FINANCIAL DEVELOPMENT, ENERGY SUPPLY AND DOMESTIC INVESTMENT IN NIGERIA

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Keywords

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Abstract

This study examines the impact of financial development and energy supply on domestic investment in Nigeria. The data for the study range from 1990 to 2023 and were sourced from the World Development Indicator database. We used the autoregressive distributed lag (ARDL) estimator for the analysis. Empirical findings showed that credit to the private sector significantly impacts domestic investment in Nigeria. It was also revealed that access to electricity significantly impacts domestic investment in Nigeria. This demonstrates that funding for the private sector and adequate power generation improve the quality of the domestic investment in the economy of Nigeria. The study concludes that financial development and energy supply has a significant impact on domestic investment. The study therefore recommends that The Central Bank of Nigeria should formulate stabilisation policies concerning the exchange rate in a manner that will ensure that the risk to investments is minimised to the lowest level. Additionally, the restructuring of the financial sector to record more credit in the hands of the private sector must commence though the long run relationship between the reforms and investment is not as strong.

1. Introduction

The level of development in Nigeria largely depends on the growth in finances, whereby through productive capital, it is possible to redirect fiscal activity via saving passively by using the finances to develop entrepreneurship and industrial development. This has meant that commercial banks and microfinance institutions grow up to supply the necessary liquidity that encourages the growth of entrepreneurial life and commercial growth within the entire economy. In practice, the financial system replenishes household savings as credit facilities and, thus, provides long-term investment opportunities (Kopylyuk & Muzychka, 2021; Molochanova et al., 2021). Even so, the growing paucity of informal networks of resources and the widespread secondary marginalisation of small-scale players within the formal monetary

system are both major obstacles to the developmental goals of the financial system. Various governments have reacted by researching, funding, advancing banking application systems, and diversifying the capital market to address macroeconomic shocks and strengthen home mobilization (Lu et al., 2021).

Nigeria however is determined by the productivity and viability of its investments through energy demand. Energy becomes a source of stability in the sense that it supports manufacturing, services, commodities and agriculture. Existence of and sufficient power supply reduces the cost of production, increases competitiveness, and supports the strategic performances over time among the customer firms (Lebepe & Mathaba, 2024). On the contrary, frequent power outages, the use of fossil fuels, inefficient infrastructure support, and continuously increasing costs of supplies are a part of capital flight, which undercut efforts to expand (Apinran et al., 2021). Here, the reliability of energy can be viewed as the globally integrated measure of national investment confidence since companies optimize their business strategies to react to the reliability of energy supply and the cost of substitutes. (Zahoor et al., 2021).

The financial development is demonstrated by existence of power (either in confirmatory or negative feedback loop) in a empirical study (domestic investment pathways), where economic growth is either enhanced or hindered by sectoral power processes in Nigeria. Powerful financial unification alongside effective infrastructural frameworks is set to trigger a serpentine or vicious circle involving industrial diversification, technological favoritism, and growth of business (Li, 2,023). This is the result of a powerful lesson which has been learned by working towards reducing risk of investing in a company, hence good returns on the firms and the nation as a whole and increased ability of the state to attract not only local but also foreign direct investments. On the other hand, constrained credit markets and mounting energy scarcity, obliges people and businesses to low-productivity states of equilibrium that prevents innovation and wealth acquisition in the nation. As a result, this means that the prospects of Nigerian domestic investment would depend on addressing the policy factors connected with energy balancing and capital-deepening, in one policy framework that is sufficient to facilitate capital movement towards sustainable and inclusive growth (Aderinto et al., 2025).

Nigeria has never been able to optimize positive qualities of productive investment, regardless of the fact that the country is the largest oil producer and that it has the largest domestic market of the continent. In the last twenty years, the financial system also grew in its complexity, but still, many companies find it challenging to have unlimited access to long-term credit lacks an opportunity to develop or upgrade activities. The natural absence of quality power supply with periodic load shedding and the lack of consistency discourages the sector of production, but based on that it forces the companies to find alternative sources of power production which they need themselves, and thus increases the cost of production and scares other investment off. The untimely shutdown of the chosen manufacturing companies, the untimely movements in labour and increased industrial performance, have established a vicious cycle (Ram et al., 2020; Malinauskaite et al., 2019).

Perspective studies (Shahbaz et al., 2021; Kalai et al., 2025) have attempted to unravel the correlation between financial progression and domestic investment, in the majority of cases on small data, the relationship between energy provision and investment performance has not

been figured out correctly. The situation in Nigeria requires particular attention because financial deficits and electrical disruptions are symbiotic and deter optimism on the part of investors. In addition, modern studies have failed to explore the constituent parts of individual banking indicators but rather in interrelation systems without breaking them down to their contents.

To fill this intellectual gap, this paper has in part discussed the nexus between energy supply and financial development as a driver toward local investment in Nigeria. It uses a general measure of financial development computed through principal component analysis, which results in overall measure of financial development within diffused financial variables (Bin Hidthir et al., 2025; Tamu et al., 2015). In addition, the study relies on a causality model to determine the existence of unidirectional relationship, that is whether the financial and energy sectors property generate investment or investment performance conditions a long run reaction in the financial and energy sectors. The combination of two forms of influence is a new methodological scheme, a point of view which, in literature on the history of investment in Nigeria, has never been addressed.

2. Theoretical Review

Financial Intermediation Theory

The Financial Intermediation Theory was coined by Gurley and Shaw (1960) and Goldsmith (1969), and its use renders an enormous importance to financial intermediaries, who are fundamentally seen to assemble liquidity (savings), distribute risk (underwriting), and concentrate capital (high-return investment). The main hypothesis of the theory is that good intermediaries reduce transaction costs, information asymmetry and productive efficiency of credit in distributing a credit between investors and savers (Levine, 2005).

The theory also accentuates that the positive spill-over of agreements between the financing between the domestic investment comes out following the intensification and augmentation of the purchase of financial associations of gearing risk diversification towards the economic system and conversion of liquidity (King and Levine, 1993). Weak, or shallow, intermediation on the other hand creates financial exclusion, high borrowing interest rates, and low investment, as companies will either have to resort to costly informal alternatives to credit, or abstain from investment altogether (Beck, Demirguc-Kunt, and Levine, 2007).

In the case of Nigeria, financial intermediation plays a pivotal role in view of the constant crisis of credit markets and restricted access to long-term funds. Non-bank financial institutions such as banks have to change in order to enhance the availability of credits and ensure an more efficient dynamic redistributing funds, particularly in order to unlock the potential of the private-sector, stimulate the domestic industry and roll back household savings to productive domestic investment (Rajan and Zingales, 1998).

Neoclassical Investment Theory

The Neoclassical Theory of Investment was developed by Jorgenson (1963) who argued that the cost of capital (interest rate), the existing interest rates, and the expected rates (investment returns) play a significant role in determining investment decision. The originality in this theory is that it states that theincrease in investment by firms is accomplished by there

being a higher level of the marginal product of capital that exceeds the costs of using capital; high-level of interest rates and increasing levels of macroeconomic uncertainty will act to deter investment (Hall and Jorgenson, 1967).

Under the model, positive financial conditions which include falling interest rates, open credit markets and unchanging economic expectations impel firms to increase productive capacity, and the opposite holds true (Abel and Eberly, 2011). Unavailability of cheap money, inflationary forces, and worry about energy sources will largely discourage long term investment in the production process (Caballero, 1999).

On this case, the Neoclassical Investment Theory would assume that power supply is unreliable increases production costs and reduces expected returns, and that underdeveloped capital markets increases the cost of capital. These two forces are forcing companies to delay or suspend investment strategies. Expansions in this direction need therefore, and as a means of ensuring that capital costs are diminished and to generate investment, certain policies motivated by the need to stabilise energy supply, deepen the market and diminish interest-rate fluctuations (Aghion, Angeletos, Banerjee, and Manova, 2010).

Empirical Review

Aderinto et al. (2025) address the relations among the development of the Nigerian financial sector, energy usage, and economic development. These authors argue that a very large percentage of the growth would grow as the result of financial development that is demonstrated by application of the time-series econometric techniques. Their results reveal that consumption of non-renewable forms of energy affirms positive impacts on growth, whereas, consumption of non-renewable forms of energy that does not incorporate suitable adoption systems is a setback to growth. They hence presume that any future proposals of financial reforms should focus on the distribution of investments that maximize the utilization of non- renewable and renewable resources to achieve a sustainable economic growth.

Amuda (2023) utilizes the role of ISO financial surpluses in financing the investments in energy and gas in Nigeria. After using both a policy review and the analysis in order to prove that Islamic financial derivatives can help in financing energy projects, the paper will state that it has the capability to lower the cost of accessing energy by the unprivileged classes by financing energy projects. The author says that the incorporation of Islamic finance in the power sector provides a solid base to enhance lifestyles.

Isah et al. (2023) compare and contrast Brazil and Nigeria in terms of funding renewable energy sources. Through the use of econometric and policy analysis, they determine that the financial and economic infrastructure is relatively weak in Nigeria and this therefore prevents the financial sector to invest in the renewable energy in Nigeria compared to Brazil which has a sound financial system. The authors argue that long-term financing is lacking thus it is suicidal to own and invest in renewable-energy projects within today private sector and they suggest radical changes within the financial sector which will shift their finances to utilize renewable- energy development.

To examine the nexus of the relations between financial development and Nigerian energy consumption, Aderajo (2022) uses the ARDL bounds cointegration model. The paper has verified that the financial system is a strong force affecting the use of renewable energy, given that long- and short-term associations

depict the growing use of clean energy. The author suggests an expansion of credit and financial services in Nigeria to help it transition into a more sustainable energy future as well as support renewable-energy projects.

Dimnwobi et al. (2022) reviewed comprehensively the article Financial Development and Renewable Energy Consumption in Nigeria. In an effort to represent the results of the principal momentum in Nigeria through econometric analysis of the Nigerian data, they indicated that financial development is a major determinant of the use of renewable energy. Their results reveal that increased access to credit, increase in financial deepening, and institutional development has positive effect in the use of renewable energy. The authors thus find that a functional financial structure plays a critical role in meeting the renewable energy targets in Nigeria.

In a study by Kolawole et al. (2022), the authors examined the link between domestic investment, sustainable energy provision, and finance in the West African countries. Using panel data, the authors discovered that access to electricity and financial deepening has very strong effects on domestic investment. The fact is that the shortcomings in power supply and restrictions in accessing them are found as the main obstacles to investment and as a result to development of the industries, and thus they cut their air out. The authors, therefore, promote energy-finance since it promotes productive investment.

Based on the analyzed data from 1981 to 2018 and the study of the Autoregressive Distributed Lag (ARDL) approach, Okoye et al. (2021) studied the relationships existing between the economic growth of Nigeria and energy use and financial development. What their findings show is that energy use and finances have strong and positive effects on the growth of the country. Moreover, increased access to credit positively impacts investment, and use of energy will lead to industrialization. The paper notes that there is a need to have better integration between energize and financial policies to create sustainable growth.

Ozdeser et al. (2021) examined how financial developments affect the level of energy consumption in Nigeria. They validate their beliefs by applying econometric estimates based on the data related to Nigeria that financial development supports the application of renewable energy and alleviates the usage of fossil fuels. What they have discovered is that the complex financial systems direct resources to projects related to green energy. The authors, therefore, suggest the clean energy funding exercise to be emphasised in the Nigerian financial policies system.

Adagunodo et al. (2021) also examined globalization, association between financial deepening and energy demand in the country. The authors utilized time-series econometric estimation when reporting those findings that revealed that the analysis of energy demand mainly focuses on financial deepening and their impact is revealed according to the action of the globalization forces. In the research, the authors emphasize that energy demand increases and consumption changes with the increase in financial accessibility. Therefore, the authors advise official minds of Nigeria to synchronize financial reformations with energy efficiency plans to relieve unnecessary burden in demand.

Olatunde et al. (2020) investigated how energy demand is related to financial development and Nigerian economic performance. Using the ARDL bounds-testing method, the paper has managed to establish that the demand of energy plays a crucial role in determining economic growth. Financial growth has been found to be

an erratic contributor to growth; inadequate financial machineries in certain stages tend to cripple their effectiveness. Comparable to the authors, equitable, balanced financial reforms in respect to proper management of energy are relevant towards credible long-term development.

The article by Onayemi et al. (2020) compared the functions of foreign direct investment, electric power, and human development in Nigeria. Based on annual data of the timespan 198016 and using the ARDL cointegration and the cause test, the authors find out that the foreign direct investment, supply of electricity, and growth are positively related at the long-run. They discover that the energy supply is a limitation to complete translation of FDI inflows into economic EG and hence propose govtal action to build electricity infrastructure is a sin qua non to its realization of investment- driven sustainable growth.

Muhammad (2019) examined the nexus between financial development, investments and energy consumption in Nigeria using an ARDL model. The results prove that the size of the financial development matters concerning the use of energy in the country since bigger investments produce more demands on the use of energy. The study also demonstrates that growth in finances leads to an increase in household energy as well as business energy. It emphasizes the necessity of considering and integrating financial planning and energy planning to prevent the existence of unsustainable consumption patterns.

3. Methodology

This paper rests on the Financial Intermediation Theory that financial intermediaries are fundamental in their role of directing savings towards more productive stages of investment, in promoting economic growth. To explain the nexus between domestic investment, financial development of the country, and supply of energy in Nigeria the gross fixed capital formation as a proportion of GDP is used as a proxy to assess the relationship between domestic investment and financial development and supply of financial services and the manner in which they are accessed and utilized. The way energy supply is operationalised is the percentage of the population that experiences reliable access to electricity along with other macroeconomic variables like fluctuating exchange rates, inflation (including interest-rate fluctuations), GDP growth and interest rates. This testing methodology will be the autoregressive distributed lag (ARDL) bounds - testing procedure developed by Pesaran et al. (2001). This method avoids a pre-test in accordance to unit-root estimation and kinesthetics accommodates variables that are merged of order 0 and 1, I (0) and I (1). The ARDL model is quite suitable in the case of the small samples and allows estimating both short-run and long-run dynamics. When additional information on the dynamic nature of the relation between domestic investment, financial development and energy supply in Nigeria is to be explored by the ARDL method, a panel of 34 years of annual data (19902023) is to be applied to analyze in detail the cointegration of the variables under study.

Model Specification

This study models domestic investment (DOI) as a function of financial development and energy supply. The model specification is expressed as follows:

DOI = f (FINDEV, ENESUP, GDP, INF, EXR, INT) …… (1)

Econometrically, the model is written as:

$$\Delta DOI_t = \beta 0 + \beta 1 \Delta FINDEV_t + \beta 2 \Delta ENESUP_t + \beta 3 \Delta GDP_t + \beta 4 \Delta INF_t + \beta 5 \Delta EXR_t + \beta 6 \Delta INT_t + \varepsilon_t \quad \ldots\ldots (2)$$

Gross fixed capital formation ratio of GDP is operationalised as domestic investment (DOI). Financial development (FINDEV) is gauged by how much credit is given to the private sector by the government. The electricity access rates amount to ENEC supply. Real GDP per capita is a measure of economic growth and consumer price index is a measure of inflation. The exchange rate measure is the parity of the naira / dollar, while interest rate is measured by the ratio of the principal at a stretch of time. Parameters b 0 up to b 6 have to be estimated and e t denotes stochastic disturbances. The subscript t signifies the 34 years of Nigerian time series 19909023.

4. Results

The summary data from Nigeria economies are presented in Table1.

Table1. Descriptive Statistics.

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
DOI	17.18624	10.85473	0	49.099	0.43357	3.810041
FINDEV	10.04787	3.887684	0	19.6256	0.200008	3.715371
ENESUP	48.0708	8.410516	27.3	61.2	-0.39037	2.424172
EXR	161.2171	143.1965	8.038285	645.1941	1.426739	5.185437
GDP	1584.432	772.3024	480.6694	3088.721	-0.02971	1.873928
INF	18.27805	15.90202	5.388008	72.8355	2.180389	6.855094
INT	3.016571	9.990355	-31.4526	18.18	-1.37115	5.671233
Observation	34	34	34	34	34	34

Source: Author's Compilation (2025).

Table 1 presents the descriptive statistics of the variables used. The average values of DOI, FINDEV, ENESUP, EXR, GDP, INF and INT are 17.18624, 10.04787, 48.0708, 161.2171, 1584.432, 18.27805 and 3.016571respectively, while the standard deviations for the variables are 10.85473, 3.887684, 8.410516, 143.1965, 772.3024, 15.90202, and 9.990355 respectively. However, the minimum value for DOI is 0, the maximum value is 49.099. The minimum and maximum values for FINDEV are 0 and 19.6256, respectively. The minimum value for ENESUP is 27.3, while the maximum is 61.2. The minimum and maximum values for EXR are 8.038285 and 645.1941, respectively. The minimum and maximum values for GDP are 480.6694 and 3088.721. The minimum and maximum values for INF are -0.69204 and 15.33478. Finally,the minimum and maximum values for INT are 5.388008 and 72.8355. The huge differences in the minimum and maximum values show substantial variations in the chosen variables; therefore, it is worth investigating.

4.1 Multicollinearity Test Results

The multicollinearity issue is a fundamental problem of regression analysis. A variance inflation factor and correlation table were applied for analysis in the research to check for multicollinearity. Table, 2, indicated that, in the correlation matrix, the variables do not have strong correlations with themselves; the value of all the pairwise coefficients is less

than 0.80 (Grewal, Cote, & Baumgartner 2004).

Table2. Correlation Matrix of Panel Analysis Variables.

Variables	DOI	FINDEV	ENESUP	EXR	GDP	INF	INT
DOI	1.0000						
FINDEV	0.2297	1.0000					
ENESUP	-0.0185	0.4729	1.0000				
EXR	-0.1742	0.1278	0.8321	1.0000			
GDP	0.0301	0.5470	0.6988	0.4261	1.0000		
INF	0.3870	-0.3100	-0.3722	-0.2164	-0.3532	1.0000	
INT	-0.2530	0.3708	0.2975	0.1671	0.3414	-0.8263	1.0000

Source: Author's Compilation (2025).

The correlation chart illustrates all the relationships between domestic investment and the most important variables of the macroeconomy in Nigeria in the 1990-2023 age, including 34 years. Financial development (FINDEV= -0.2297) and inflation (INF=0.3870) have a positive relationship with organisational investment as does organisational investment have with financial development and price inflation. The domestic investment (DOI), on the other hand, has a negative correlation with the energy supply (ENESUP= -0.0185), exchange rate (EXR= -0.1742), and interest rate (INT= -0.2530) meaning that any tendencies towards the declines in the specified variables are associated with the decrease in the domestic investment. The correlation between the financial development (FINDEV) and the gross domestic product (GDP) is positive (0.5470) while that between the financial development (FINDEV) and the energy supply (ENESUP) is negative (0.4729). The exchange rate has a positive correlation with GDP (ENESUP = 0.8321 statistically significant0.6988 not statistically significant) however the correlation between the exchange rate and GDP is positive (0.6988) at the margin (0.3722). There is also a positive association between exchange rate (EXR) and GDP (0.4261), though exchange rate portrays a negative correlation with inflation (INF= -0.2164). There is a negative correlation between Gross domestic product and inflation (INF 0.3532) but a positive correlation between Gross domestic product and interest rate (INT 0.3414). Lastly, it verified that inflation has a strong negative relationship with the interest rate (INF vs. INT) i.e. that a rise in both variables in the study period of Nigeria is related to unfavourable developments. The difference in order and level of these correlations reflects on the intricate interactive relations between domestic investment in Nigeria, financial growth and energy supply.

Table 3.Regression results of domestic investment (DOI) model.

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DOI(-1))	0.283033	0.259927	1.088893	0.2946
D(FINDEV)	3.175348	1.168869	2.7166	0.0167
D(FINDEV(-1))	-2.96855	1.14115	-2.60136	0.0209
D(ENESUP)	-0.1658	0.90339	-0.18353	0.857
D(ENESUP(-1))	-1.62603	0.622717	-2.61119	0.0205
D(EXR)	0.06458	0.113019	0.571411	0.5768
D(GDP)	0.006673	0.008234	0.810486	0.4312
D(GDP(-1))	-0.00568	0.005266	-1.07886	0.2989
D(INF)	0.736424	0.249045	2.956998	0.0104
D(INT)	0.185559	0.344888	0.538028	0.599
CointEq(-1)	-1.75436	0.358303	-4.8963	0.0002

Cointeq = DOI - (0.5185*FINDEV + 1.5235*ENESUP -0.0608*EXR
-0.0032*GDP + 0.8279*INF + 0.5844*INT -62.8164)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FINDEV	0.518535	0.525627	0.986509	0.3406
ENESUP	1.523525	0.599191	2.542636	0.0234
EXR	-0.06079	0.027718	-2.1932	0.0457
GDP	-0.00321	0.002687	-1.19386	0.2524
INF	0.827874	0.187784	4.408644	0.0006
INT	0.584413	0.341827	1.709678	0.1094
C	-62.8164	23.37067	-2.68783	0.0177

Source: Author's Compilation (2025).

The results show energy supply as the largest factor to influence domestic investment in Nigeria. The domestic investment increases to 1.524 in response to each unit increase in the amount of energy supplied (access to electricity), implying that well developed electricity infrastructure will stimulate domestic investing in the Nigerian economy. Domestic investment is also affected by inflation with maximum significance level of 10, and the coefficient stands at 0.828; therefore, domestic investment is amplified by 0.828 with a one unit augmentation in the inflation rate.

The exchange rate adversely and significantly affects internal investing. In exchange rate, the exchange rate coefficient at the 5percent level of significance is -0.061 that indicates a high negative relationship that exists between the exchange rate and domestic investment. Therefore, an increase in domestic investment by 0.061 unit depreciation in the exchange rate (i.e., naïra depreciation), which shows that the exchange rate depreciation is vital in promoting domestic investment. Interest rates are however showing a positive trend towards domestic investment, but not statistically significant. This coefficient of 0.584 has indicated a positive relationship to the domestic investment and interest rates contrary to the economic theory.

The error -term of the error -correction model is substantial at the -4.150 level of significance by 1. The model coordinated domestic investment shocks in FINDEV, ENESUP, EXR, GDP, INF, and INT. The equilibrium in financial development and internal investment exhibits the instantaneous adjustment of investment between short-/run disequilibrium and long-/run equilibrium at the rate of 175.4 percent per period.

Financial development has a positive impact on domestic investment in the short-term (coef. = 3.175, p = 0.0167), but a lagged impact is negative (coef. = 2.969, p 209). Domestic investment is negatively correlated with energy supply in the lagged (coef. = -1.626, p= 0.0 205) case, and positively correlated with inflation in the short-run (coef. -0.736, p= 0.0 104). Financial development (FINDEV), energy supply (ENESUP), exchange rate (EXR), GDP, inflation (INF), and interest rate (INT) are independent variables while the dependent variable is domestic investment. The results show that over the long-term, domestic investment has a positive relationship with energy supply, inflation, financial development, and interest rate whereas, there is a negative relationship between three 34-year time series of Nigerian economies regarding exchange rate and GDP (1990-2023).

4.2 Diagnostic Test

These diagnostic test requirements assess the validity and reliability of the domestic investment model testing for the interplay between energy supply, financial development, and domestic investment in Nigeria.

Table 5. Diagnostic Test Results

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.010557	Prob. F(2,14)	0.393
Obs*R-squared	4.612732	Prob. Chi-Square(2)	0.0996

Source: Author's Compilation (2025).

The Breusch Godfrey Serial Corporation LM ensures that the condition of the models used to test the existence of serial correlation within the residuals of the Nigeria domestic investment model is tested. The test has values of F 1.010557 and p 0.393 rejecting the null hypothesis of no serial correlation. Besides this, the value of R 2 that is 4.612732 represents a probability value of 0.0996 which adds support to the conclusion that there is no serial correlation in the model. Serial correlation is one of the

pre-requisites of valid statistical inference in the Nigerian time-series analysis of the relationship between financial development, energy supply, and domestic investment using a 34-year span of analysis (1990-2023).

Table 6. Diagnostic Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.841581	Prob. F(15,16)	0.6368
Obs*R-squared	16.17345	Prob. Chi-Square(15)	0.5116
Scaled explained SS	1.469372	Prob. Chi-Square(15)	1

Source: Author's Compilation (2025).

According to the diagnostic tests, the domestic investment model is said to be highly well specified. F-statistic Breusch-Pagan-Godfrey heteroskedasticity test is 0.841581 with an associated probability of 0.6368 and probability of Obs*R-squared is 16.17345 and 0.5116, and probability of Scale explained SS is 1.469372 and 1.0000. Each of the above probability values exceeds 0.05, providing evidence of no heteroskedasticity and a constant standard error of zero and no invalidity of confidence intervals. The homoskedastic residuals confirm the adequacy of the estimated financial development variable (domestic credit to the private sector), the supply of energy variable (access to electricity) and the relations between domestic investment, all renders the support to policy prescriptions generated by the model to Nigeria. All of the above diagnostics indicate that domestic investment (financial development, energy supply, economic growth, inflation, exchange rate, and interest rate) coefficient can be estimated with a reasonable degree of confidence because the model meets the overall assumptions when used to infer with certainty the 34-year time series data of Nigerian investment 1990-2023.

5. Conclusion

The following research paper establishes a correlation between financial development, foreign investment in Nigeria and the provision of energy. Basing the analysis on the data published by the World Development Indicators in the years 1990-2023, the authors use (Autoregressive Distributed Lag) ARDL method to evaluate the impact of financial development and the availability of electricity on local investment. Empirical studies suggest that financial development as well as energy supply play an important role in domestic investment in Nigeria; the electricity supply turns out to be played as a decisive factor in investment.

The error-correctionn method shows long-equilibrium relationship, reflected by the very significant coefficient of 1562 (p = 0.0002) of the lagged error terms. This scale indicates that in a sufficing balance adjusting mechanism, non-perspective deviations in the short run are rectified, on average, by about 175% in the later periods. Thus, the supply of energy is seen to be the most salient of all positive predictors of domestic investment in the long-run regression, although it has no statistically relevant coefficient (1.524) at the 5% mark (p = 0.234).

The positive relationship between inflation and investment (B = 0.828, t = 0.0006) reveals that average rate of inflation may be considered as a positive indicator on business investment in the Nigerian economy.

On the other hand, insider issues are a negative determinant of investment with a negative coefficient of -0.061 (p= -0.0457); such a determination means that currency depreciation is a discouraging factor when investing. There is no statistically significant association between investment and financial development (b = 0.519, p = 03406). Moreover, there is a weak negative correlation between GDP per capita and domestic investment (r= -0.003, p= 0.2524), and interest rates and GDP per capita are positively associated (z= 0.584, p= 0.1095).

The inspection of short-run dynamic behavior shows that financial development affects the level of domestic investment positively (coefficient = 3.175, p = 0.0167), but the lagged term of financial development negatively influences the adjustment process (coefficient = -2.969, p = 0.0209). Energy supply exhibits negative short proves of lag on both lagged and contemporaneous stage indicating the adjustment developments of long run equilibrium. Relationship between inflation and inflation is not very significant (coeff=0.736, p=0.0104) in the short run. The model is reliable and valid as verified by diagnostic tests. The Breusch Godrey LM Test does not indicate any serial correlation (F Statistics = 1,011, p, 0.393), and the Heteroscedasticity Test of Breusch-Pagan Godfrey does not reveal any non-homoscedastic residues (F Statistics = 0,84 2, p = 0,637). The findings are original, comprehensive, and consistent, which makes them applicable to designing and implementing policies in Nigeria.

Considering such observation, Nigerian policy makers would be wise to measure the growth of energy infrastructure by access to electricity as this is the fastest growing driver of investment in Nigeria. The Central Bank of Nigeria should formulate stabilisation policies concerning the exchange rate in a manner that will ensure that the risk to investments is minimised to the lowest level. Additionally, the restructuring of the financial sector to record more credit in the hands of the private sector must commence though the long run relationship between the reforms and investment is not as strong.

The limitation of the study is the fact that the Nigerian case of the financial development and energy supply and investment research is applied with proxy variables over a 34-year period. A future study could investigate sector relationship and could add in to this research, variables that did not affect the conclusive measure of the quality of the institutions like the institutional quality. Neither non-linear ARDL models nor difference models could be used to determine the relationship between positive and negative shocks and their domestic investment effects because non-linear ARDLs are asymmetric, thus providing a means of capturing the variability relationship in relationships in the Nigerian economy.

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