Afropolitan Journals

ISSN: 3027-2971 www.afropolitanjournals.com

Selected Macroeconomic Indicators and Economic Wellbeing in Nigeria

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DOI: *https://doi.org/10.62154/ajmbr.2025.018.010655*

Abstract

This study examines selected macroeconomic indicators and economic well-being in Nigeria. It focuses the effects of exchange rate fluctuation, inflation, balance of payments, unemployment and literacy rate in both short and long run on the wellbeing of Nigerians. It used econometric analysis on the annual time series data collected from both Central Bank of Nigeria Statistical Bulletin and World Bank development indications of 2024. Findings of the study reveal that exchange rate is negative and statistically significant on the economic well-being in the long run indicating, that depreciation of naira reduces purchasing power and worsens economic conditions. Inflation though has a negative impact, is found to be statistically insignificant suggesting, the presence of economic adaptation mechanisms. Balance of payments was found to have positive and significant effect, demonstrating that an improved trade balance enhances economic well-being. However, unemployment and literacy rates, despite having positive coefficients, are found to be statistically insignificant. This implies that structural labor market inefficiencies and educational mismatch may limit their direct impact on economic well-being. The study concludes that macroeconomic stability, exchange rate management, trade balance improvements, and job creation strategies are essential for enhancing economic wellbeing in Nigeria. The study therefore made the following policy recommendations; ensuring foreign exchange stability measures, export diversification, inflation control policies, labor market reforms, and investments in infrastructure and education. Implementation of these strategies will contribute to sustainable economic growth and improved living standards for Nigerians.

Keywords: Economic Well-being, Balance of Payments, Literacy Rate, Macroeconomic Stability, Trade Balance.

JEL: 011,023,047.

Introduction

As Africa's largest economy, Nigeria is critical to the continent's economic stability. Crude oil, natural gas, and agricultural products are among the country's vast natural resources, which provide the majority of government revenue and foreign exchange gains (World Bank, 2021). Notwithstanding these, the has continued to experience macroeconomic issues that have substantial impact on the financial well-being of its people, these include unemployment, exchange rate instability, and inflation (IMF 2022). Macroeconomic influences like GDP, inflation, interest rates, currency exchange rates, and fiscal policies are also instrumental to the poor standard of living in Nigeria (Adeniran, Yusuf and Adeyemi, 2020). The inconsistency in the nation`s growth trajectory could be associated with both

internal and external causes, such as price shocks in world oil supply, policy inconsistency and problems linked with governance (Eze and Okonkwo, 2021). The country's general living standards, income distribution, and poverty levels have been found to be strongly impacted by the interface among these macroeconomic indices (Ogunleye, 2019).

Macroeconomic variables are important indicators for analyzing the nation's economic success and well-being. Macroeconomic factors in the like of inflation, exchange rate unpredictability, interest rates, and fiscal policies have all obligated substantial impact on Nigeria's economic growth and stability. Understanding the connection between these variables and economic well-being is critical for policymakers and developing measures to promote justifiable development and better living conditions both in developed and developing Nations, including Nigeria. The country has passed through phases of economic boom and recession, which were attributable mostly to swings in oil revenues and government fiscal policies (Uchenna & Chijioke, 2021). The instability in macroeconomic variables have negatively impact on employment, income levels, and overall economic wellbeing.

Despite Nigeria's rich natural and economic resources, the country has continued to experience protracted macroeconomic unevenness, which has negative influence on its economic well-being. Main economic indices such as GDP growth, inflation, exchange rates, and employment levels have fluctuated significantly over time, sign posting economic vulnerabilities and policy inconsistencies (IMF, 2022). In recent years, high inflation rates of 16-18% have reduced household purchasing power, contributing to rising poverty rates (World Bank, 2021). The Naira depreciation, along with inconsistent fiscal policies have worsened our economic woes, reducing both local and foreign investment (Eze & Okonkwo, 2021). Rising unemployment rates, particularly, among them youth, suggest the mismatch in the economic policy and labour market realities (Adeniran, Yusuf and Adeyemi, 2020). These realities have hampered the achievement of long-term economic fortune thus, raise worries concerning Nigerians' general economic well-being (Nwankwo, 2020).

There has existed considerable research on Nigeria's macroeconomic variables but many gaps abound. For instance, some reviewed literature focuses mostly on individual macroeconomic indicators, such as inflation and GDP growth without sufficient investigation their general effects on economic well-being (Adeniran et al., 2020). Secondly, there has been research on the significance of oil price variations in the Nigerian economy, agriculture and industry, economic stability, macroeconomic instability (Eze and Okonkwo, 2021), etc. Although, there were also some noticeable studies on the effect of macroeconomic variables on economic growth. For instance, Omebere et al. (2024) examined the effects of a few macroeconomic factors on Nigeria's economic growth between 1980 and 2022, Adebayo and Ohonba (2024) demonstrated that internal debt, interest rates, and trade openness all significantly contribute to economic growth impact on banking sector productivity. Economic well-being, which encompasses metrics like per

capita income, income distribution, poverty reduction, employment quality, access to social services and household purchasing power, is not specifically addressed in any of the studies.

This study is a departure from the existing literature because it addressed the consequences of selected macroeconomic indicators on economic well-being in Nigeria from the period, 1981 - 2023. It accounts for the moderating influence of literacy in the equation. The study analyzed the connection between selected macroeconomic variables and Nigeria's economic well-being thus, filling the gaps in the existing literature arising from previous studies on the effects of inflation, exchange rates, GDP growth, and literacy on economic wellbeing. Understanding these relationships is critical for developing a successful economic policy that promote sustainable development and improve the quality of life in Nigeria.

Literature Review

Conceptual Clarification

Economic Wellbeing: The concept of *economic well-being* is an all-inclusive measure that arrests not only income and wealth but factors like financial security, employment quality, work-life balance, and overall living standards. It embodies the extent to which individuals or groups experience economic security, comfort, and the ability to meet with their needs sustainably over time. Economic well-being is generally defined as the state of having stable financial resources and access to goods and services that enable individuals and households to meet their basic needs, maintain security against economic surprises, and pursue a quality life. It covers various dimensions, such as income solidity, wealth, financial security, job excellence, and living standards. Economic well-being reflects not only the material wealth but also, factors like work-life balance, financial resilience, and satisfaction with one's financial situation (OECD, 2011; Stiglitz, Sen, & Fitoussi, 2009). Within the framework of this study, wellbeing in economics is rated by per capita income of citizens which to a reasonable extent is used for financial transactions of goods and services.

Macroeconomic Indicators: These are measures arrived at statistically or yard sticks to regulate the level of performance of an economy. As the name implied, it is a pointer or indices to assess the strength or weakness of an economic system. Some of these pointers otherwise referred to variables include; Balance of Payments, Unemployment rate, Inflation rate, Exchange rate. The necessity to understand these indices is to enable investors, policy makers and Government and others to make economic decisions.

Theoretical Review

This study is anchored on the following theories as a basis to create the framework of the subject matter.

Theory of Open Economy

As important as this framework, it attempts to explain the interactions between economic variables and the performance of the economy, such as employment, price levels and the gross domestic products, etc. The theory analyses the behavior of the economy which engages in transactions across national frontiers. To illustrate an open economy, it will be necessary to examine the external sector model with a modest uncluttered economic system where the total disbursements in the economy is categorized into internal and foreign components.

$$Y = (C - C^*) + (I - I^*) + (G - G^*) + EXP \ldots\ldots \quad 1.$$

Where:

C = consumption of internal goods and services,

C* = foreign goods and services consumption,

I = investment in internal goods and services

I* = foreign goods and services investment.

G and G* = purchases by Government of domestic and foreign goods and services.

EXP = domestic goods and services export.

re-arranging the model, we have:

$$Y = C + G + I + EXP - (C^* + I^* + G^*) \ldots\ldots \quad 2.$$

$(C^* + I^* + G^*)$ indicates aggregate expenditure of imports (IMP), a component of total output, thus:

$$Y = C + I + G + EXP - IMP \ldots\ldots \quad 3.$$

The relationship of Export (EXP) and Import (IMP) imitate external sector performance. Where EXP surpasses IMP, external sector will be in excess. Accordingly, the contrary indicates a deficit.

The necessity of this theory and its relevance is that its application gives room for economic diversification, enhanced foreign investment, and competitiveness. Open economic theory creates awareness of the inherent opportunity in increasing market access.

Big Push Theory

The big push theory was propounded by Rosentein-Rodan developed the Big Push Theory in 1943 to showcase how market failure can elicit public actions that can accelerate development. The theory considered numbers of imbalances that exists in a typical economic system such as low savings, poor and limited infrastructure, human capital inadequacy and weaknesses of institutions to drive an economy. It was the consideration of Rosentein-Rodan to advocate coordination of efforts to invest concurrently on these development agent areas in order to stimulate economic activities by way of complementary gestures. In so doing, there will be a self-sustaining economic development. The theory is however an integrated economic approach.

Like the open economic theory, the Big Push Theory is relevant in our study because its application

Promotes the understanding of economies of large scale, diversification of the economy and industrialization. The understanding of the theory could sensitize infrastructural development, creation of external economies and sustenance of stability in the economy amongst others.

Endogenous Growth Model

Paul M. Romer developed the Endogenous growth model in 1986. He opined that technological progress and economic transformation are not determined exogenously or externally, but from internal concerted efforts within the economic system. The theorist therefore, identified innovations, human investment and strong institutions as key drivers of economic growth. He further advocated for improvements in the internal or domestic economy through investment in innovations, technology and information over time.

The application of this theory can ensure sustained economic growth, stability, human capital development and reduced income inequality. Application of this theory and its importance in an unstable economic system like ours is most appropriate.

Factor Endowment Theory

Two Swedish economists, Heckscher and Ohlin (H-O), in 1933 developed this fundamental theory in international Trade which expounded that countries have comparative advantage where they have rich endowment in a specific reserve. For instance, country with enormous gifts in mineral resources may normally produce these bequests cheaper, and so have comparative advantage in mineral production. H-O affirms that there exist differences in relative factor endowment that explain perceived differences in comparative cost of production between countries, motivating the need for international trade thus attracting such country's surplus goods. Consequent upon diverse resource endowments, relative factor prices will differ. Factor of production combinations and commodity price ratios will differ such that, a country copious labour but lack capital will have relative cost advantage over other countries in production of such goods and services that requires labour intensity. Following, the country may need then focus on the production of labor-intensive product which will create surplus for export. The scenario applies to capital and other factor inputs. The relationship of this theory with the wellbeing of citizens is that it creates avenue for individuals and the state to enjoy those goods and services that it could not produce through the process of export and import. The essence of such interdependence made necessary through inter- trading not only creates job but promotes wellbeing.

Empirical Literature

Omebere, Ezenekwe, Uzoechina and Nwokoye (2024), studied the impact of selected Macroeconomic variables on economic growth in Nigeria from 1980-2022. The study adopted descriptive statistics wherein, Augmented Dickey Fuller Tests, Unit root, Autoregressive Distributed Lag (ARDL) and Bound Test were presented and analysed. The study model consists of designated independent variables namely; rate of inflation,

exchange rate, rate of unemployment among others while, GDP is proxy for economy. Findings discovered that inflation rate took negative and weighty effect on the economic growth of Nigeria. It recommended the negative coefficient among inflation rate and the real GDP is imperative for price stability. Thus prompting strong fiscal and monetary policies. It further concluded that steady exchange rate is crucial for economic growth.

Adebayo and Ohonba (2024), examined macroeconomic variables as determinant of economic growth in Nigeria: a dynamic generalized method of moment approach.

It employed time sequence data from 1986Q1-2022Q4 and GMM and dynamic GMM models. The result of the analysis shows significant influence of all the variables used on economic growth. Short and long run correlation of the study revealed that internal debt, interest rate, and trade openness pointedly contributed to economic growth. Therefore, among other recommendations, was that both internal and external borrowing must be appropriately scrutinized and directed to productive areas of the economic system.

Oladipo, Ado, Alesinloye and Yusuf (2024), studied the impact of selected variables on the economic growth in Nigeria using quarterly data for the period from 2000Q1-2022Q3. The study employed in methodology Co-integrated, Auto regressive Distributed Lag model. Data for the study were sourced from the Nigeria Central Bank and National Bureau of Statistics which was sampled in order to determine the outcome of the investigation. The indices selected for the study were; inflation rate, interest rate, exchange rate. Among the statistical tests employed in the study were, Augmented Dickey Fuller, and Philips-Perron Unit Root Test which showed mixed order combination among the variables. There was long run association among the selected variables. The findings from the combined analyses show that inflation and interest rate boost economic growth whereas, exchange rate exhibited adverse and momentous influence on the dependent variable. The behavior of variables in the study showed great level of interplay with the Nigeria economic growth leading to the researcher's recommendation that, macroeconomic policy that will create foreign exchange appreciation should be encouraged, while monetary and fiscal authorities should address increasing inflation level. It also recommended the de-emphasizing of the application of interest rate to grow the Nigeria economy.

Olokoyo, Oyakhilome, Abiola and Yinka-Banjo (2021), investigated effect of macroeconomic variables on Bank Performance in Nigeria. The research espoused the Autoregressive Distributive Lag (ARDL) test methodology to co-integration analysis and employed these variables, inflation rate, international capital flows, interest rate, trade openness, and exchange rate in the study. The result of the analyses indicate among others that, Bank productivity is mostly defined by the existing macroeconomic environment, growth rate of the GDP and interest rate determines bank performance and that Bank performance hovers around the trading activities prevailing in the nation. It thus, recommended that Government should implement lesser interest rate system to reassure production in the country.

Ehigiamusoe and Lean (2017), examine response of macroeconomic variables and investment rates on economic development in Nigeria from period, 1980–2014. Of the select variables based on Maastricht Criteria indicators that determine a country's macroeconomic solidity, financial deficit relative towards GDP and real exchange rate were found to positively affect economic growth, while inflation rate and government liability have negative impact. The policy implication is that macroeconomic variables are vital in addressing matters of economic growth and development. It also places investment on a momentous position to define the economic situation of the nation. It also recommended that for the purpose of achieving sustainable economic growth, there must be a strong industrial sector and alignment between the macroeconomic variables and the socio-political influences.

Research Methodology

Methodology illustrates the design, procedure adopted in data collection and model specification. The study adopts a quasi-experimental research design. Quantitative approach was engaged to determine the reaction of macroeconomic indicators on economic wellbeing. In so doing, time series data were secondarily sourced. E-views statistical tool were used to process the data and other obtained information.

Model Specification

Model specification of the study took cognizance of select macroeconomic indicators as follows:

The functional equation of the form is expressed as follows:

$$PCIt = F(INF, BOP, EXR, UNP, LTR,) + \mu t \quad \ldots\ldots (1)$$

The functional model can be expressed and shown in equation form as;

$$PCIt=\beta o+\beta_1 INF+\beta_2 BOP+\beta 3 EXR+\beta_4 UNP+\beta_5 LTR+\mu \quad \ldots\ldots (2)$$

Where:

PCI=Per Capita Income

INF=Inflation

BOP= Balance of Payment

EXR = External Reserve

UNP=Unemployment

LTR= Literacy Rate

μ = Error term

βo= Constant term

Variables in the Study

Dependent Variables:

Per Capita Income: This demonstrates the total income of one country`s employee or the average quantum of money an individual in a given locality.

Independent variables:

Unemployment Rate: Unemployment rate is the proportion of the labor strength that are active, willing to work but cannot find job.

Inflation Rate: Percentage rate of the rise in prices of goods and services over time. It is also described as the wide measure of price increase generally.

Balance of Payment: Periodic summary of the net effect between foreign economic inflow and outflow arising from trade transactions. It provides information on the nation's exports and domestic earnings.

Exchange Rate: Number of units a local coinage interacts for any foreign currency. Theoretically, rate is believed to have either positive or negative impact on fiscal development indicators depending on the price of the domestic currency.

Result Presentation, Analyses and Discussion

Our data analyses and discussion of the results obtained are considered in this segment of the research. Consequently, Unit Root test, Stationarity test, Error Correction Mechanism, Auto Regression Distributive Lag Result and Bound test which were employed in the study are below.

The study adopted annual time series data obtained from secondary source.

Table 4.1

	UNIT ROOT TEST						
	(PP)			(ADF)			
Variables	**t-Statistic**	**Prob.**	**Decision**	**t-Statistic**	**Prob.**	**Decision**	**Result**
PCI	-4.702	0.0005	1(1)	-4.7594	0.0004	1(1)	1(1)
INFL	-3.993	0.0034	1(0)	-4.1466	0.0112	1(0)	1(0)
LTR	-3.0221	0.0409	1(0)	-3.0221	0.0409	1(0)	1(0)
BOP	-3.1368	0.0314	1(0)	-3.2996	0.0228	1(0)	1(0)
EXR	-1.5874	0.0487	1(0)	-4.6927	0.0005	1(1)	1(0) & 1(1)
UNP	-6.4495	0	1(1)	-6.3916	0	1(1)	1(1)

Source: Eview 10.5

The Phillips-Perron and ADF tests confirm that, INFL, LTR, and BOP are stationary at level [I (0)], while PCI and UNP are stationary at first difference [I (1)]. EXR shows mixed stationarity [I (0) & I (1)], justifying the use of ARDL for analysis. The Autoregressive Distributed Lag (ARDL) model is appropriate because it accommodates both I (0) and I (1) variables, allowing estimation of both short-run and long-run relationships with;out requiring prior differencing. ARDL is also suitable for small sample sizes and provides robust results even when variables have different stationarity levels.

Sample: 1981 2023

	PCI	INFL	LTR	BOP	EXR	UNP	
Mean	1151.533	18.24419	31.49163	1023862.	112.3616	10.40814	
Median	946.6200	12.09000	33.06000	195533.7	118.5700	9.000000	
Maximum	2538.700	72.84000	53.28000	5822589.	445.4700	23.90000	
Minimum	180.7400	5.390000	9.140000	-7905599.	0.620000	1.900000	
Std. Dev.	755.1570	16.48196	12.17909	2595775.	111.5204	6.365383	
Skewness	0.311182	1.934643	-0.221871	-0.500491	1.030072	0.470186	
Kurtosis	1.619896	5.604844	2.182020	4.798712	3.619167	1.997320	
Jarque-Bera	4.106546	38.98054	1.551581	7.591881	8.291054	3.385654	
Probability	0.128314	0.000000	0.460340	0.022462	0.015835	0.183999	
Sum	49515.91	784.5000	1354.140	44026086	4831.550	447.5500	
Sum Sq. Dev.	23951011	11409.51	6229.866	2.83E+14	522345.2	1701.760	
Observations	43	43	43	43	43	43	

Per capita income (PCI) has mean value of 1,151.533, whereas the median value is 946.62, indicating some dispersion. The maximum value recorded is 2,538.7, while the minimum value is 180.74. The skewness value of 0.3112 suggests slight rightward skew. The kurtosis value of 1.6199 indicates that the series is platykurtic, connoting that it is flatter than a normal distribution. The Jarque-Bera statistic of 4.1065 and its probability of 0.1283 suggest that PCI follows a normal distribution.

The mean value for inflation (INFL) is 18.2442, whereas the median value is 12.09, signifying a robust dispersion between the values. The maximum inflation rate recorded 72.84, while the minimum is 5.39. The skewness value of 1.9346 suggests that the inflation rate has a long right tail. The kurtosis value of 5.6048 indicates the series is leptokurtic, implying a higher peak compared to a normal distribution. The Jarque-Bera statistic of 38.9805 and a probability of 0.0000 confirm that inflation rate does not follow normal distribution.

Literacy Rate (LTR) has mean value of 31.4916, the median value is 33.06, showing a slight dispersion between them. The maximum value recorded is 53.28, and the minimum value 9.14. The skewness value of -0.2219 suggests the variable as slightly negatively skewed. The kurtosis value of 2.1820 shows that the series is platykurtic, thus less peaked than a normal distribution. The Jarque-Bera statistic of 1.5516 and its probability value of 0.4603 suggest trade openness followed normal distribution.

The mean value for balance of payments (BOP) is 1,023,862, while the median value is 195,533.7, indicating a large dispersion between the two values. The maximum value recorded is 5,822,589, and the minimum value is -7,905,599. The skewness value of -0.5005 suggests that indicator is long left tail. The kurtosis value of 4.7987 shows that the series is

leptokurtic. The Jarque-Bera statistic of 7.5919 and its probability value of 0.0225 suggest BOP does not follow a normal distribution.

The exchange rate (EXR) has mean value of 112.3616, and median value of 118.57, indicating minimal dispersion. The maximum value recorded 445.47. The minimum value is 0.62. Skewness value of 1.0301 suggests variable to be positively skewed. The kurtosis value of 3.6192 indicates that the series is leptokurtic. The Jarque-Bera statistic of 8.2911 and its probability of 0.0158 suggest that the exchange rate does not follow a normal distribution. Finally, the mean value for unemployment (UNP) is 10.4081, while the median value is 9.00, indicating a small dispersion. The maximum value recorded is 23.9, while the minimum value is 1.9. The skewness value of 0.4702 suggests that the variable is positively skewed. The kurtosis value of 1.9973 implies that series is platykurtic. The Jarque-Bera statistic of 3.3857 and probability value of 0.1840 suggest unemployment follows a normal distribution.

Table 4.2 Cointegration Test (Bounds Cointegration Test)

Null Hypothesis: long-run relationships does not exist				
Test Statistic	Value	K		
F-statistic	6.078892	5		
Critical Value Bounds				
Significance	Io Bound	I1 Bound		
10%	2.26	3.35		
5%	2.62	3.79		
2.5%	2.96	4.18		
1%	3.41	4.68		
Source: Author's Computation Eviews 10.05				

The F-Bounds Test assesses whether long-run association (cointegration) occurs among economic the selected indicators. The F-statistic value of 6.078892 is greater than the critical values (I (1)) at all significance levels of 3.79 at 5%. Because the F-statistic exceeds the upper bound, we reject the null hypothesis. No levels relationship exists, confirming the presence of long-run cointegration among the variables. Hence, we settle that, there will be long run convergence within the series in the long run which laid the foundation for the estimation of the short and long causation.

Table 4.3 Short Run Regression

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXR)	-0.001629	0.000807	-2.019470	0.0525
D(EXR(-1))	-0.002233	0.000785	-2.843504	0.0080
D(INFL)	-0.002521	0.001824	-1.381582	0.1773
D(BOP)	0.001824	0.000654	2.791133	0.0090
D(BOP(-1))	-0.000606	0.001984	-0.305577	0.7620
D(UNP)	0.003396	0.007364	0.461219	0.6480
D(LTR)	0.006567	0.008125	0.808231	0.4253
CointEq(-1)	-0.329435	0.060703	-5.427034	0.0000

R-squared	0.872209	Mean dependent var	6.754591
Adjusted R-squared	0.862945	S.D. dependent var	0.779543
S.E. of regression	0.150059	Akaike info criterion	-0.731362
Sum squared resid	0.675534	Schwarz criterion	-0.271623
Log likelihood	25.99292	Hannan-Quinn criter.	-0.563950
F-statistic	104.9480	Durbin-Watson stat	R
Prob(F-statistic)	0.000000		

*Note: p-values and any other tests do not account for model selection.

R-squared value of 0.872209 and adjusted R-squared value of 0.862945, shows interaction among explanatory variables interact at more than 86% of the variances in the dependent variable. The error term accounts for 14% of the remaining changes, this means that oscillations of dependent variable are being influenced by factors not included in the model. Reliability of model's estimations is strengthened by Durbin-Watson statistic of 2.366751, meaning that there is no first-order autocorrelation in the residuals, therefore serial correlation problems are not present. Moreover, model's strong overall fit is confirmed by considerable distribution in F-statistic which supports the validity of its explanatory power. At the 5% level, error correction term (ECT) is statistically significant and shows predicted sign. This suggests that the system's historical disequilibrium circumstances will eventually be fixed, with the economy approaching long-term equilibrium at an annual adjustment speed of 0.329435, or roughly 33%.

Short-Run Dynamics

The dependent variables are impacted negatively by the exchange rate coefficient and its one-year lagged value. An average marginal decrease of -0.002233 in Nigeria's economic wellbeing is caused by previous rate variations. Accordingly, the exchange rate's one-year lagged value is significant even though the exchange rate itself is statistically substantial.

Likewise, statistical insignificance of negative coefficient of inflation indicates that short-term economic well-being is not directly impacted by increases non the overall price level. Since economic theory states that rising inflation usually results in greater production costs and decreased purchasing power, which should create economic suffering, this conclusion deviates from a priori theoretical expectations. Other mitigating economic factors or structural dynamics inside the Nigerian economy could be the cause of the disparity.

The balance of payments (BOP) coefficient is positive and statistically momentous, suggesting a rise in the country`s balance of payments which enhances economic prosperity. In particular, assuming everything else is equal, a unit rise in the BOP results in a 0.001824 increase in economic wellbeing. This result is consistent with theory since stability and good economic performance are typically linked to a favourable balance of payments.

Finally, even if they show encouraging indicators, the unemployment and literacy rate coefficients are not significant at 5% level. This means that shifts in unemployment and literacy rates have no immediate impact on Nigeria's economic health.

Long-Run Dynamics

Table 4.4 Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	-0.005010	0.001404	3.568618	0.0012
INFL	-0.007652	0.005084	-1.505000	0.1428
BOP	0.002233	0.000785	2.843504	0.0080
UNP	0.010309	0.022679	0.454572	0.6527
LTR	0.019934	0.025445	0.783444	0.4395
C	4.903655	1.471061	3.333414	0.0023

At the 5% level, the exchange rate coefficient statistically is significant and have long-term undesirable impact on dependent variables. This suggests that fluctuations in the exchange rate has long-term result on financial security. In particular, assuming everything else is equal, a depreciation of the naira, or an appreciation of the exchange rate will reduce economic wellbeing with -0.005010 over time. This research implies that increased import prices, inflationary pressures, and diminished purchasing power make people and households worse off as the naira's value keeps falling.

As predicted by theory, the coefficient of inflation also continues to have adverse impact on the dependent variable. Enduring effects, however, are determined to be statistically negligible. This suggests that although inflation theoretically lowers economic well-being by raising living expenses and depleting real incomes, other structural elements like wage adjustments, government policies, or inflation-indexed financial instruments may lessen inflation's long-term impact on the Nigerian economy.

Similarly, at 5% level, dependent variable were seen to be positively and significantly impacted by balance of payments (BOP) coefficient. Accordingly, a 0.002233 improvement in economic wel-being, as shown by per capita income, will result from a unit increase in a favourable balance of payments, which reflects greater foreign revenues, bigger reserves, or decreased trade deficits. A favourable balance of payments improves macroeconomic stability, boosts investor confidence, and supports long-term economic growth, therefore this beneficial effect is in line with a priori economic assumptions.

Finally, while the unemployment and literacy rate coefficients show long-term upward trends, their effects are still statistically negligible at the 5% level. This implies that unemployment and literacy rates do not have substantial effect on economic wellbeing of Nigeria over long or medium term. Given that unemployment is so insignificant may suggest that other economic factors—like underemployment or activity in the unorganized sector—have a greater influence on determining economic well-being. Similarly, the lack of relevance for literacy rates may indicate that, although education is important, its direct influence on economic well-being in the Nigerian setting is limited by other factors such skill mismatches, labour market inefficiencies, or structural economic restrictions.

Discussion of Findings

The analysis's conclusions offer important new information about the short- and long-term variables affecting Nigeria's economic well-being. The study emphasizes how changes in the balance of payments, inflation, unemployment, currency rate movements, and literacy rates all influence the state of the economy. These findings have significant policy and economic ramifications, which are covered in more detail below.

Negative Consequence of Exchange Rate on Wellbeing:

Study revealed that the exchange rate has a long-term significant negative impact on economic wellbeing. Accordingly, economic wellbeing is diminished when the naira depreciates (i.e., the exchange rate rises), which results in higher import prices, more inflationary pressures, and a drop in purchasing power. In an economy that depends heavily on imports, such as Nigeria, a declining value of the naira results in higher prices for necessities. Living expenses may rise as a result, worsening the financial situation of households. Increased expenses for importers could be passed on to customers, so contributing to inflation. Since investors look for more stable economic situations, a weak currency deters foreign investment. To stabilize the currency rate and lessen its adverse impacts, policy measures such import substitution plans, export promotion, and foreign exchange interventions are required.

Insignificant Effect of Inflation on Economic Wellbeing:

Equally, the short- and long-term inflation are found to have detrimental but statistically inconsequential effect on economic well-being. This finding runs counter to economic theory, which holds that rising inflation should impair economic well-being by raising

production costs and lowering real incomes. Economic Implications: Inflation raises the possibility that the economy has adaptation mechanisms that mitigate its consequences, such as price restrictions, salary adjustments, or unofficial economic activity. It also suggests that other structural factors, like employment levels, social welfare, or investment, may be more important in explaining differences in economic well-being than inflation alone. While advocating for policies that increase purchasing power and productivity, policymakers should concentrate on making sure that inflation stays within controllable bounds.

Positive Effect of Balance of Payments (BOP) on Economic Wellbeing:

From our study, both the short- and long-term economic wellbeing show positive and statistically significantly result by the improvement in balance of payments. A stronger economy will be the result of a favorable balance of payments. This was made manifest by the exceeding rate of export revenue over import expenses. Implications of this for the economy is that balance of payment (BOP) increases foreign exchange reserves thus, improves currency stability and reduces inflationary pressures. This suggests that boosting remittances, exports, and foreign direct investments (FDI) can be very important for enhancing economic wellbeing. Export diversification, industrialization, and trade policies that improve Nigeria's external sector performance should be the main priorities of policymakers. Reducing reliance on imports and increasing domestic production will help increase foreign reserves and economic resilience.

Insignificance of Unemployment and Literacy Rate:

Both the unemployment and literacy rate coefficients are found to be positive but statistically insignificant, suggesting that they have no discernible effect on Nigeria's economic well-being over the long or medium term. This outcome defies logic since the negligible unemployment rate raises the possibility that official employment data may not accurately reflect the state of the labour market, particularly in light of Nigeria's sizable informal sector. Many people could work in low-wage or informal jobs that don't make a big difference in their well-being. Due to skills mismatches, limited work prospects, and insufficient industrial absorption of labour, education alone may not be enough to improve economic well-being, as seen by the lack of relevance for literacy rates. Policymakers should focus on job creation programs, vocational training, and entrepreneurship development **to** ensure that the labor market effectively translates education into economic benefits. Investments in quality education, technological skills, and digital transformation will be critical to improving economic opportunities in the long run.

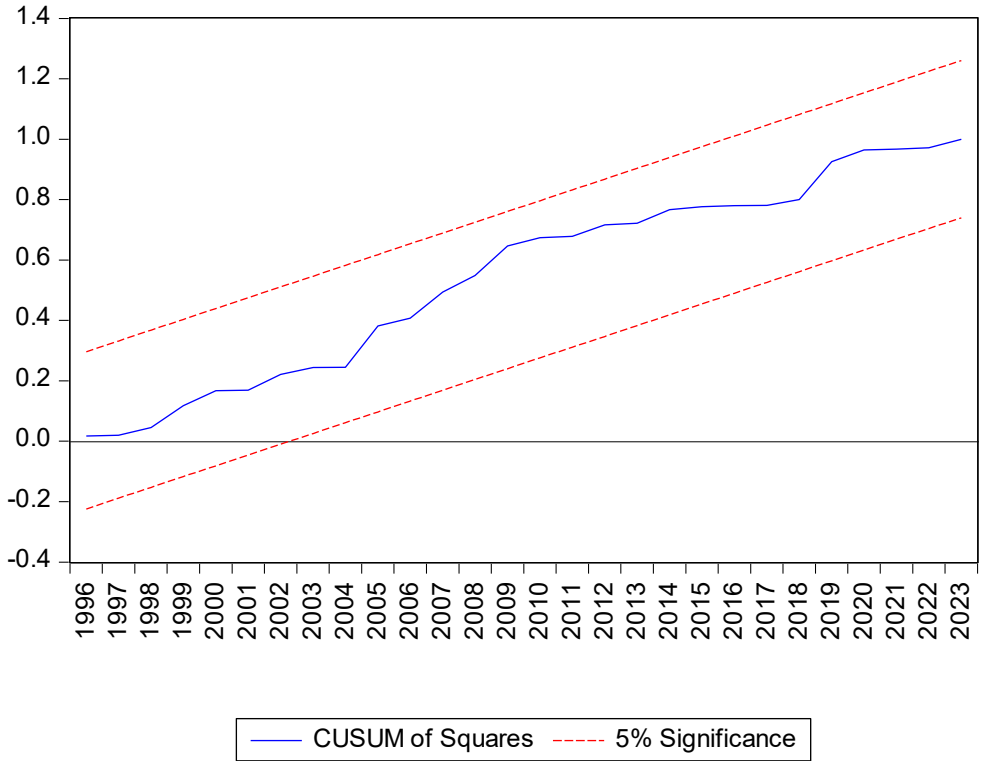
Table 4.5 Diagnostic Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.404088	Prob. F(13,28)	0.9560
Obs*R-squared	6.634921	Prob. Chi-Square(13)	0.9200
Scaled explained SS	3.870566	Prob. Chi-Square(13)	0.9925

The Breusch-Pagan-Godfrey heteroskedasticity test results indicate that the model does not suffer from heteroskedasticity. The F-statistic (0.4041, p = 0.9560) and the Obs*R-squared value (6.6349, p = 0.9200) both have p-values well above the conventional significance levels (1%, 5%, and 10%), suggesting that the null hypothesis of homoskedasticity (constant variance of errors) cannot be rejected.

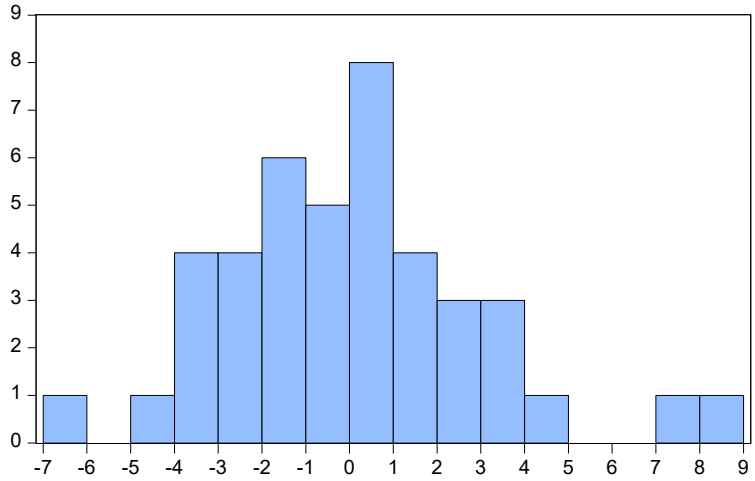
Similarly, our scaled explained sum of squares (3.8706, p = 0.9925) further supports this conclusion. Since all p-values are high, there is no indication of heteroskedasticity, meaning the model residual exhibit constant variance, making the regression results reliable and efficient for interpretation.

Stability Test



The CUSUM Square line are within the critical bounds (dashed red lines), the regression classical therefore, is considered structurally stable. This suggests that there are no significant structural breaks in the connection between the dependent and independent variables, meaning that our model parameters have relatively remained consistent over time.

Normality Test



Series: Residuals	
Sample 1982 2023	
Observations 42	
Mean	-1.59e-15
Median	-0.234931
Maximum	8.117277
Minimum	-6.053925
Std. Dev.	2.988454
Skewness	0.688082
Kurtosis	3.625132
Jarque-Bera	3.998086
Probability	0.135465

Summary

The study examined the consequence of macroeconomic indicators on economic wellbeing of Nigeria. We considered the short- and long-term impacts of the currency rate, inflation, balance of payments, unemployment, and literacy rate. Results show that changes in exchange rate have a long-term, statistically important and negative effect on economic wellbeing. That is, a decline in economic conditions is caused by the depreciation of the naira. Despite the theoretical expectation that inflation would lower economic wellbeing, inflation was found to be negligible in both time periods. The balance of payments showed a positive and noteworthy impact, suggestive that economic wellbeing is improved by favourable trade balance. Nonetheless, the rate of unemployment and literacy were not remarkable. The indicators do not have a direct impact on Nigeria's economic prosperity.

Conclusion

Our findings demonstrate the crucial nature of macroeconomic stability in assessing and addressing the economic wellbeing of citizens. Given that a weaker naira raises inflationary pressures and lowers purchasing power, the substantial negative effects of exchange rate depreciation indicate that currency stability is essential for economic advancement. In the meantime, the balance of payment beneficial impact highlights the necessity of a robust external sector whereas, increased exports and less reliance on imports support economic resilience. The negligibility of unemployment and literacy rates raises the possibility that structural reasons and labour market inefficiencies could restrict the anticipated advantages of education and work. All things considered, Nigeria need a comprehensive policy strategy that guarantees exchange rate stability, improve the trade balance and promotes job creation in order to achieve sustainable economic wellbeing.

Recommendations

i. The Central Bank of Nigeria should adopt policy measures that will stabilize the country`s currency and at the same time encourage the productive sectors of the economy such as manufacturing and agriculture. and price stabilization policies to keep inflation at manageable levels.
ii. Government should invest in skills development, vocational training, and entrepreneurship programs in order to bridge the gap between education and employment, thus ensuring that economic growth translates into wellbeing.
iii. Effort should be made by relevant agencies of Government to reduce frequence fluctuations in the exchange rate through deliberate policy. This will promote local production thus reduce over reliance on importation.
iv. Economic wellbeing requires the upgrade and stability in energy supply, improve transportation and digital communication infrastructure. These are necessary for improved productivity. Government should give impetus for industrialization by prioritizing the provision of the essential infrastructure.
v. Mass literacy is important to achieve productivity. Deliberate literacy policy should be given serious attention to promote literacy level in the country.

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