Macroeconomic Determinants of Economic Recession in Nigeria

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Abstract

The objective of the study is to examine the macroeconomic determinants of economic recessions in Nigeria. Time series variables for GDP growth rate, interest rate, inflation, recurrent spending, FDI, external debt, and oil rent for the period 1981-2023 were examined. The Autoregressive Distributed Lag (ARDL) model was used for data analysis. Results show that current inflation considerably slows growth, FDI has a delayed negative effect in the short term, and interest rates, external debt, and oil rent have negligible effects. Growth is greatly slowed by recurring expenses. Long-term growth is still hampered by inflation and recurring spending, FDI and interest rates are still ineffective, external debt has a slight positive impact, and oil revenue is still negligible. Based on the findings from the study, it is suggested that Nigeria adopt tighter and well-coordinated monetary and fiscal policies to reduce inflation, which consistently slows economic growth in both the short and long term. Foreign direct investment should be redirected toward productive sectors through targeted incentives and regulatory reforms, while recurrent expenditure must be reduced and reprioritized in favor of capital spending that drives inclusive growth. In addition, Nigeria should use external borrowing strictly for high-impact investments, reduce reliance on oil revenues by diversifying exports, and strengthen the monetary transmission mechanism to make interest rate policy more effective.

Keywords: *Macroeconomic factors; Economic recession; ARDL model, Inflation, FDI.*

Background to the Study

A lot of policymakers are interested in global recessions, but there isn't a single definition that everyone agrees on. It is hard to define them because the usual way to tell if a country is in a recession is if its output falls for at least two quarters in a row, which is not easy to apply to the whole world (Kose, Sugawara, & Terrones, 2020). When supply, demand, or both shocks happen at the same time, they can cause an economic recession, which slow down production and exacerbate price stability. Supply-side recessions happen when there are limits on production, which makes output go down and prices go up. Demand-driven recessions happen when output goes down and prices go down. A lot of the time, both of these things work together to make the economy worse. The intensity of a recession relies on what caused it and how well policies work to lessen its consequences (Weinstock, 2023). This basic knowledge of economic downturns gives us a way to look at Nigeria's repeated downturns, which are mostly caused by outside shocks, especially changes in global oil prices.

Nigeria has gone through a lot of economic downturns, mostly because it relies too much on exporting crude oil (Tella, 2017). Nigeria makes roughly 90% of its foreign exchange profits and about 60% of its government revenue from crude oil. Because of this, big drops in world oil prices, like the one that happened in 2020 because of the COVID-19 epidemic, caused export earnings to drop sharply. For example, crude oil exports declined by 14% in the first quarter of 2020 compared to the same time last year. In the third quarter of 2020, oil sector output fell by 13.89% compared to the same time last year. Nigeria's economy became even less stable because of this fiscal fragility, together with poor foreign reserves and few economic buffers (Durojaiye, 2020).

The COVID-19 epidemic made the economy worse by breaking up global supply chains and putting severe lockdowns in place. These rules made people less likely to buy things, made it harder to make things, and caused a lot of people to lose their jobs. During this time, Nigeria's unemployment rate rose to 27.1% in the second quarter of 2020, leaving more than 21 million people without jobs. At the same time, inflation rose to 14.23% in October 2020, which made it harder for people to buy things and made poverty worse (Asunloye, 2020).

Nigeria's economy is weak because of structural problems like bad infrastructure, a lack of economic diversity, and poor policy implementation. These problems are made worse by the fact that oil prices are unstable and the country has been hit hard by the epidemic. Stagflation, which is marked by slow growth, high inflation, and high unemployment, is a persistent problem that shows how the system is not working as well as it should. Fiscal sustainability has gotten worse since important economic changes have been put off and the government is relying more and more on borrowing from other countries to make up for budget shortfalls (Asunloye, 2020; Durojaiye, 2020).

Nigeria's economic problems got worse between 2022 and 2023, which made the recessionary pressures more-worse. The on-going drop in oil production because of theft, sabotage, and operational problems led to fewer foreign exchange profits, which made the country's financial problems worse. Rising prices for food and energy around the world, along with problems in

the domestic supply system, made inflation worse. The naira's sharp drop in value made imports even more expensive, putting a pressure on household budgets and company operations (African Development Bank Group, 2024). These economic problems got worse because of policy changes that were meant to fix structural problems but ended up making things worse harder for businesses and families.

Government policies, such the Central Bank of Nigeria's decision to demonetize the currency in early 2023, made things even less stable for businesses. The lack of currency that came from the naira redesign hurt the informal sector more than other sectors, making daily transactions harder and making economic problems worse. The slow end of fuel subsidies, which was a necessary change, raised the expenses of transportation and production, which made inflation worse. The government's ability to make good social and economic changes was limited by inconsistent policies, insufficient fiscal discipline, and mounting public debt (African Development Bank Group, 2024; World Bank, 2023). The lack of knowledge about the main causes of economic downturns shows how important it is to look more closely at the reasons behind Nigeria's recessions.

This paper adds to the existing body of work in six important ways. First, even though recessions in Nigeria have a big impact on the economy, most studies only look at their impacts and not the reasons behind them. Second, most of the research that has been done on economic downturns in Nigeria has looked at how they are related to changes in the exchange rate (Tella, 2017; Uwatt, 2017). Third, a lot of studies look at how recessions affect macroeconomic metrics like GDP, employment, inflation, and investment (Mbah, et. al., 2018), but they don't look at the reasons behind them in a systematic way. Fourth, Oseni et al. (2019) looked at macroeconomic policies for stabilizing the economy from 1980 to 2016, but they didn't look at recessionary periods after the COVID-19 era. This study, on the other hand, looks at the years 1981 to 2023. Fifth, this analysis uses changes in Real GDP growth rates as a sign of an economic downturn instead of absolute Real GDP, which is different from Oseni et al. (2019). This proxy (GDP growth rate) does a better job of showing changes in the economy, fits with common definitions of a recession, makes trend analysis easier, lets you compare different economies, and lowers the danger of misinterpreting how well the economy is doing. Finally, the lack of real-world research on the causes of recessions has led to guesses about what they are, which means that policymakers don't have a clear way to stop or lessen economic downturns. Because of these gaps, a very important question comes up: What are the main macroeconomic factors that triggers economic recession in Nigeria?

This study's goal is to fill in this gap by looking at the macroeconomic factors that cause economic downturns in Nigeria. This will give policymakers data-driven information that they can use to come up with effective ways to help. The Autoregressive Distributed Lagged modelling method is used to analyze the inquiry. This model was chosen because it can look at both short- and long-run correlations between variables, even if they are stationary at level $I(0)$ or first difference $I(1)$. There are five parts to this study. The first part is an introduction, while the second part is a thorough study of the literature. The third section talks about the research method, and the fourth is the data presentation and analysis. Finally, the study ends with the highlight of conclusion and recommendations.

Literature Review

A recession is a long-run drop in economic activity, which is shown by a falling GDP, growing unemployment, and less spending by consumers (Leamer, 2008). It starts at a high point and concludes at a low point. Financial problems, outside shocks, or bad policy choices can all lead to recessions. The housing market crash in 2008–2009 caused the recession (Mian & Sufi, 2014). External shocks, such oil price increases or pandemics, can also cause downturns.

Key indicators are used to measure economic downturns. A recession is when GDP goes down for two quarters in a row (Mankiw, 2016). Other signs are higher unemployment rates and lower productivity. When unemployment rises, it means that businesses are doing less business. When industrial production and retail sales go down, it means that the economy is getting smaller. Consumer and corporate confidence indexes also go down, which shows that the economy is uncertain. These indicators work together to measure the health of the economy, which helps with diagnosing and responding to recessions.

There are several elements that are connected to each other that cause economic downturns in Nigeria. Each of these aspects makes the economy less stable in a big way. The economy is quite sensitive to changes in oil prices because it relies so heavily on oil. Because a large part of the government's income comes from oil, a drop in global oil prices means less money for the government, less spending by the public, and less economic activity (Gylych, Ahmad Jibrin, Celik, & Isik, 2022). When the government runs out of money, important areas like infrastructure, healthcare, and education suffer, which makes things worse for businesses and individuals.

Monetary policy failings, like not handling inflation and exchange rates correctly, make the economy unstable on a large scale. Policies that aren't well thought out often cause inflationary pressures that lower people's buying power and raise businesses' production costs. Unstable exchange rates make it further harder for firms to invest since they don't know how much it will cost to import goods or how much profit they will make (Sanusi, 2010). When things like global financial crises and pandemics happen, they hurt commerce and make Nigeria's economy weaker. A drop in global demand or problems in the supply chain can cause the country to make less money, have more people out of work, and see slower economic growth (IMF, 2020). For instance, the COVID-19 epidemic had a big effect on trade around the world, which showed how weak Nigeria's economy is.

Nigeria's sluggish economic recovery and structural weaknesses are obvious. Nigeria's recovery from the 2016 recession was gradual. In 2018, the GDP grew by only 1.9%, which was less than the population increase and pre-crisis levels. The oil industry shrank, while non-oil growth, mostly in ICT, stayed poor. Agriculture, which employs many people, didn't add much to GDP, which shows that there was an imbalance across sectors. This made the economy weak and open to shocks like falling oil prices. Job growth didn't keep up with labour force expansion, thus over 25% of people were unemployed and 20% were underemployed. Recessions got worse and lasted longer because the economy didn't have enough different types of jobs (World Bank, 2019).

Poor infrastructure makes businesses pay more and work less efficiently. Businesses have to rely on expensive alternatives, like generators, when the power goes out, which raises their operating costs. Weak transportation networks make it hard for goods and services to move around, which causes inefficiencies and raises production costs. A lack of developed technology infrastructure makes it further harder for new ideas to come up and for the economy to be competitive (Jabara et al., 2009).

The government's ability to spend is limited by budget deficits and a growing debt burden. Nigeria is borrowing more and more to make up for budget gaps, which means that a big part of the country's revenue goes to paying off debts. The government cannot spend as much on infrastructure, education, and healthcare, which slows down economic growth (Onyele & Nwadike, 2021). These financial problems make economic downturns worse when there is a crisis, like when oil prices go up. Changes in exchange rates make the economy less stable. The value of the naira changes a lot, which affects the cost of imports, inflation, and investor confidence. Businesses are less likely to grow or invest when currency rates are hard to anticipate. This slows down economic activity and causes capital flight (Morina, et. al., 2020: Ebire & Bello 2016; Bello & Sanusi 2019).

Nigeria's economy is too dependent on oil because it hasn't diversified enough, which makes it hard for other sectors to help when things go wrong. Even though the country has tried to improve agriculture, industry, and services, these sectors are still not fully developed and can't keep the economy going when oil prices drop (International Monetary Fund, 2022). When the economy goes down, things get worse if there isn't a robust base in a lot of different businesses. Insurgency and banditry are just two of the security problems that affect economic activities in many areas. Violent conflicts make it harder for farmers to grow crops, make people less likely to invest in impacted areas, and cost the government more money for security instead of development programs. This makes the economy even less stable and slows down growth (Ajiboye, et al., 2024).

Last but not least, bad administration and ineffective policy implementation make economic reforms less successful. Even when programs are well-thought-out, they often don't work because of inefficiency, corruption, and a lack of political will. This wastes resources, misses chances for growth, and makes economic problems last longer (Hussaini & Kabuga, 2025). To deal with these problems, we need to take a broad approach that includes good fiscal policies, investing in infrastructure, diversifying the economy, and making changes to how the government works. Nigeria's economy will be weak and vulnerable to repeated recessions if these steps aren't taken. To understand the macroeconomic determinants of economic recession in Nigeria, a solid theoretical foundation is essential. Several macroeconomic theories help explain the observed behavior of the explanatory variables used in this study, namely interest rate, inflation, government recurrent expenditure, external debt, foreign direct investment, and oil rent, in relation to the dependent variable, real GDP growth rate, a proxy for economic recession. The Classical Theory of Recession, rooted in the works of Smith and Ricardo, argues that market forces are self-correcting and recessions are temporary. However, this view assumes flexible prices and wages, which may not hold in Nigeria's context of

structural rigidities, policy lags, and institutional weaknesses. Consequently, variables like interest rate and inflation may not adjust swiftly to restore equilibrium, leading to prolonged downturns.

The Keynesian Theory (Keynes, 1936) attributes recessions to inadequate aggregate demand. In this framework, recurrent government spending (LRXP) plays a stabilizing role. However, in Nigeria, where recurrent expenditures often go toward administrative overheads rather than productive investments, the expected Keynesian stimulus effect may be dampened. Thus, recurrent spending that does not stimulate demand can deepen economic contraction.

The Monetary Theory of Recession, advanced by Friedman (1968), emphasizes the role of money supply in economic cycles. High interest rates (INT) can discourage borrowing and investment, while inflation (INF), particularly when volatile, distorts pricing and undermines consumer confidence. These factors jointly affect Nigeria's macroeconomic stability and can trigger recessionary dynamics when monetary policy becomes pro-cyclical or excessively tight.

Clower (1965) and Malinvaud (1977) introduced the Macroeconomic Disequilibrium Theory, which suggests that recessions arise from price rigidities, market imperfections, and coordination failures. The behavior of Nigeria's interest rate and inflation, often disconnected from real sector dynamics, reflects these disequilibrium conditions. In such settings, monetary tools may not yield expected outcomes, making recession harder to reverse. The Structuralist Theory (Prebisch & Singer, 1950s) views recession as a result of long-term structural challenges in developing countries. Nigeria's dependence on oil rent (OILR) and its rising external debt burden (LXTD) underscore this vulnerability. Fluctuations in oil prices and external borrowing costs affect fiscal sustainability and expose the economy to recurrent shocks, increasing recession risk.

The Real Business Cycle (RBC) Theory, as posited by Kydland and Prescott (1982), interprets recessions as rational responses to real shocks—like changes in technology or commodity prices. Oil rent (OILR), a proxy for external commodity shocks, is central to this theory. Nigeria's growth trajectory remains highly sensitive to global oil market volatility, reinforcing RBC insights. Finally, the Endogenous Growth Theory (Romer, 1990) highlights the importance of investment, innovation, and capital accumulation in sustaining growth. Foreign direct investment (LFDI), as a proxy for such capital flows, can spur productivity, but is sensitive to macroeconomic instability. Recessionary conditions, often marked by policy unpredictability, tend to repel FDI inflows.

The Keynesian theory is adopted as the framework for this study because it best explains Nigeria's recessionary experience, where weak aggregate demand, driven by inefficient recurrent government spending and inflationary pressures, contributes to economic downturns. Unlike the Classical view, Nigeria's structural rigidities hinder market self-correction. The Keynesian emphasis on fiscal and monetary intervention aligns closely with the macroeconomic variables examined, making it the most suitable framework for analyzing Nigeria's economic recession.

Empirical studies on the determinants and dynamics of economic recessions, especially in Nigeria and other developing countries. They adopted various methodological approaches and highlighted critical research gaps. Kiley (2022) assessed financial and macroeconomic indicators of recession risk in the United States between 1965Q1 and 2019Q4 using a logistic regression model. The study found that traditional indicators such as corporate bond spreads and leading indices were not significant predictors of rising unemployment. Instead, the unemployment rate emerged as a more robust indicator. Including both unemployment and inflation improved prediction accuracy, while the role of the run spread diminished, suggesting its effect is conditional on broader macroeconomic variables.

Olatunji, Abubakar, Tejideen, and Ishola (2019) conducted a survey-based study on how economic recession affected market traders in Ibadan, Nigeria. Results showed that recession had negative effects on business operations and livelihoods, as supported by both regression analysis and qualitative interviews.

Usman (2019) examined how economic recession influenced Nigeria's leadership role in Africa. Using secondary data, the study concluded that domestic economic instability weakened Nigeria's regional and diplomatic influence, highlighting the importance of internal stability for external policy success. Ibrahim, Habibu, and Abubakar (2019) analyzed the impact of corruption and recession on economic growth in Nigeria (1980–2016) using OLS regression. They found that both factors had significant negative effects on the economy, resulting in job losses, reduced public spending, and overall decline in national productivity.

Ezeanyeji, Imoagwu, and Ifeako (2019) investigated the impact of recession on economic growth using a multiple regression and error correction model. Findings revealed a negative impact of recession on GDP and living standards, uncovering deep structural flaws in Nigeria's economy.

Olanrewaju et al. (2018) conducted one of the few empirical studies that directly examined the causes of economic recession in Nigeria. Using survey data from the construction sector, the study identified fluctuating exchange rates, declining oil prices, and corruption as key causes. Major effects included unemployment, bankruptcy, and a decline in mortgage availability. However, the study was sector-specific and did not take a broader macroeconomic view. Uwatt (2017) explored recession and currency crises in Nigeria using quarterly data from 2000 to 2017. The study identified one recession and two currency crises using the Exchange Market Pressure Index (EMPI). Composite Leading Indicators (CLIs) effectively predicted crises up to three years in advance.

Tella (2017) provided a theoretical analysis of the recession and exchange rate crisis in Nigeria. The study concluded that the recession was driven by a combination of economic, political, and social factors, primarily linked to external shocks in oil prices, poor management of oil revenues, and weak policy responses. Kodila-Tedika and Nguena (2017) analyzed the role of financial sector development in recession vulnerability using data from 129 countries (1990–2010). Using OLS, they found a U-shaped relationship: financial development

initially reduced the severity of recessions but increased vulnerability beyond a certain threshold. Trade openness was also found to exacerbate recessionary effects.

Kannan, Rabanal, and Scott (2012) examined the nature of recessions and recoveries in advanced economies. Their results indicated that recessions linked to financial crises were deeper and slower to recover from, while globally synchronized recessions also had prolonged recovery periods. The study underscored the importance of countercyclical macroeconomic policy. Palley (2009) provided a foundational analysis of the macroeconomic causes of the 2008 U.S. financial crisis and recession. He attributed the crisis to the neoliberal growth model adopted after 1980, which emphasized debt-driven consumption and asset price inflation over wage growth. The study highlighted how deregulation, rising household debt, and growing income inequality fueled speculative bubbles that eventually collapsed, triggering a major recession.

Despite these valuable contributions, most empirical studies on Nigeria's recession either address its consequences, focus on specific sectors like construction or trade, or explore isolated variables such as exchange rate or corruption. Very few have empirically examined the broad macroeconomic determinants of economic recessions in Nigeria. This study addresses that gap by identifying the key macroeconomic drivers of economic downturns and providing a holistic framework for policy intervention.

Methodology
This research adopts the ex-post facto research design. The Real Business Cycle (RBC) and the monetarist theory serve as the theoretical framework for this study. This study employs secondary annual time series data for the period 1981 to 2023. The time series data for all the variables were obtained from the Central Bank of Nigeria. The preliminary test is done using pairwise correlation analysis, the Augmented Dickey–Fuller (ADF) by Dickey-Fuller (1979) and Phillips–Perron (1988) unit root tests unit root tests for stationarity. The ADF equation is stated below:

$$\Delta y_t = \mu + \delta y_{t-1} + \sum_{i=1}^{p} \beta_i \, \Delta y_{t-1} + \varepsilon_t \tag{1}$$

The testing procedure follows an examination of the Student t ratio for δ. The critical values of the test are all negative and larger in absolute runs than standard critical t-values, so they are called ADF statistics. The technique proposed by Phillips and Perron (1988) adopts an alternative (nonparametric) method of controlling for serial correlation in testing for stationarity. If the null hypothesis cannot be rejected then the series Y_t cannot be stationary. The decision rule is to reject H0, if the absolute ADF or PP t-statistic has greater than 5% critical values, otherwise accept H_0.

Bounds Test/Autoregressive Distributed Lagged Model
The current study examines the short-run dynamics as well as the cointegration (long-run) relationship between the dependent and explanatory variables using the autoregressive distributed lag (ARDL) bounds testing approach. The Johansen method of cointegration is

not as good as the ARDL limits test (Pesaran et al., 2001). The hypothesis of no cointegration vs the presence of cointegration is tested using an F-test on the joint significance of the coefficients of the lagged levels of the variables. Whether the variables are I(0) or I(1), the distribution of this F-test is non-standard. The lower and upper bounds for inference are obtained from two sets of adjusted critical values given by Pesaran et al. (2001): one set assumes that all variables are I(0), while the other set assumes that they are all stationary at first difference, I(1). The null hypothesis of no cointegration is rejected if the calculated statistic is more than the upper bound; yet, the null cannot be rejected if it is less than the lower bound. An inconclusive result is obtained if it falls between the boundaries. According to Pesaran, et al. (2010), estimation can continue as long as the variables are a combination of I(0) and I(1).

Model Specification
The study adopted the model used by Kodila-Tedika and Nguena (2017) which expressed recession as a function of financial development.

$$\text{Recession} = f(\text{Financial Development}) \qquad (2)$$

The current study builds on this by adding some macroeconomic variables to explain economic recessions in Nigeria. The model of the study specifies economic recession as a function of macroeconomic variables. Symbolically, the model is shown as:

$$GDPGR = f(INT, INF, RXP, XTD, FDI, OILR) \qquad (3)$$

Stochastically written:

$$GDPGR_t = \beta_0 + \beta_1 INT_t + \beta_2 INF_t + \beta_3 LRXP_t + \beta_4 LXTD_t + \beta_5 LFDI_t + \beta_6 OILR_t + \varphi_t \qquad (4)$$

Where the dependent variable, GDPGR = annual growth rate of real GDP (proxy for economic recession, as have been suggested by Bernanke, 2018; Blanchard, 2017). The explanatory variables are: INT = Monetary policy rate, INF = annual inflation rate, LRXP = log of government recurrent expenditure, LXTD = log of external debt, LFDI = log of foreign direct investment/GDP, OILR = oil rent. β_0 = regression constant, while $\beta_1 - \beta_6$ = regression coefficients. t = annual time series.

A priori expectations
$f(\beta_1) > 0; f(\beta_2) > 0; f(\beta_3) < 0; f(\beta_4) > 0; f(\beta_5) > 0; f(\beta_6) < 0.$

However, Equation (5) specifies the short-run and long run dynamics of the ARDL model based on the assumption of cointegration of the variables in Equation (4).

$$\Delta GDPGR_t = \propto_0 + \propto_{1i} \sum_{i=1}^{q} \Delta GDPGR_{t-1} + \propto_{2i} \sum_{i=0}^{q} \Delta INT_{t-i} + \propto_{3i} \sum_{i=0}^{q} \Delta INF_{t-i} + \propto_{4i} \sum_{i=0}^{q} \Delta LRXP_{t-i}$$

$$+ \propto_{5i} \sum_{i=0}^{q} \Delta LXTD + \propto_{6i} \sum_{i=0}^{q} \Delta LFDI + \propto_{7i} \sum_{i=0}^{q} \Delta OILR + \beta_0 + \beta_1 INT_t + \beta_2 INF_t$$

$$+ \beta_3 LRXP_t + \beta_4 LXTD_t + \beta_5 LFDI_t + \beta_6 OILR$$

$$+ \varphi_t ECM \qquad (5)$$

Where: $\propto_i$ = short regression coefficients and i= 0, 1, …,n, β = long run regression coefficients, φ = error correction coefficient (speed of adjustment from the short run to the long run equilibrium after a shock). The researcher used the econometric program Eviews 9.0 to analyze the data. The availability of ARDL tools in the software is the reason for this choice.

Results and Discussions
Table 1 displays the results of the correlation analysis. The findings indicate that most variable coefficients remain below the 0.8 threshold, which signals the absence of multicollinearity. The correlation coefficients for all the variables followed this standard, except RXP and XTD.

Table 1: Result of Correlation Analysis

	FDI	GDPGR	INF	INT	OILR	RXP	XTD
FDI	1.00						
GDPGR	0.46	1.00					
INF	0.22	-0.16	1.00				
INT	0.18	0.23	0.35	1.00			
OILR	0.61	0.45	0.35	0.49	1.00		
RXP	-0.27	-0.03	-0.13	0.12	-0.42	1.00	
XTD	-0.25	-0.03	0.00	0.30	-0.30	0.89	1.00

**Source**: Author's result of correlation analysis from Eviews 9

Table 2 presents the results of the Augmented Dickey-Fuller and Phillips-Perron unit root tests for stationarity. The findings from both methods were consistent. GDPGR, FDI, INF, and INT were stationary at level, while OILR, LRXP, and LXTD became stationary after first differencing.

Table 2: Result of ADF Unit Root Test of the Variables

Variable	Level Form		First Difference		Level Form		First Difference		Order of
	ADF t-stat	P(t)	PP t-stat	P(t)	ADF t-stat	P(t)	PP t-stat	P(t)	integration
GDPGR	-4.05	0.00	-4.04	0.00					I(0)
FD1	-3.82	0.01	-3.78	0.01					I(0)
INF	-3.20	0.03	-3.19	0.03					I(0)
INT	-3.27	0.02	-3.21	0.03					I(0)
OILR	-2.80	0.08	-2.80	0.07	-7.53	0.00	-8.17	0.00	I(1)
LRXP	-1.55	0.50	-1.34	0.60	-1.07	0.72	-8.65	0.00	I(1)
LXTD	-1.07	0.72	-2.13	0.23	-4.92	0.00	-4.94	0.00	I(1)

Source: Author's output of ADF unit root test using Eviews 9

Figure 1: Graph of ARDL lag length selection based on Akaike information criteria for Model 1.
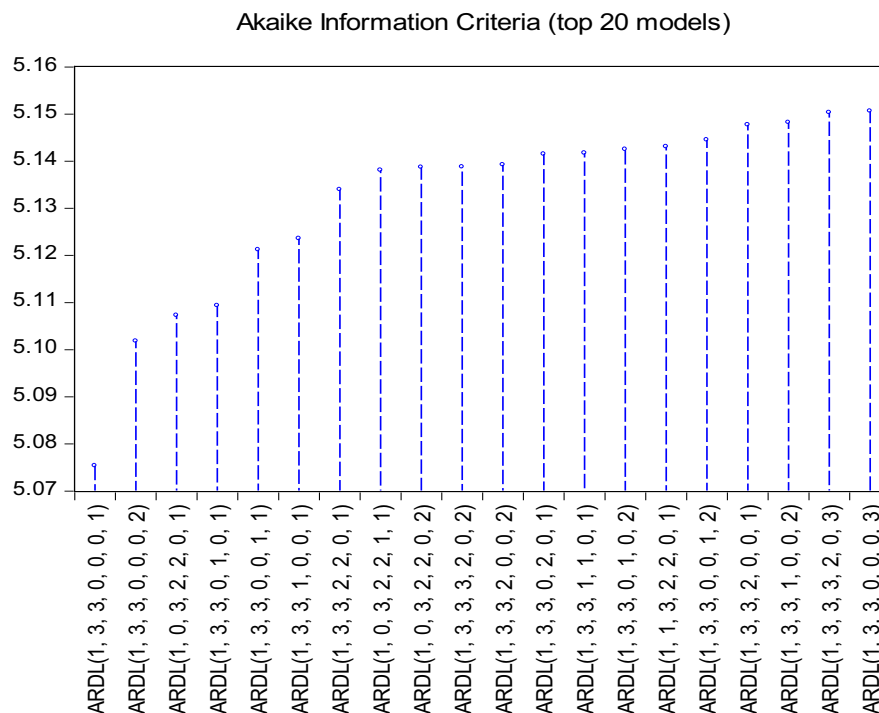
Source: Eviews 9 output for model selection based on Akaike information criteria

The lag length for the ARDL model was done using Akaike information. The study selected maximum lag lengths of 1 and 2 for the dependent and independent variables, respectively, which produced the ARDL model presented in Figure 1. The result of the lag length selection showed that after 20 evaluations, the selected ARDL (1, 3, 3, 0, 0, 0, 1) has the minimum information (5.08) based on AIC.

Table 3 presents the results of the bounds cointegration test. The findings reveal that the F-statistic (3.99) exceeds both the upper and lower critical values of the Pesaran test at the 5%, and 10% significance levels. This confirms the existence of a long-run relationship among the variables in the model.

Table 3: Result of Bound Test Cointegration

T-Stat	K	F-stat. calculated	1%		5%		10%	
			L	U	L	U	L	U
F-Statistic	6	3.99	3.15	4.43	2.45	3.61	2.12	3.23

Note: Null hypothesis: No long-run relationship exists.
Source: Eviews 9 output for the result of bounds test (cointegration of the variables).

The result of the regression estimates is presented in Table 4
Table 4: Result of Regression Estimates

Variables	Short Run ARDL (1, 3, 3, 0, 0, 0, 1)			Long Run ARDL		
Variable	β	t^*	Prob.	β	t^*	Prob.
D(FDI)	-0.56	-0.53	0.60	2.05	0.97	0.34
D(FDI(-1))	-0.17	-0.24	0.81			
D(FDI(-2))	-1.59	-2.45	0.02			
D(INF)	-0.10	-2.94	0.01	-0.32	-2.77	0.01
D(INF)	0.02	0.37	0.71			
D(INF)	0.15	3.37	0.00			
D(INT)	-0.23	-0.96	0.35	-0.33	-0.88	0.39
D(LRXP)	-1.88	-2.73	0.01	-2.76	-2.39	0.02
D(LXTD)	-0.64	-0.47	0.64	2.57	1.97	0.06
D(OILR)	0.09	0.49	0.63	0.14	0.47	0.64
CointEq(-1)	-0.68	-3.92	0.00			
R-squared	0.62					
Adjusted R-squared	0.45					

Source: Author's output of ARDL estimates using Eviews 9

Table 4 presents the ARDL regression results. The result captures both the short-run and long-run effects of key macroeconomic variables on economic recession, as measured by the GDP growth rate (GDPGR). The short-run ARDL (1, 3, 3, 0, 0, 0, 1) estimates reveal how immediate changes in macroeconomic indicators influence GDP growth, while the long-run coefficients represent their persistent impact over time.

In the short run, the results indicate that Foreign Direct Investment (FDI) has a negative and statistically insignificant effect on economic recession. The current change in FDI (D(FDI)) has a coefficient of -0.5643 ($p = 0.5979$), while its first lag (D(FDI(-1))) remains insignificant. However, the second lag (D(FDI(-2))) is statistically significant at the 5% level with a coefficient of -1.5856 ($p = 0.0218$). This suggests that past FDI inflows may negatively affect economic recession after a lag. This could be as a result of structural delays in the productivity impact of foreign investment or inefficient allocation of public resources.

Inflation (INF) is identified as a key macroeconomic determinant of economic recession in Nigeria. The negative and statistically significant coefficient of current inflation (-0.1025, $p = 0.0070$) indicates that rising inflation reduces GDP growth, increasing the risk of recession. This aligns with the view that persistent inflation erodes purchasing power, raises production costs, and distorts investment, thereby undermining economic stability. Although one lag of inflation shows a positive effect, the dominant short-run impact confirms inflation as a destabilizing force. This finding supports Sanusi's (2010) argument that high and volatile inflation discourages investment and disrupts long-term planning, which are central triggers of economic downturns in Nigeria. Hence, inflation significantly contributes to recurring recessions in the country.

Interest rate (INT) exhibits a negative short-run effect on economic growth (-0.2252), suggesting that rising interest rates may slow down economic activity by discouraging investment and consumption. Although the effect is not statistically significant (p = 0.3475), the direction of the relationship indicates that interest rates have the potential to contribute to recessionary conditions. This finding supports the Macroeconomic Disequilibrium Theory (Clower, 1965; Malinvaud, 1977), which highlights how price rigidities and weak policy coordination can hinder monetary transmission. Thus, even when statistically weak, an increase in interest rates remains a relevant macroeconomic factor capable of slowing growth and triggering recession in Nigeria.

Recurrent government expenditure (LRXP) in the short run shows a statistically significant negative impact on growth (-1.8796, $p = 0.0115$). This suggests that short run increases in government consumption spending may be contractionary, especially when it is due to inefficiencies or non-productive expenditures (Hussaini & Kabuga (2025; CBN, 2020). Similarly, in the short run, the coefficient of external debt (LXTD) has a negative and insignificant impact on the dependent variable (economic recession), (-0.6364, $p = 0.6402$). The implication is that immediate external borrowing does not contribute meaningfully to economic recovery. This effect could even be harmful if external debt is not effectively utilized. Oil revenue (OILR) has a positive but statistically insignificant short-run impact, (0.0927, $p = 0.6252$). This implies that fluctuations in oil income have minimal immediate impact on GDP growth.

The error correction term (CointEq(-1)) is negative and highly significant (-0.6818, $p = 0.0006$). This confirms the existence of a long-run equilibrium relationship among the

variables in the study. The size of the coefficient indicates that approximately 68% of any deviation from the long-run path is corrected within a single period. This is a pointer to a moderate speed of adjustment to shocks arising from the system.

In the long run, the results show that the coefficient of FDI is positive but statistically insignificant (2.0463, $p = 0.3432$). The indication is that while FDI might support long run growth, its impact is not strong or adequate to be statistically reliable. On the other hand, Inflation exhibits a significant negative long-run effect (-0.3155, $p = 0.0103$). This implies that persistent price instability hampers economic growth by eroding purchasing power, driving up production costs, and discouraging investment.

The interest rate continues to have a negative long-run impact (-0.3303), though still statistically insignificant ($p = 0.3886$). This result supports the view that high interest rates discourage borrowing and investment over time, but the evidence remains inconclusive. Recurrent government expenditure (LRXP) in the long run also has a significant negative coefficient (-2.7568, $p = 0.0246$). This finding is consistent with Ezeanyeji et al. (2019) and Ibrahim et al. (2019), who found that fiscal mismanagement exacerbates recession and structural weaknesses. This suggests that long run government consumption spending, such as wages and administrative costs, may not contribute meaningfully to productive economic growth. Such spending might even crowd out private investment.

Interestingly, external debt (LXTD) has a positive and marginally significant long-run effect (2.5669, $p = 0.0601$). This reflects findings from Olanrewaju et al. (2018) regarding the macroeconomic constraints (like debt) that deepen the recessionary impact on sectors like construction. This is an indication that if managed properly, external borrowing can support long-term growth by financing productive investments. Finally, oil revenue (OILR) also has a positive but statistically insignificant long-run effect (0.1359, $p = 0.6447$). This outcome is a highlight that while oil earnings may provide fiscal support, their impact on sustainable growth is limited and may depend on how the revenue is utilized. This finding aligns with Tella (2017) and Uwatt (2017) who tied recession episodes in Nigeria to external sector issues, especially oil price fluctuations.

Overall, the R-squared value of 0.6199 and adjusted R-squared of 0.4509 indicate that the model explains a moderate proportion of the variation in GDP growth rate (economic recession). These findings underscore the importance of prudent macroeconomic management, especially in areas like inflation control, efficient public expenditure, and strategic use of external debt, in fostering both short-term stability and long-term economic growth.

Table 5: Result of Post estimation Tests

Test for Normal Distribution			
JB-statistics	0.92	Probability	0.63
Test for Serial Correlation			
F-statistic	2.50	Prob. F(1,24)	0.13
Heteroskedasticity Test			
F-statistic	0.98	Prob. F(14,25)	0.50
Ramsey Test for Model Specification			
F-statistic	2.73	(1, 35)	0.11

Source: Author's output of Post estimation results estimates using Eviews 9

The result shows that the Jarque-Bera statistic's probability value (0.630278) is higher than the 0.05 criterion of significance. Because of this, the null hypothesis is not rejected. This signifies that the residuals are spread out in a regular way. The findings of the Breusch-Godfrey test demonstrate that the p-values are greater than the 0.05 criterion of significance. This shows that the residuals don't have any serial correlation. The p-values from the Breusch-Pagan-Godfrey test are greater than conventional significance levels, which suggests that there is no strong evidence of heteroskedasticity. This means that the model meets the criteria of having a constant error variance. The Ramsey RESET test indicates that the model is correctly specified, as the p-value (0.1072) is greater than 0.05, leading to a failure to reject the null hypothesis.

Figure 2 and Figure 3: Test for Model Stability
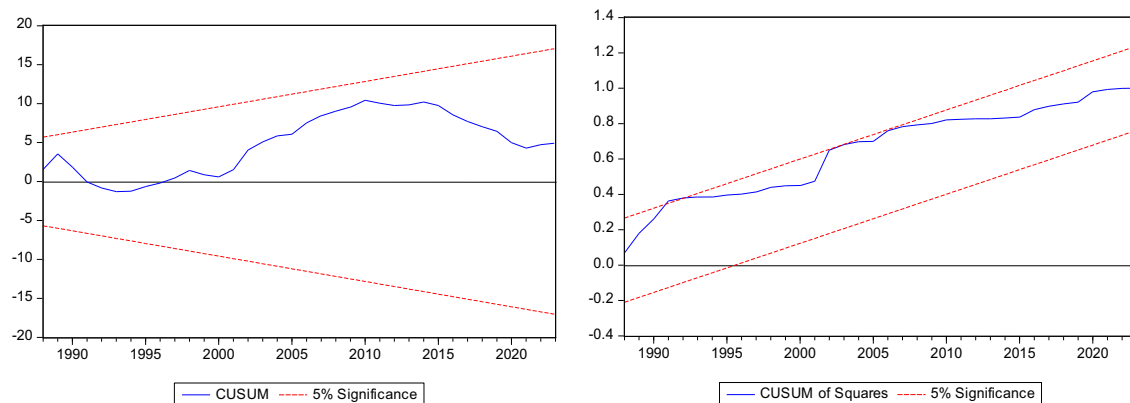
The results confirm that the ARDL model successfully passed the diagnostic tests, while the CUSUM and CUSUMSQ plots (Figs. 2 and 3) remain within the critical bounds at the 5% significance level, validating the stability of the ARDL estimation. Hence, the model is reliable for policy analysis and forecasting.

Limitations of the Study

This study is subject to several limitations. It focuses on a selected set of macroeconomic variables, excluding other potentially relevant factors such as exchange rate volatility, unemployment, institutional quality, and global shocks that could influence economic recessions. The reliance on the ARDL model, while appropriate for the data structure, assumes linear relationships and may not capture complex dynamics or threshold effects. Additionally, the use of annual time-series data limits the analysis of short-term fluctuations and may be affected by data quality issues. The study also does not disaggregate results by economic sectors, which could mask important sector-specific recessionary trends. Finally, the findings are context-specific to Nigeria and may not be generalizable to other countries with differing economic conditions.

Conclusion and Recommendations

Declining GDP growth rates, increased unemployment, and slow economic activity, affects both social and economic growth of Nigeria. Finding the macroeconomic factors that cause Nigeria's economy to deteriorate is important for keeping the economy stable and healthy. This study looks at the macroeconomic issues that lead to economic recessions. The study employed time series data from 1981 to 2023 for the variables: GDP growth rate, interest rates, inflation, recurring spending, foreign direct investment (FDI), external debt, and oil rent. The technique of Autoregressive Distributed Lagged Model was used for data analysis. Results reveal that FDI has a delayed negative effect on growth in the short term, but only the second lag is important. Inflation has both positive and negative consequences. Current inflation slows growth a lot, but a lagged term is good. Both interest rates and foreign debt have negative but small effects, which means they don't have a strong short-term effect. Recurrent government spending slows down growth a lot, whereas oil revenue has a very little, unimportant effect. In the long run, FDI and interest rates have no influence on growth, inflation and recurrent spending slow it down, external debt has a small positive effect, and oil revenue has no effect on growth. First, interest rates have a weak impact on growth. Therefore, Nigeria adopt tighter and well-coordinated monetary and fiscal policies to reduce inflation, which consistently slows economic growth in both the short and long term. Foreign direct investment should be redirected toward productive sectors through targeted incentives and regulatory reforms, while recurrent expenditure must be reduced and reprioritized in favor of capital spending that drives inclusive growth. In addition, Nigeria should use external borrowing strictly for high-impact investments, reduce reliance on oil revenues by diversifying exports, and strengthen the monetary transmission mechanism to make interest rate policy more effective.

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