (Wh) is the equivalent of one Watt of energy continuously added to or removed from an electric circuit for one hour. A power plant's or an electric utility customer's electricity consumption is commonly expressed in kilowatt-hours (kWh). One kWh is equal to one kilowatt of energy produced or used in a single hour. According to Eseyin and Ogunjobi (2022), for instance, using a 40-watt (0.04 kW) light bulb for five hours results in the consumption of 200 Wh, or 0.2 kWh, of electrical energy. Ajibola and Saibu (2016) state that electric companies use meters, which are typically placed outside the customer's property where the power line enters the property, to measure the amount of electricity that their customers use. All electricity meters were mechanical devices in the past, and a utility worker had to physically read them. Automated reading devices eventually went on sale. Through the use of an electronic signal, these meters periodically report electricity use to utilities from mechanical meters. Electronic smart meters, which offer wireless access to the meter's power usage data, are now widely used by utilities to measure electricity consumption in real-time. The utility or client can remotely control power use using certain smart meters, which can even measure the electrical consumption of particular gadgets.

Conceptual Issues in Monetary Policy and Inclusive Growth

Both rich and developing economies are calling for inclusive growth primarily for the benefit of their countries, however Michael et al. (2024) highlight the following key reasons why inclusive growth is crucial:

- In order to adhere to ethical principles of justice, equity, and fairness, growth must be inclusive and shared among many demographic groups and geographical areas. Growth that creates significant disparities is unacceptable because economic and other shocks disproportionately harm the poor and the weak. The inclusive growth is therefore unavoidable (Goshit, 2015; Amaechi, 2024).

- When a country's growth is accompanied by persistent inequality, it can jeopardize social harmony, push the poor and unemployed into criminal activity, increase the vulnerability of women to prostitution, force children into unwanted labor, and further weaken other vulnerable and disadvantaged groups of people. This leads to a waste of important human resources that could be used to generate economic outputs for sustainable growth.

Persistent disparities in a nation's results and chances can lead to social unrest and violent reactions from those who are consistently disadvantaged, which can sabotage a healthy growth process. Political upheaval, social disintegration, and national unity could result from this, weakening the possibility of long-term, steady progress (Goshit, 2015).

Monetary Policy Transmission Channels

To attain and sustain low inflation and strong economic growth while fostering financial stability, monetary authorities worldwide are practically implementing monetary policy. According to Chang and Jaffar (2014), monetary policy often has a long and variable lag time and impacts the actual economy through a variety of transmission channels. Through a variety of transmission mechanisms, central banks' adjustments in policy rates impact inflation, growth, and aggregate demand, which in turn causes changes in employment. It is generally acknowledged that in contemporary emerging economies, monetary policy can influence the real economy through at least four primary routes of transmission (Goshit, 2015; Rena et al., 2024a). Goshit, (2015) has identified the following channels for the transmission of monetary policy: interest rates, asset prices, exchange rates, and credit.

Interest Rates Channel: The interest rate channel operates by either increasing investment as a result of a decrease in the actual cost of borrowing or decreasing investment as a result of an increase in the real cost of borrowing. For example, an expansionary monetary policy is anticipated to result in a reduction in the cost of loanable funds, which stimulates demand for investment and consumption and should ultimately be seen in prices and aggregate output (Aluko et al., 2024a; Goshit, 2015).

Asset Prices Channel: According to Goshit, (2015); and Amaechi, (2024), shifts in the policy rate can have an impact on the actual economy by affecting the values of stocks, bonds, and real estate. Interest rate increases cause stock prices, which represent the market worth of businesses, to drop, as does the market value of businesses divided by the cost of replacing their physical assets. As a result, investment will diminish, which in turn lowers aggregate demand. Furthermore, the current value of future profits on stocks, bonds, and real estate declines when interest rates rise. Consequently, a drop in asset values (wealth) lowers aggregate demand, household consumption, and employment.

Exchange Rate Channel: The exchange rate is likely the most significant asset price impacted by monetary policy in many developing nations, especially those with just basic markets for bonds, stocks, and real estate (Aluko et al., 2024a; Goshit, 2015) The yield rate of domestic financial assets denominated in domestic currency rises relative to that of international assets as interest rates rise. As a result, sensible investors sell foreign currency and purchase domestic currency,

which causes the value of the domestic currency to rise. A rise in the value of the home currency would raise export prices while lowering import prices at the same time. As a result, both exports and aggregate demand will decrease while imports will rise (Goshit, 2015).

Credit Channel: Goshit, (2015) claims that when central banks increase the policy rate, banks' credit availability decreases, and fewer loans are made to families and businesses. Consumption and investment will decline in tandem. The balance sheet channel and the bank lending channel are two other subcategories of this credit channel. Interest rate hikes harm a company's balance sheet by lowering future profits and raising the real value of debt. The higher risk premium suggests that businesses will have trouble using outside funding to finance their investment. Because of asymmetric information, banks may have concerns about borrowers' ability to repay loans as interest rates rise through the bank lending channel. Consequently, there is now stricter loan screening Goshit, (2015); and Michael et al., (2024). A decrease in bank loans, investment, and consumption is implied by all of these phenomena.

Monetary Policy and Monetary Policy Rate

Monetary policy, according to Bright, Ohwofasa, and Obukohwo (2024), is the process by which a nation's central bank or monetary authority regulates the rate of interest, the cost of money, and the availability of money to achieve several goals aimed at the expansion and stability of the economy. Monetary policy, then, refers to the particular steps that the Central Bank takes to control the cost, value, and supply of money in the economy to accomplish the macroeconomic goals of the government. Monetary policy, according to the Central Bank of Nigeria (CBN), is any policy action created by the federal government to regulate the cost, availability, and supply of credit.

The apex bank's lending rate to commercial banks, which they use as a benchmark rate for their lending, is known as the monetary policy rate (MPR). The benchmark that other lending rates in the economy are based on is the MPR, which is typically employed as a tool to control inflation. A central bank change in this economic metric could have a favorable or negative impact on an individual by influencing the prime lending rate, or the cost of borrowing. This means that if MPR rises, commercial banks may raise the prime lending rate and other lending rates to the general population (Bright et al., 2024).

Money Supply

Money supply refers to the entire amount of money in circulation, including cash, coins, and bank account balances. The standard definition of the money supply is a collection of secure assets that firms and consumers can hold as short-term investments or use to make payments. It is the total quantity of money that is in an economy at a given time, including both currency and deposit money. There are two ways the Central Bank of Nigeria defines the money supply: narrow money and broad money. Currency in circulation as well as current account deposits with commercial banks are considered to be part of narrow money (M1). M2 consists of M1 plus money market mutual funds and savings accounts, whereas M3 consists of M2 plus long-term bank deposits. M2 serves as a stand-in for the money supply in this investigation. The literature has shown that the money supply has a favorable effect on economic growth (Bright et al., 2024).

B) Theoretical Literature

Some relevant theories for this study include:

Monetarist Theory

The works of Milton Friedman, who championed management of the money supply as preferable to Keynesian fiscal policies for stabilizing aggregate demand, are the pieces of literature that are most strongly connected with the ideology of monetary stability. Friedman (1948) advocated that

the government should release new money to support budget deficits and that budget surpluses should be used to finance the retirement of money. The countercyclical changes in the money stock that would arise would be able to stabilize the economy, assuming that the government would structure its expenditures and tax rates in such a way that they would balance the budget when full employment was achieved. Nevertheless, Friedman claimed in his book "A Program for Monetary Stability" (1960) that "constant growth of the money stock, divorced from the government budget, would be simpler and equally effective for stabilizing the economy" (Ekong et al., 2024).

Friedman's proposal states that "this would be the case." These propositions adhered to a long-standing practice of the Chicago School of Economics by placing a strong focus on the significance of monetary resources. Before Friedman arrived at the University of Chicago, Henry Simons had pushed for the regulation of the money supply to create a stable price level (Ekong et al., 2024). Rocheteau, et al., 2014) also proposed a particular monetary program to stabilize an index of the price level. According to monetarism, its origins may be traced back to the quantity theory of money, which served as the foundation for classical monetary economics beginning at least in the 18th century. Changes in nominal aggregate expenditures, which represent changes in both the physical volume of production and the price level, are explained by the quantity theory in terms of changes in the money stock and an increase in the velocity of circulation of money. This theory was developed to explain the relationship between these two variables. Generally speaking, changes in velocity are often less significant than those in the money stock throughout a lengthy period (Ekong et al., 2024; Rocheteau et al., 2014).

The Classical View of Monetary Policy

Classical economists use the quantity theory of money, which is derived from the Fisher equation of exchange ($MV = PY$), to explain monetary policy. The Y in the equation of exchange is constant in the short term, according to classical economics, because the economy is always at or close to the natural level of real GDP. Because Y and V are both fixed, the Central Bank of Nigeria (CBN) will implement expansionary (or contractionary) monetary policy. The money supply (M) would rise or fall, and the only result would be an increase or reduction in the price level P , which would be directly proportional to the change in the money supply (M). As stated by Bright et al. (2024), Goshit (2015), and Ngaikedi et al. (2023), expansionary monetary policy can only cause inflation, while contractionary monetary policy will cause the price level to deflate.

Keynesian View of Monetary Policy

Keynesian economists did not support the idea that the relationship between money and price is direct and proportional but rather indirect through the interest rate channel. Likewise, the belief that the economy always tended towards the natural level of real GDP so that Y in the equation of exchange could be regarded as fixed was rejected by Keynesians. The Keynesians held that expansionary monetary policy lowers interest rates by increasing the amount of loanable money accessible through the banking system. Lower interest rates typically result in higher real GDP because of the aggregate spending on investment and interest-sensitive consumer items. Keynesian economists concluded that monetary policy could indirectly affect real GDP (Bright et al., 2024; Tajudeen & Adesina, 2024).

Human Capital Theory

Inclusive growth is an economic growth that addresses inequality, promotes social benefits, and more evenly distributes advantages across individuals and locations. The conventional "grow now, redistribute later" concept of economic growth is ineffective, as inclusive growth acknowledges. Rather, it provides a more intentional method of generating growth. This is determined by how

and where it is produced and disseminated, in addition to how quickly or forcefully it is. By addressing disparities and taking into account the social and environmental results it produces for individuals and locations, it promotes a flourishing economy that everyone can support and profit from. This can be achieved through the quality of education the society is exposed to; the quality of health care the society has access to and other social benefits that accrue to the society. It is, therefore, imperative to examine the human capital theory.

The concept of human capital may be described as the accumulation of productive wealth in the form of labor, skills, and knowledge (OECD, 2001). It encompasses the whole of an individual's knowledge and the inherent or acquired attributes that enhance their economic production (Garibaldi, 2006). Essentially, HCT posits that education enhances the efficiency and income of people, therefore making education a worthwhile investment. Indeed, this investment has significant importance not only for people but also serves as a pivotal factor in fostering the economic development of a nation. According to Alfred Marshall (1920), investment in human beings is considered the most valuable kind of capital (Ekong et al., 2024).

The theory of human capital (HCT) extends beyond the realm of economics. This method offers a thorough framework for analyzing a diverse range of human problems within the context of a certain mentality, and then formulating policies in response. In this strategy, education is positioned as the focal point and seen as the primary catalyst for economic progress. The concept of HCT is rooted in the neoclassical paradigm within the field of economics. Hence, to have a clear and comprehensive understanding, it is important to grasp the neoclassical economic model and its fundamental presumptions on human behaviors. In the present paradigm, it is posited that people are motivated to optimize their economic interests. HCT posits that people allocate resources towards education and training with the expectation of attaining a greater income in the future. According to Ekong et al., (2024), these investments are made not just for immediate pleasure but also to obtain financial and non-financial benefits in the future.

This particular approach is strongly linked to the concept of methodological individualism. The idea posits that the origins of all social phenomena may be traced back to the actions shown by individuals. This aligns with the premise that the process of human capital development is often pursued by people who want to optimize their interests. However, it should be noted that human capital economists do not necessarily overlook the nonmonetary impacts of education on both individuals and society. In addition, they recognize the beneficial externalities of education, which include social, cultural, intellectual, and artistic advantages (Ekong et al., 2024).

C) Empirical Review

Scholars in developed and developing countries have studied monetary policy and inclusive growth. In some such studies Olanrewaju, (2024), examines the relationship between a few chosen explanatory factors (interest rate, money supply, government spending, labor force participation, and bank loans to the industrial and agricultural sectors) and the two main actual sectors (manufacturing and agriculture). The Johansen cointegration approach was used in the investigation. All of the variables that were chosen for the study showed evidence of long-term co-movement, according to the study's conclusions. The study's conclusions also showed that expansionary monetary policy boosts and enhances the output of the manufacturing and agriculture sectors. Additionally, the results demonstrated that while labor force participation increases the output of the industrial sector, it slows down and reduces the output of the agriculture sector.

Using the Autoregressive Distributed Lag (ARDL) econometric technique, Tajudeen and Adesina (2024) examine the relationship between monetary policy and financial development and foreign direct investment (FDI) inflow in Nigeria. They conclude that monetary policy and financial

development play a pivotal and substantial role in attracting FDI inflow in Nigeria. They found that monetary policy and financial development had a long-term positive influence on FDI inflow but had significant and negative effects in the short term. The report suggested that the country's monetary authorities establish effective monetary policy, robust financial institutions, and suitable macroeconomic mechanisms to draw in more foreign direct investment. Value: The study demonstrates how monetary policy and financial development affect foreign direct investment influx into Nigeria.

Ogbonnaya, Okereke, Ugwu, Eze, Oko, and Uzochi (2024) looked at how Nigeria's inflation rate affected economic growth and if interest rates contributed significantly to it. The study used the error correction model and the Johansen cointegration test to demonstrate that the underlying variables were integrated of order one, or stationary after the first difference. The independent variables were the inflation rate and interest rate, while the dependent variable was the growth rate of the real gross domestic product. As control variables, the broad money supply and exchange rate were employed. The study found that, at the 5% significance level, the error correction model (ECM) estimation showed that interest rates and inflation rates both have a negative and statistically significant effect on GDP. Furthermore, at a 5% significance level, the research showed that a broad money supply has a positive and significant impact on GDP, whereas the exchange rate had no discernible effect. The report made several recommendations, one of which was that policymakers should take action to reduce inflationary pressures because inflation has a negative impact on economic growth. This could entail implementing stricter monetary measures to control inflation and stabilize prices, including raising interest rates or modifying government expenditure.

Babalola (2024) investigates how monetary policy affects Nigeria's economic performance. The study looked into the asymmetric effects of monetary policy on short- and long-term economic performance using both Autoregressive Distributive Lag (ARDL) and Non-Linear ARDL (NARDL) models. Using the ARDL technique, the study demonstrated a negligible inverse association between short-term economic performance and monetary policy variables (exchange rate and money supply). The NARDL results also showed that the money supply and exchange rate had a long-term, negligible negative impact on economic performance. Based on these findings, it was determined that monetary policy and economic performance are unrelated over the long and short term. The report suggested that the central bank should employ tools other than the exchange rate to improve the country's economic performance and manage monetary policy to draw in both foreign and domestic investment by keeping the money supply at a suitable level.

Sule, Lawong, and Dahiru, (2023), investigated empirically how Nigerian fiscal policy affected the interplay between macroeconomic variables and monetary policy. The estimating method used in the study was a two-stage least squares approach. According to the study's findings, Nigeria's monetary policy rate has a negative relationship with the country's gross domestic product (GDP), inflation, and money supply. Additionally, government spending limits the ability of monetary policy to control inflation and economic growth in Nigeria, as the impact on GDP shifts from negative to positive and the effect on inflation. To provide a high and sustainable fiscal and monetary policy mix and, consequently, economic growth with price stability, the study suggested that improved consultation between the two policies be established.

Ohwofasa, and Obeh (2024), assessed how instruments of monetary policy such as Treasury bill rate, monetary policy rate, cash reserve ratio, liquidity ratio, and money supply affect economic development in Nigeria. The study found that in the long run cash reserve ratio and money supply had a significant positive impact on human development in Nigeria. On the other hand, the study

found that economic development is significant and positively responsive to changes in treasury bill rate, level estimation of monetary policy rate, and cash reserve ratio contrary to its significant negative response to changes in money supply in the short run. The study recommended better manipulating the aggregate money supply to achieve the desired policy targets, especially in the short run. The study suggested that MPR should be used to adjust interest rate policy through minimum rediscounts, thereby preventing interest rates from being an obstacle to private and public investment growth in Nigeria.

Amaechi, and Ekene (2024), examined the relationship between monetary policy and economic growth in Nigeria. The study made use of the Ordinary Least Square Method. The study revealed that interest rate and liquidity have an insignificant relationship with real gross domestic product while liquidity ratio and cash ratio have a positive and significant relationship with real gross domestic product. The study recommended amongst others that the Government through its regulatory agencies pursue policy measures that promote financial inclusion and deepening thereby increasing the number of Nigerians captured in the banking net and increasing the capital and funds available to banks in their intermediation roles in the economy.

Across 35 OECD economies, Hui, Aulia, Ijaz, Mohammed, and Xiao (2024) investigated the benefits of technical advancement, energy efficiency, renewable power, and human capital on equitable growth. For data analysis, the study used dynamic ordinary least squares, fully modified ordinary least squares, and cross-sectional augmented distributed lag approaches. According to the report, both short- and long-term projections indicate that inclusive growth is positively impacted by energy efficiency, renewable electricity, human capital, technological advancement, and renewable energy use. Based on these results, the study suggested that the government should subsidize technology development and innovation since these initiatives enhance information and service accessibility, boost efficiency and productivity, generate new employment opportunities, and encourage inclusive growth. Additionally, the government ought to support energy efficiency since it will result in financial savings, the development of jobs, better energy access, inclusive growth, and environmental advantages.

D) Summary of Literature Review and Gap in the Literature

This section started with a conceptual review such as the concept of inclusive growth, the concept of monetary policy, monetary policy rate, and money supply. For theoretical review, theories such as monetarist theory, the classical view of monetary policy theory, the Keynesian view of monetary policy, and human capital theory. The review of empirical shows different trends, some studies such as Olanrewaju, (2024), Tajudeen and Adesina, (2024), and Ohwofasa, and Obeh (2024) indicated a positive relationship between monetary policy and inclusive growth/economic growth, while some studies such as Amaechi, and Ekene (2024), Sule, Lawong, and Dahiru, (2023), Ngaikedi, Ezu, Nwanna, and Ananwude (2023) found a negative relationship between monetary policy and inclusive growth/economic growth.

The general observation is that the results of such studies have been mixed. This might be a result of the scope of the study, variables used as a proxy for monetary policy and inclusive growth, the method used, and the countries where the study was conducted. Despite all that has been pointed out, this study has identified some gaps in terms of variables used, and the scope of the study. The previous studies such as Olanrewaju, (2024), Tajudeen and Adesina, (2024), Amaechi, and Ekene (2024), and Sule, Lawong, and Dahiru, (2023), used economic growth, therefore used GDP as their dependent variable, while this study used inclusive growth as its dependent variable which is proxied by human development index. This study also introduced the monetary policy rate which

was omitted by the previous studies. This, therefore, served as gaps in the literature that this study intends to fill.

3.0 METHOD

The study examined the impact of monetary policy and electricity consumption on inclusive growth in Nigeria from the first half of 2003 through the second half of 2023 using secondary time series data in nature from the World Development Indicators (2023) and the Central Bank of Nigeria Statistical Bulletin (2023). The study made use of semi-annual data. This is due to limited data on the human development index, the proxy for inclusive growth, which the data is available starting in 2003. The study has 40 observations based on the semi-annual data. The use of the semi-annual data will also help us to make comparisons and evaluate trends in the model, to evaluate how the monetary policy variables have impacted inclusive growth. The study used the Johansen cointegration test which is based on the outcome of the unit root test that was conducted and found that all the variables in the model achieved stationarity at first differencing and the suitable method is the Johansen cointegration test to evaluate the long-run impact of monetary policy on inclusive growth in Nigeria for the period under review (2003-2023).

Model Specification

The study's functional relationship between variables is expressed as follows:

$$\text{HDI} = f(\text{MS}, \text{ELC}, \text{LQR}, \text{MPR}, \text{GOV}) \quad (1)$$

$$\text{HDI} = \beta_0 + \beta_1 \text{MS} + \beta_2 \text{ELC} + \beta_3 \text{LQR} + \beta_4 \text{MPR} + \beta_5 \text{GOV} + \mu_t \quad (2)$$

Where:

HDI: Human Development Index

MS: Monetary Supply

ELC: Electricity Consumption

LQR: Liquidity Ratios

MPR: Monetary Policy Rate

GOV: Government Expenditure

β_0 : Constant

β_1 to β_3 : Parameters

μ_t : Error term

Log-linear equation 2 to give:

$$\text{hdi} = \beta_0 + \beta_1 \ln \text{ms} + \beta_2 \ln \text{elc} + \beta_3 \ln \text{lqr} + \beta_4 \ln \text{mpr} + \beta_5 \ln \text{gov} + \mu_t \quad (3)$$

Once the long-term relationship has been determined, the related error correction equation is

provided below to estimate the short-term relationship.: Note: HDI and MPR: human

development index and monetary policy rate were not log linearised since the data are already in

rate:

$$\Delta \text{hdi}_t = \beta_0 + \sum_{i=1}^p \beta_1 \Delta \ln \text{ms}_{t-i} + \sum_{i=1}^p \beta_2 \Delta \ln \text{elc}_{t-i} + \sum_{i=1}^p \beta_3 \Delta \ln \text{lqr}_{t-i} + \sum_{i=1}^p \beta_4 \Delta \ln \text{mpr}_{t-i} + \sum_{i=1}^p \beta_5 \Delta \ln \text{gov}_{t-i} + \mu_t \psi \text{ECM}_{t-1} + \mu_t \quad (4)$$

The ECM_{t-1} is the error correction term. The variables in the model are $\text{hdi} = \ln \text{ms} + \ln \text{elc} + \ln \text{lqr} + \ln \text{mpr} + \ln \text{gov}$.

Where:

hdi : human development index (already in rate)

$\ln \text{ms}$: log-linear of money supply

$\ln \text{elc}$: log-linear of electricity consumption

$\ln \text{lqr}$: log-linear of liquidity ratios

$\ln \text{mpr}$: monetary policy rate (already in rate)

$\ln \text{gov}$: log-linear of government expenditure

Estimation Techniques

To ascertain whether the time series is stationary, the study used the Phillip-Perron (PP) unit root test and the Augmented Dickey-Fuller test (ADF). This is because time series data usually follow a particular trend, and according to economic theory, such data must pass a stationarity test to prevent erroneous findings. This was carried out to help researchers choose which research methodology to employ. Using the Phillip-Perron (PP) and Augmented Dickey-Fuller (ADF) tests, all variables were integrated at I(1) for the investigation. All variables were presumably integrated at the first difference. Based on the findings of the unit root test, the cointegration test is employed in this research to ascertain the long-term impact of energy consumption and monetary policy on inclusive growth in Nigeria. A reliable error correction model will be conducted between the models to determine the short-term relationship if the investigation shows evidence of long-term (cointegration) relationships.

4.0 RESULTS AND DISCUSSION

The results of this study are presented in the following order unit root test, co-integration test result, and error correction test result. Some of the variables such as the human development index and monetary policy rate were in rate and there is no need to log such variables, while other variables such as money supply, liquidity ratios and government expenditure were all logged. This is to bring the values onto a comparable scale and bring in “linearity” to the values.

Unit Root Test

The Augmented Dickey-Fuller test (ADF), and the Phillips-Perron (PP) test statistics were used to examine the unit roots of the study variables. The results are presented in Tables 1 and 2 below, showing that all variables achieved stationarity at first differencing at the 5% critical value. Based on the unit root test results, the study employed a cointegration test to analyze the objectives of the study:

Table 1: Unit Root Test Using the Augmented Dickey-Fuller test (ADF)

Variables	ADF	5% Critical Value (*)	Prob. *	Order of Integration
HDI	-4.061077	-2.941145	0.0031	I(1)
MS	-3.913566	-2.957110	0.0221	I(1)
ELC	-3.541344	-2.941155	0.0024	I(1)
LQR	-5.341586	-2.943427	0.0001	I(1)
MPR	-3.469316	-2.951125	0.0316	I(1)
GOV	-3.010180	-2.941145	0.0037	I(1)

Source: Author's Computation using E-View

Table 2: Unit Root Test Using the Phillip-Perron (PP) Test

Variables	PP	5% Critical Value (*)	Prob. *	Order of Integration
HDI	-4.061220	-2.941145	0.0031	I(1)
MS	-3.359161	-2.941145	0.0198	I(1)
ELC	-4.167110	-2.941145	0.0150	I(1)
LQR	-3.627759	-2.941145	0.0097	I(1)
MPR	-2.993452	-2.941145	0.0445	I(1)
GOV	-3.837486	-2.941145	0.0034	I(1)

Source: Author's Computation using E-View

Cointegration Test

Given that the unit root test showed that all of the variables were integrated at order one and stationary, the linear combination of one or more of these variables may show a long-term relationship. To achieve the stated goal of identifying the long-term relationship between monetary policy and inclusive development, the degree of cointegration among the variables was measured using the multivariate co-integration methodology outlined by Johansen (1990). Tables 3 and 4 present the results of determining the number of co-integration vectors using the trace test and maximum eigenvalue from this technique. At a 5% level of significance, the highest eigenvalue shows two co-integrating variables, whereas the trace test shows four. Thus, the outcome implies that monetary policy, power use, and inclusive growth in Nigeria are related over the long term.

Therefore, an error correction test (ECM) must be performed. Error Correction Models (ECMs) are the standard approach for modeling time series equations. The ECM makes it possible to handle non-stationary data series, separate them, and distinguish between short-term and long-term data. The cointegration results are presented below:

Table 3: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.578255	82.01957	69.81889	0.0039
At most 1 *	0.525718	49.21212	47.85613	0.0371
At most 2 *	0.352263	20.86591	29.79707	0.3661
At most 3 *	0.107186	4.363659	15.49471	0.8721
At most 4	0.001455	0.055316	3.841466	0.8140
At most 5	0.208175	14.33665	11.03479	0.0021

Source: Author's Computation using E-View

Table 4: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.578255	32.80745	33.87687	0.0667
At most 1 *	0.525718	28.34620	27.58434	0.0399
At most 2	0.352263	16.50225	21.13162	0.1969
At most 3	0.107186	4.308343	14.26460	0.8255
At most 4	0.005716	8.143621	7.015432	0.0030
At most 5	0.001455	0.055316	3.841466	0.8140

Source: Author's Computation using E-View

THE ERROR CORRECTION MODEL

The error correction model (ECM) is a type of multiple time series model that is most frequently applied to data in which the underlying variables exhibit cointegration or a long-term common stochastic tendency. ECMs are a theoretically based method that can be used to estimate the short-

and long-term impacts of one-time series on another. Error correction refers to how the short-term dynamics of a period are influenced by the mistake, or departure from a long-term equilibrium, that occurred during the previous era. ECMs, therefore, provide a direct assessment of how quickly a dependent variable regains equilibrium following a change in other variables. The results are presented in Table 5 below:

The result in the table above indicates that the coefficient of the error correction mechanism (ECM) is positive 0.036742 and significant at the 0.05 percent critical level. This indicates that approximately 3 percent of disequilibria in Nigeria's inclusive growth during the previous semi-half of the years are corrected in the current semi-half. Alternatively, in this study, the error correction coefficient is 0.036742. As indicated by the coefficient, there is a 3% semi-half adjustment time between the short- and long-term realities of the cointegrating equations. All of the explanatory variables (money supply, power consumption, liquidity ratio, monetary policy rate, and government expenditure) have a long-term equilibrium relationship with inclusive growth in Nigeria, as indicated and confirmed by the ECM's significance. This clearly demonstrates what must be done to address the relationship's short-term dynamics. According to the significance of ECM (-1) once again, the variables cannot be co-integrated unless the error correction model coefficient is positive and statistically significant, as shown below:

Table 5: Error Correction Model Result

Variables	Coefficient	Standard Error	t-Statistic	Prob. Value
C	0.437630	0.003084	141.9152	0.0000
MS	2.52E-06	4.51E-07	5.578536	0.0000
ELC	0.378013	0.039907	9.472293	0.0020
LQR	0.000132	4.70E-05	2.797588	0.0085
MPR	0.003807	0.000327	11.62757	0.0000
GOV	3.02E-07	5.25E-07	0.575067	0.5691
ECM (-1)	0.036742	0.016822	2.184130	0.0010
R-Square		95.4%		
Adjusted R-Square		92.9%		
Prob(F-statistic)		0.0000		

Source: Author's Computation using E-View

CONCLUSION AND RECOMMENDATIONS

Inclusive growth refers to economic growth that provides social benefits, addresses inequalities, and distributes advantages more equitably among individuals and regions. The study assessed the effects of monetary policy and electricity consumption on inclusive growth in Nigeria. Specifically, it evaluated the influence of money supply and liquidity ratios on inclusive growth, and examined the long-term relationship between electricity consumption and inclusive growth in Nigeria. The Johansen cointegration test was employed, based on the results of the unit root test, which showed that all variables in the model achieved stationarity after first differencing. Thus, the Johansen cointegration test is the appropriate method to evaluate the long-run impact of monetary policy and electricity consumption on inclusive growth in Nigeria for the period under review (2003-2023). At the conclusion of the study, we found that the trace test indicated four co-integrating variables, while the maximum eigenvalue indicated two co-integrating variables at a 5% significance level. These results suggest a long-run relationship between monetary policy, electricity consumption, and inclusive growth in Nigeria. Furthermore, the error correction mechanism (ECM) coefficient is significant at the 0.05 percent critical threshold and positive, at

0.036742. This indicates that the current semi-annual period corrects approximately 3% of the disequilibrium in Nigeria's inclusive growth from the previous half-year. On the other hand, 0.036742 is the error correction coefficient in this study. This coefficient demonstrated that, within half a cycle, the short- and long-term dynamics of the cointegrating equations shift at a rate of 3%. The significance of the ECM confirms the presence of a long-term equilibrium relationship between all the explanatory variables and inclusive growth in Nigeria.

Recommendations

Based on the outcome of this study, we therefore recommend that monetary policy has the potential to stimulate Nigeria's economy, but its benefits can only be fully realized if complementary fiscal policies are implemented and structural constraints are removed. The government should prioritize structural improvements, enhance policy coordination, look into cutting-edge monetary policy tools, and put inflation-targeting frameworks into place to promote sustainable, inclusive growth in Nigeria. Also, the government should intensify efforts in setting up a committee to come up with a strategy for controlling the amount of monetary policy rate efficiently to attain price stability in the economy. The study also suggested that, given the long-run effect of electricity consumption on inclusive growth, the government should intensify efforts at revamping the electricity sector through investment in new power generation plants. This will help include some parts of the country that have been facing electricity challenges.

Policy Implications of the Study

The study evaluated the long-run effect of monetary policy and electricity consumption on inclusive growth in Nigeria. The policy implication of the study findings is that there is the need by Central Bank of Nigeria (CBN) who also serve as head of monetary authority encourages Deposit Money Banks (DMBs) to develop innovative schemes that will promote the mobilization of short-, medium- and long-term deposits in Nigeria, and ensure strict monitoring of money supply in Nigeria, with a special focus on liquidity ratios. Based on relevant models deployed elsewhere. The magnitude of deposits attracted would determine the decision of the apex bank on whether to increase or decrease the liquidity ratio for economic development.

In so doing, it can have a transmission effect on the human development index, which is the proxy for inclusive growth, keeping in mind that government expenditure should not be neglected at such a point. This is because monetary policy serves as the cornerstone of every economy, and the monetary policy also underlines every action of the apex bank. Also, electricity consumption can promote inclusive growth, through which electricity consumption can, to some extent, enhance the production of capital, labor, and technique; inclusive growth can, in turn, increase the demand for electricity consumption, which indicates the inherent relationship between them.

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