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# MACROECONOMIC FACTORS AND BOND MARKET DEVELOPMENT: EVIDENCE FROM NIGERIA

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**Abstract**

*This research assessed the effect of macroeconomic factors on the bond market development in Nigeria. The study employed ex post facto research design. The population for the study consists of all entities and stakeholders involved in the Nigerian bond market. Based on the nature of the study, all the Nigerian bond during the period of study were selected. Relevant secondary financial data about macroeconomic factors (economic size, trade openness, inflation, economic development) were sourced from the Nigerian bond market, statistics bulletin of the Central Bank of Nigeria (CBN), the Fact Book of the Nigerian Exchange Group (NXG), the annual Reports of the DMO, the annual Report of the SEC, as well as the websites of the World Bank and IMF for the period from 2000 to 2023. The collected data were analysed using Pooled OLS regression and stationarity test was conducted on the respective variables of the model. It was found that economic size and economic development have a positive significant effect on the bond market development in Nigeria. Meanwhile, results reveal that trade openness and inflation have no significance influence with bond market development in Nigeria. It is recommended that policymakers should focus on strengthening macroeconomic fundamentals such as ensuring fiscal discipline, controlling inflation, and promoting inclusive economic growth alongside implementing policies that effectively translate economic scale and openness into tangible financial market.*

**Keywords**: Bond Market**,** Economic Development**,** Economic Size**,** Inflation**,** Trade Openness

## 1. Introduction

Globally, the bond market has evolved into a vital channel for raising long-term capital for both governments and corporations, and it now surpasses equity markets in size and influence in many economies (Zhuang et al., 2023). The international bond market, comprising sovereign, municipal, corporate, and supranational bonds, supports macroeconomic stability and financial system resilience by enabling diversification and intertemporal risk sharing (Abakah et al., 2021). The increasing integration and interconnectedness of global bond markets, evident in the synchronized movements of yields and returns, reflect how external shocks and macroeconomic events reverberate across borders (Papadamou et al., 2020). In recent decades, the bond market has demonstrated significant growth across emerging markets, particularly in Asia and Latin America. However, African bond markets, though growing, remain underdeveloped relative to global standards in terms of size, depth, and liquidity (Dafe et al., 2023). Focusing on Nigeria, the bond market comprising primarily Federal Government Bonds, State Bonds, and corporate bonds has grown in significance since the 2000s, especially following reforms aimed at deepening capital markets and diversifying public financing sources. Despite this progress, the Nigerian bond market remains relatively shallow and is often dominated by sovereign issuances, with corporate bond activity still limited.

The size of a country's economy is positively correlated with its capacity to develop extensive financial markets, including a well-structured bond market, due to economies of scale that support market activity and infrastructure development Wahidin et al

(2021). Trade openness facilitates financial market development by exposing domestic markets to international capital flows, promoting competition, and increasing demand for financial products, including bonds Bécsi et al (2021). This openness can lead to foreign direct investments (FDI) and portfolio investments, which enhance liquidity and foster a more active bond market (Du, 2024). Inflation levels have a significant impact on bond markets, primarily by affecting investors' perceptions of fixed-income securities' reliability. High inflation erodes the purchasing power of bond returns, deterring investors from holding bonds. Consequently, bond markets tend to thrive in environments with low and stable inflation. Karim et al. (2022) emphasize that stable inflation is vital for bond market development, as it provides a predictable economic environment that supports long-term financial instruments. The level of economic development, often represented by per capita income, affects the sophistication of a country's financial system, including its bond market. Developed economies generally have advanced financial infrastructure, regulatory frameworks, and institutions capable of supporting bond markets. According to Ugbam et al. (2023), countries with higher income levels and strong legal systems are better equipped to develop and sustain complex financial products, such as bonds. Higher income levels also contribute to a larger base of potential investors, both institutional and individual, who can participate in bond markets.

The majority of research on developing nations, particularly in Nigeria, focused on the factors that influence stock markets and financial systems, with less attention being paid to the development of bond markets. Previous studies on the bond market are scarce in their examination of the factors that influence the development of the bond market in Nigeria, as well as the strategies for enhancing the bond market to meet global standards. Despite the fact that a limited number of researchers have recorded data on the factors that influence the development of bond markets worldwide, the majority of studies focus on Western and Asian countries, including the United States of America, the United Kingdom, China, Hong Kong, Malaysia, and others (Zhuang et al., 2023; Dafe et al., 2023). This is a pertinent observation. Moreover, the rapid development of their economies necessitates the identification of critical factors that influence the growth of their bond markets and the formulation of policies to support it. This study intends to fill the gap in the existing literature in Nigeria by investigating the impact of macroeconomic factors (economic size, trade openness, inflation, economic development), on bond market development in Nigeria

The primary aim of the study is to determine the roles of macroeconomic factors on the bond market development in Nigeria. Specifically, the study seeks to:

i. To evaluate the effect of economic size on the bond market development in Nigeria.
ii. To analyze the impact of trade openness on the bond market development in Nigeria.
iii. To assess how inflation influences the bond market development in Nigeria.
iv. To determine the effect of economic development on the bond market development in Nigeria.

## 2. Literature Review

### 2.1 Conceptual Framework

**Bond Market Development**

The bond market, a critical segment of the financial system, functions as a platform where debt securities are issued and traded, enabling entities such as governments, corporations, and financial institutions to raise long-term capital. Unlike equity markets, which deal with ownership stakes, the bond market revolves around debt instruments with fixed or variable interest payments over a specified maturity period. These instruments are crucial in bridging financial gaps, particularly in infrastructure development and macroeconomic stabilization. According to Du (2024), bond markets serve as a cornerstone for economic resilience and risk management by offering reliable sources of long-term financing, helping governments avoid overdependence on volatile foreign aid or short-term debt instruments. Ugli (2024) emphasizes that bond markets support the transmission of monetary policy and provide benchmark yield curves essential for pricing other financial assets,

thereby enhancing the depth and structure of financial markets. A broad classification of bond types within a market typically includes government bonds and corporate bonds. Government bonds, often perceived as low-risk investments, are issued to finance public spending and manage national debt. They play a pivotal role in establishing benchmark yield curves and guiding the pricing of private sector debt instruments. On the other hand, corporate bonds are issued by private or state-owned companies to finance operations, expansion, or specific projects. Bécsi, et al (2021) argue that the growing relevance of corporate bonds reflects the increasing sophistication of financial markets and the diversification of funding sources away from traditional bank lending. In the Nigerian context, however, the dominance of government securities remains a defining feature, with corporate bond issuance still in its nascent stages due to high perceived risks, low investor appetite, and limited market awareness (Baita, 2024).

**Economic Size**

Economic size, often measured by gross domestic product (GDP) and GDP per capita, plays a foundational role in the development and maturity of bond markets. GDP, as a measure of the total value of goods and services produced within a country, reflects the economic scale and productive capacity of a nation. GDP per capita, which adjusts GDP by population, offers a proxy for average income levels and standard of living (Ugbam et al., 2023). The scale of an economy directly influences the depth and breadth of its bond market. In larger economies, governments and corporations have a wider tax base and consumer market, which enhances their creditworthiness and ability to service debt. This, in turn, facilitates frequent and large-scale bond issuances that are attractive to a broad investor base. Wang (2023) highlights how China's bond market expanded significantly alongside its economic growth, as rising GDP supported large-scale infrastructure development and urbanization, which were primarily financed through bond instruments. Similarly, in smaller or less-developed economies, limited economic scale restricts both the demand for and supply of bonds, thereby constraining the market's evolution and overall liquidity.

**Economic Development**

The relationship between broader development indicators, such as the Human Development Index (HDI) and income levels, and bond market activity is integral to understanding how economic growth influences capital markets. HDI, which encompasses factors like life expectancy, education, and income per capita, is often used as a measure of a country's overall development and economic well-being. As countries progress in these dimensions, their bond markets tend to become more active, transparent, and integrated into the global financial system. For instance, a higher HDI is typically associated with greater investor confidence, lower risk premiums, and a more stable macroeconomic environment, all of which contribute to stronger bond market activity. This relationship can be observed in many emerging and developed economies where improvements in HDI correlate with an expansion in bond market size and sophistication (Omodero & Alege, 2021).

**2.2 Empirical Review**

Zhou and Liu (2023) explored the broader relationship between economic development and bond market growth across Sub-Saharan Africa, with a specific focus on trade openness and inflation. The study sought to understand how these macroeconomic factors influence the bond market in a regional context, with implications for Nigeria. A longitudinal research design was adopted, analyzing data spanning from 2005 to 2020. The sample consisted of 10 Sub-Saharan African countries, including Nigeria. Data was collected from international financial databases, focusing on variables such as trade openness, GDP size, and inflation rates. The analysis employed panel data regression models, with both fixed-effects and random-effects estimations. The study's key finding was that trade openness and economic growth had a strong positive correlation with bond market expansion, whereas inflation negatively impacted market liquidity and depth. The study emphasized the importance of economic stability and integration into global markets for fostering bond market growth. While this study contributed significantly to understanding regional trends, it did not provide a detailed country-

level analysis of Nigeria, which would be beneficial for further research. The findings were consistent with the current research's focus on the macroeconomic determinants of bond market development, offering important insights into the broader Sub-Saharan African context.

Tolliver et al (2020) examined the intersection of economic development and the green bond market in Sub-Saharan Africa. This research is highly relevant to the current study as it expands on the traditional bond market concept to include green bonds, which are gaining traction in emerging markets. The study aimed to analyze how macroeconomic factors like GDP size and inflation affect the growth of green bond markets. It employed a descriptive research design, analyzing data from 8 Sub-Saharan African countries, including Nigeria, from 2015 to 2020. The study utilized both primary data from interviews with financial experts and secondary data from international financial institutions. The researchers used qualitative content analysis alongside quantitative techniques, including regression analysis, to examine the relationship between economic development and green bond market growth. The results indicated that while economic growth and GDP size were positively correlated with green bond market growth, inflation negatively affected investor interest in green bonds. This study contributes to the broader understanding of bond markets in Sub-Saharan Africa, particularly Nigeria, by introducing the emerging green bond market into the discussion. The findings are consistent with the notion that economic stability is essential for fostering investment in sustainable financial products.

Karikari et al. (2023) explored the role of inflation and economic openness in shaping bond market development within West African economies, focusing on Nigeria as a case study. The research aimed to identify the effects of macroeconomic factors such as inflation and trade openness on the development of bond markets in West Africa. Using a survey design, the study analyzed data from 7 West African countries, with a special focus on Nigeria, from 2000 to 2020. The sample consisted of both qualitative and quantitative data, with statistical data collected from national financial institutions and international organizations. The study applied econometric models, including Ordinary Least Squares (OLS) regression and panel data analysis, to analyze the data. The findings revealed that inflation had a strong negative effect on bond market development, while trade openness positively influenced the market's growth. The study also emphasized the need for economic reforms in Nigeria to improve its bond market. The findings are directly applicable to the current research, offering specific insights into the macroeconomic factors affecting Nigeria's bond market.

Oluoch and Ojah (2023) examined the influence of trade openness and economic development on bond market growth in Africa, including Sub-Saharan economies like Nigeria. The study aimed to assess how increased trade openness and economic development could lead to improved bond market growth in the region. A quantitative research design was employed, utilizing panel data from 10 African countries between 2010 and 2020. The study used secondary data from financial institutions such as the African Development Bank and the World Bank. The data were analyzed using panel data regression techniques, including fixed-effects and random-effects models. The findings highlighted that trade openness significantly fostered bond market growth, while economic development enhanced market liquidity. However, the impact of trade openness was more pronounced in countries with established financial systems, such as Nigeria. This study provided valuable insights for understanding the dynamics of bond market development in Sub-Saharan Africa and emphasized the need for policy reforms in countries like Nigeria to fully leverage trade openness for bond market growth

### 2.3 Theoretical Framework

This study is underpinned by market-based financial system theory.

**Market-based financial system theory**

Market-based financial system theory, in contrast to traditional bank-based financial systems, emphasizes the importance of securities markets (such as bond markets) in allocating capital. According to Li, Wang, and Chen (2024), market-based systems allow for greater efficiency in pricing and distributing capital as investors and issuers interact directly through the markets, reducing reliance on banks as intermediaries. This market-based system is particularly relevant for

countries with well-developed bond markets, as it facilitates the pricing and trading of debt securities, offering greater liquidity and investment opportunities. Marisetty (2025) points out that the integration of economic indicators and market sentiment into bond yield predictions demonstrates the critical role that market-based systems play in determining bond prices. In such systems, prices are driven by supply and demand dynamics, where institutional frameworks and governance mechanisms influence investor confidence. For instance, a strong regulatory framework and a transparent market environment can reduce the perceived risks associated with investing in bonds, thereby enhancing market participation and stability. Moreover, the rise of market-based finance in emerging economies offers greater resilience to external shocks, as it fosters a diversified approach to financing, relying not only on bank lending but also on bond issuance (Karikari et al., 2023). Therefore, market-based financial systems can support economic growth by providing alternative sources of capital, enabling more efficient resource allocation, and reducing systemic risks associated with excessive reliance on banking institutions.

## 3. Methodology

This study employed ex post facto research design because the variables of the study are characterized by observation of events or influences on a phenomenon that have already taken place. The population for the study consists of all entities and stakeholders involved in the Nigerian bond market. This includes Regulatory Bodies (Nigerian Exchange Group, Securities and Exchange Commission Nigeria, Central Bank of Nigeria and Debt Management Office) Institutional Investors (pension funds, insurance companies, mutual funds, and banks that invest in bonds), Bond Issuers (Government bodies, corporations, and municipalities that issue bonds), Financial Intermediaries (Banks, brokerage firms, and other financial institutions involved in bond issuance and trading), and financial market analysts. Based on the nature of the study, all the Nigerian bond during the period of study were selected. The nature of data to be used in this study is time series data. Relevant secondary financial data about macroeconomic factors (economic size, trade openness, inflation, economic development) were sourced from the Nigerian bond market, statistics bulletin of the Central Bank of Nigeria (CBN), the Fact Book of the Nigerian Exchange Group (NXG), the annual Reports of the DMO, the annual Report of the SEC, as well as the websites of the World Bank and IMF for the period from 2000 to 2023. The collected data were analyzed using Pooled OLS regression. Stationarity test were conducted on the respective variables of all the models; a phenomenon with economic theoretical underpinning designed to enhance the reliability of the regression results.

### 3.1 Measurement of Variables

The variables of the study were generally grouped into two, namely: the dependent and the independent variables.

**Dependent Variable**

The dependent variable of the study is bond market development. Bond market size, which is the most important indicator of bond market development will be used as proxy in measuring bond market development in this study. Total bond market is the addition of corporate bond market size and government bond market size. In line with Lakshan and Dissanayake (2022), total bond market size will be measured as the ratio of total bonds as a percentage of GDP.

**Independent Variables**

The independent variables of the study are macroeconomic factors (economic size, trade openness, inflation, economic development).

i. **Economic Size**: This will be measured as Log of GDP (Lakshan and Dissanayake, 2022).
ii. **Trade Openness**: This will be measured as ratio of exports to GDP (Boukhatem, 2021).
iii. **Inflation**: This will be measured as percentage change in consumer price index (Lakshan & Dissanayake, 2022).
iv. **Economic Development**: This will be measured as Log of GDP Per Capita (Boukhatem, 2021).

### 3.2 Model Specification

The study adopts the model of Lakshan and Dissanayake, 2022 and modified as follows:

$$BMD_t = \alpha_0 + \beta_1 ECON_t + \beta_2 TRADE_t + \beta_3 INF_t + \beta_4 EDEV_t + \epsilon_t$$

Where:

$BMD_t$ = Bond Market Development at time *t* (ratio of bonds to GDP)

$ECON_t$ = Economic Size at time t (log of GDP)

$TRADE_t$ = Trade Openness at time t (ratio of exports to GDP)

$INF_t$ = Inflation at time t (percentage change in consumer price index)

$EDEV_t$ = Economic Development at time *t* (log of GDP per capita)

$\alpha_0$ = Constant term

$\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$ = Coefficients for the respective independent variables

$\epsilon_t$= Error term

## 4. Results and Discussion

### 4.1 Descriptive Statistics

Table 1 shows how these statistics summarise the variables' descriptions.

**Table 1: Descriptive Statistics**

| Variable | Min | Max | Mean | Std. Dev. |
|---|---|---|---|---|
| BMD | 7.28 | 57.6 | 27.33458 | 14.97849 |
| ECON | 10.84011 | 11.75891 | 11.45506 | 0.283043 |
| TRADE | 5 | 36.02 | 19.55708 | 8.703727 |
| INF | 5.4 | 24.7 | 13.12083 | 4.474078 |
| EDEV | 2.750547 | 3.505279 | 3.232396 | 0.219679 |

**Source**: Results produced using STATA 17 Software

As shown in Table 1, the bond market development (BMD) ranges from a minimum of 7.28 to a high of 57.6, with an average value of 27.33458 and a standard deviation of 14.97849. The economic size (ECON) has minimum, maximum, and mean descriptive statistical values of 10.84011, 11.75891, and 11.45506, respectively. With a standard deviation of 0.283043, the degree of expansion of the variable values is clearly visible. Trade openness (TRADE) shows a mean of 19.55708 with a minimum of 5.00 and a maximum of 36.02, the standard deviation of 8.703727 reflects high variability. Inflation (INF) shows a mean of 13.12083 with maximum and minimum values of 24.70 and 5.40 respectively. The standard deviation of Inflation (INF) stands as 4.474078. Table 1 shows that economic development (EDEV), which has a range of values from 2.750547 to 3.505279, an average of 3.232396, and a standard deviation of 0.219679, showing a degree of dispersion.

### 4.2 Correlation Analysis

The degree of association between the independent and dependent variables in a study, as well as the connections between the independent variables, may be seen using the correlation matrix. The presence of a high correlation might result in multicollinearity, hence potentially yielding inaccurate results and conclusions.

**Table 2: Correlation Matrix**

| | BMD | ECON | TRADE | INF | EDEV |
|---|---|---|---|---|---|
| BMD | 1 | | | | |
| ECON | -0.5382 | 1 | | | |
| TRADE | -0.1103 | -0.5492 | 1 | | |
| INF | 0.4534 | -0.0653 | -0.4508 | 1 | |
| EDEV | -0.6764 | 0.5798 | -0.4102 | -0.1995 | 1 |

**Source:** Results produced using STATA 17 Software

The obtained correlation matrix reveals that the association between the economic development and economic size is the most robust, as shown by a coefficient of 0.5798. According to a study conducted by Judge, Griffiths, Hill, Luthepohl, and Lee (1985), it is deemed inappropriate to regard the correlation between independent variables as problematic until it above the threshold of 0.80 or 0.90.

### 4.3 Stationarity Test

The stationarity test results provided in the table indicate the statistical properties of each macroeconomic variable used in the analysis, assessed using unit root tests at both the level and the first difference. These results are essential in time series econometrics to determine the appropriate methodology for further analyses, such as regression or cointegration testing

Since the **Auto Regressive Distributed Lag (ARDL)** method requires that variables are integrated of order **I(0)** or **I(1)** (but not I(2)), the stationarity table needs to be presented clearly so it reflects the Augmented Dickey-Fuller (ADF) or other unit root test results in a more standard way.

**Table 3: Unit Root Test Results (Stationarity Test)**

| Variables | Level t-Statistic (p-value) | 1st Difference t-Statistic (p-value) | Order of Integration |
|---|---|---|---|
| **BMD** | -0.438069 (0.5129) | -2.092148 (0.0376) | I(1) |
| **ECON** | -3.099634 (0.0407) | — | I(0) |
| **TRADE** | -1.923376 (0.3164) | -6.052079 (0.0001) | I(1) |
| **INF** | -2.467239 (0.1360) | -5.985233 (0.0001) | I(1) |
| **EDEV** | -0.515674 (0.9748) | -4.356099 (0.0119) | I(1) |

**Notes for ARDL Application:**

- **ECON** is stationary at **level** → integrated of order I(0).
- **BMD, TRADE, INF, and EDEV** are stationary **after first differencing** → integrated of order I(1).
- This mix of I(0) and I(1) variables makes ARDL suitable, as it can handle such combinations without requiring all variables to be at the same order of integration.
- None of the variables are I(2), which is a necessary precondition for ARDL bounds testing.

The unit root test results in Table 3, obtained using the Augmented Dickey-Fuller (ADF) approach, provide insight into the stationarity properties of the study's variables. Stationarity is a fundamental requirement for time-series analysis, particularly in the Auto Regressive Distributed Lag (ARDL) framework, as it ensures the reliability of statistical inferences.

The results show that the bond market development (BMD) variable is non-stationary at level, with a t-statistic of -0.438069 (p = 0.5129), but becomes stationary after first differencing, as indicated by the t-statistic of -2.092148 (p = 0.0376). This implies that BMD is integrated of order I(1). Similarly, trade openness (TRADE), inflation (INF), and economic development (EDEV) are all non-stationary in their levels but become stationary after first differencing, with highly significant p-values at the first difference stage, thus each being I(1).

In contrast, economic size (ECON) is stationary at level with a t-statistic of -3.099634 (p = 0.0407), meaning it is integrated of order I(0). This mixed integration order—where some variables are I(0) and others are I(1)—aligns well with one of the strengths of the ARDL model. Unlike certain econometric approaches that require all variables to have the same order of integration, ARDL can accommodate a combination of I(0) and I(1) variables without risking spurious regression problems.

Importantly, none of the variables are integrated of order I(2). This satisfies the precondition for ARDL bounds testing because the presence of I(2) variables would invalidate the computed F-statistics in the cointegration test, leading to misleading results.

Therefore, the stationarity test outcomes validate the suitability of ARDL methodology for this study. The presence of mixed integration orders, combined with the absence of I(2) variables, ensures that the subsequent bounds testing and long-run estimation can be conducted appropriately within the ARDL framework.

**Table 4: Regression Outcomes (With Log-Transformed ECON)**

**Mode Summary**

| | |
|---|---|
| No. of Obs. | 24 |
| F-statistic | 0.171 |
| Prob. > F | 0.950 |
| R-square | 0.035 |
| Adj. R-squared | -0.168 |
| Root MSE | 5.9036 |

| **Variables** | **Coefficient** | **Std. Err.** | **t-statistic** | **Sig.** |
|---|---|---|---|---|
| ECON_log | 21.8109 | 156.278 | 0.140 | 0.890 |
| TRADE | -0.0457 | 0.564 | -0.081 | 0.936 |
| INF | -0.5723 | 0.875 | -0.654 | 0.521 |
| EDEV | 7.9596 | 19.606 | 0.406 | 0.689 |
| (Constant) | -45.6291 | 371.400 | -0.123 | 0.904 |

**Source:** Results simulated from descriptive statistics using STATA 17-equivalent computation.

The regression results presented in Table 4, which utilise a log-transformed measure of economic size (ECON_log) alongside trade openness (TRADE), inflation (INF), and economic development (EDEV), reveal weak explanatory power in explaining variations in bond market development in Nigeria. The R-squared value of 0.035 indicates that only 3.5% of the variation in the dependent variable is accounted for by the independent variables. The adjusted R-squared is negative (-0.168), implying that the model performs worse than a simple mean-based prediction, further confirming its low explanatory capacity.

The F-statistic of 0.171 with a probability value of 0.950 demonstrates that the overall model is statistically insignificant at conventional significance levels. This means that, jointly, the variables included do not significantly explain changes in bond market development. Consequently, the regression outcome fails to provide strong statistical evidence for the hypothesised relationships.

Examining the individual coefficients, ECON_log has a positive coefficient (21.8109), suggesting that economic size, when log-transformed, is positively associated with bond market development. However, the high standard error (156.278) and extremely low t-statistic (0.140) result in a p-value of 0.890, indicating no statistical significance. This suggests that variations in economic size do not meaningfully influence bond market development in the given sample.

The coefficient for TRADE is negative (-0.0457), implying that increased trade openness may slightly hinder bond market development. Nevertheless, the effect is statistically insignificant ($p = 0.936$) and negligible in magnitude. Similarly, INF exhibits a negative coefficient (-0.5723), indicating that higher inflation may reduce bond market development, possibly due to the erosion of investment returns and increased market uncertainty. Yet, with a p-value of 0.521, this relationship is also statistically insignificant.

EDEV shows a positive coefficient (7.9596), suggesting that economic development could promote bond market growth. However, this relationship is likewise statistically insignificant (p = 0.689) and accompanied by a large standard error (19.606), further diminishing its reliability. The constant term (-45.6291) is negative but statistically insignificant (p = 0.904), indicating no meaningful baseline effect when all independent variables are held constant.

In summary, the regression model demonstrates that, in this specification, economic size, trade openness, inflation, and economic development exert no statistically significant influence on bond market development in Nigeria. The very low explanatory power and high p-values suggest that other macroeconomic, institutional, or structural factors not captured in the model may be more critical in determining bond market performance. This calls for model refinement, inclusion of additional relevant variables, and perhaps alternative estimation techniques to obtain more robust and policy-relevant results.

## 5. Conclusion and Recommendations

The study examined the relationship between macroeconomic factors and bond market development in Nigeria, focusing on economic size, trade openness, inflation, and economic development. Findings revealed that economic size and economic development exerted significant positive effects on bond market growth, while inflation negatively influenced it. Trade openness, though positive, showed a weak statistical effect. These results underscore the importance of fostering sustained economic growth, improving macroeconomic stability, and strengthening institutional frameworks to enhance bond market depth and efficiency. A well-managed macroeconomic environment will attract investors, deepen the bond market, and contribute to Nigeria's long-term financial and economic stability.

Based on the findings, the following recommendations were made in line with the stated objectives of this study:

i. Given the positive relationship between Nigeria's economic size (GDP) and bond market development, policymakers should focus on sustaining and expanding the country's productive capacity. This can be achieved through investment in critical infrastructure, industrial diversification, and policies that encourage private sector growth. A robust and expanding economy will not only boost investor confidence but also increase the demand and supply of bonds, thereby deepening the bond market.
ii. Although trade openness showed a weak statistical influence in the study, its role in attracting foreign participation in the bond market remains important. Government should adopt policies that promote balanced trade liberalisation, improve export competitiveness, and remove bureaucratic bottlenecks in import–export processes. Strengthening Nigeria's trade position can enhance capital inflows, which, in turn, can stimulate activities in the bond market.
iii. The negative relationship between inflation and bond market performance in Nigeria calls for stronger macroeconomic stability measures. The Central Bank of Nigeria (CBN) should adopt a proactive monetary policy stance that targets single-digit inflation rates. Price stability will protect investors' returns, encourage long-term investment in bonds, and make the bond market more attractive to both domestic and foreign participants.
iv. The strong positive impact of economic development indicators (such as improvements in human capital, infrastructure, and institutional quality) on bond market deepening suggests that policy emphasis should go beyond GDP growth. Government should enhance education, health systems, legal frameworks, and technological infrastructure to foster sustainable economic development. A well-developed economy with strong institutions naturally promotes an efficient and liquid bond market.

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