Economic Development Research Journal
ISSN: 2997-6669|
Volume 14 Issue 3, July-September, 2026
Journal Homepage: https://ethanpublication.com/journals/E24/
Official Journal of Ethan Publication

ECONOMIC EFFECT OF INFLATION AND EXCHANGE RATE FLUCTUATION ON PERFORMANCE OF OIL AND GAS SECTOR IN NIGERIA

[1]Ajimati Oluwatosin Blessing, [2]Ajibola Hussein Olamilekan, [3]Agbede Johnson Olugbenga and [4]Taiwo Olufemi Emmanuel

[1, 2]Department of Accountancy, Federal University of Technology, Ilaro, Ogun State, Nigeria
[3]Department of Accounting, Crescent University, Abeokuta, Ogun State, Nigeria
[4]Department of Accounting and Finance, McPherson University, Seriki-Sotayo, Ogun State, Nigeria
DOI: https://doi.org/10.5281/zenodo.22304834

Abstract

One of the goals of the Nigerian government is to have a stable currency rate. However, despite devaluation to encourage exports, the country failed to achieve this aim, which in-turn affects the Nigerian oil and gas industry. Also, inflation discouraged saving and crowded out investment, which might have a detrimental impact on Nigeria's oil and gas prices as well as productivity. Therefore, this study examined inflation, exchange rate fluctuation, and performance of oil and gas sector in Nigeria. Ex-post facto research design was employed by the study. Secondary source of data was adopted by the study while the data was extracted from CBN Statistical Bulletin. The study covered a 34-year period, from 1991 to 2024. The data gathered was analyzed with the use of descriptive statistics, correlation and regression analysis. The regression results revealed that consumer price index (β = 0.978479, P = 0.0000 < 0.05) has positive and significant effect on Nigerian oil and gas output, while exchange rate (β = -1.183260, P = 0.0044 < 0.05) has a negative and significant effect on Nigerian oil and gas output. Therefore, this study concluded that exchange rate and consumer price index be can relied upon to forecast performance (measured by oil and gas output) of Nigerian oil and gas sector. The study recommended that the government's effort should be geared towards maintaining stable and sustainable exchange rates, since the stability of this would significantly enhance oil and gas output, as revealed by the study's findings.

Keywords: *Consumer Price Index, Exchange Rate, Inflation, Oil & Gas Output, and Performance.*

1. INTRODUCTION

The oil and gas sector plays a catalytic role in a modern economics and has many dynamic benefits that are crucial for economic transformation. In an advanced country, the oil and gas sector is a leading sector in many respects, as it is a quest for increasing productivity in relation to import substitution and export expansion, creating foreign exchange earnings capacity, raising employment, promoting the growth of investments at a faster rate than any other sector of the economy, as well as wider and more efficient linkage among different sectors (Fakiyesi, 2025).

Nigeria joined the ranks of oil producers in 1958 when its first oil field came on stream producing 5,100 barrels per day after crude oil was discovered in 1956 at Olobiri in its Niger Delta. Over the years, the economy has relied heavily on crude oil exports for government revenues and its foreign exchange earnings. However, Nigeria, as an oil-producing economy, is under-industrialized, and its capacity utilization is also low (Onakoya & Agunbiade, 2020). This is despite the fact that the oil and gas sector has been the fastest growing sector since 1973/74 (Obaden, 2024).

However, oil and gas in Nigeria is one of the most important factors for manufacturing processes and good transportation. Hence, costs of production and consumer prices trend in the same direction as oil prices. Furthermore, fluctuations in oil price can reduce temporarily the total production when companies delay in making their investment decisions due to uncertain conditions or costs arising from re-allocation processes of resources (Paul, 2021). In addition, the oil and gas sector generate huge part of the country foreign earning in the economy, and provides employment opportunities to a certain percentage of Nigerian citizens (Central Bank of Nigeria, 2020). Also, the tremendous growth in oil earnings has influenced significantly Nigeria's international relation and sometimes the politics of oil has taken centre stage in the nation's history of international relations in the last few decades (NNPC, 2024).

Exchange rate of a country plays a key role in international economic transactions because no nation can remain self-sufficient due to varying factor endowments. Oladipupo and Onotaniyohuwo (2021) asserted that movements in the exchange rate have ripple effects on other economic variables such as interest rate, inflation rate, unemployment, money supply, etc. These facts underscore the importance of exchange rate to the economic well-being of every country that opens its doors to international trade in goods and services. The importance of exchange rate derives from the fact that it connects the price systems of two different countries making it possible for international trade to make direct comparison of traded goods. In other words, it links domestic prices with international prices.

Opaluwa et al. (2020) opined that the goal of every economy is to have a stable rate of exchange with its trading partners. In Nigeria, this goal was not reached in spite of the fact that the country embarked on devaluation to promote export and stabilize the rate of exchange. The failure to realize this goal subjected the Nigerian oil and gas sector to the challenge of a constantly functioning exchange rate. Inflation, on the other hand discouraged saving and crowd out investment, and this can have a negative effect on the productivity and prices of oil and gas in Nigeria (Onoh, 2017). Apart from inflation, other macroeconomic variables such as exchange rate, money supply, interest rate, economic growth have direct effect on the prices of oil and gas in Nigeria (Onakoya & Agunbiade, 2020).

Exchange rate is a major constraint on development of an economy, making planning more problematic and investment riskier. For instance, if potential foreign investors to Nigeria are risk averse (or even risk neutral), larger exchange rate fluctuations may reduce the overall foreign direct investment inflows since it increases uncertainty over the returns in a given investment (Gerardo & Felipe, 2022). However, despite various efforts by the Nigerian of Nigeria to maintain a stable exchange rate, the naira has continued to depreciate from N4.54 in 1988 to N17.30 in 1993, N21.89 in 1997, all against the one US dollar. The policy

of guided or managed deregulation pegged the naira at N99 in 2001, N128.50 in 2006 and N158.76 in 2011. Thereafter, the exchange rate appreciated to N157.58 in 2012 and later N232.40 in 2015. Towards the end of the year, the naira depreciated to N415.36 in 2016 and current in 16th April 2017 the dollar depreciate to N369.95 in 2018 the dollar again depreciate to N364. Thereafter, the exchange rate appreciates to N365.5 in 2019, in 2020 the dollar increases to N387.57, in 2021 it increases to N409.57, increases to N420 in 2022, in 2024 it rises to around N1,100 and recently the U.S Dollar to Naira is around N1,450 at the official rate. As a consequence, the problems of exchange rate fluctuation persisted in macro-economic management, as changes in the rate of exchange have significant implications, for a country's oil and gas output (Oyejide, 2025). Another major problem this has resulted to is inflation, which involves persistence increase in the prices of goods and services in the country. This is because whenever there is an increase in prices of oil products, it affects transportation, cost of goods and other services (Mba & Afolabi, 2019).

Furthermore, along the lines of the existing literature, few studies have actually explored the impact of inflation and exchange rate on oil and gas in Nigeria. Some of these studies are the ones conducted by Adegbemi & Hassan (2020), Adenekan, et al. (2020), Oga & Chima (2020), Onakoya & Agunbiade (2020), Osareti & Sodik (2020), Agbo (2021) and Paul (2022). However, most of the studies only concentrated on either inflation rate or exchange rate separately, while some other studies conducted their work on Nigerian economic growth. Also, there have been mixed results from the aforementioned studies, as some results revealed that inflation and exchange rate have significant effect on performance of Nigerian oil and gas firms, some results were contrast to this.

From the findings of the aforementioned studies, one can conclude that the relationship between these economic variables (inflation, exchange rate fluctuations and oil gas firms performance) is far from being empirically settled, as previous empirical studies showed that inflation, exchange rate and performance relationship is still inconclusive and open to further discussion, as indicated in the mixed results. Hence, this study attempts to fill the literature gap and add to the existing body of knowledge by examining the effect of inflation and exchange rate fluctuations on performance of oil and gas sector in Nigeria from 1991 to 2024, thereby aiming to achieve the underlisted specific objectives:

i. To evaluate the effect of consumer price index on Nigerian oil and gas output
ii. To examine how exchange rate affects Nigerian oil and gas output

2. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Oil and Gas Output

Oil and gas output refers to the quantity of crude oil and natural gas extracted from the earth. This includes the total amount of both liquid and gaseous hydrocarbons, as well as associated substances, such as sulfur or helium, that are produced or extracted from underground reserves. Essentially, it involves the volume of these resources that are brought to the surface and made available for processing and further use (Agbo, 2021).

As the 10th largest oil producer in the world and the third largest in Africa, Nigeria's economy highly dependent on its oil sector. It accounts for 95% of Nigeria's foreign exchange earnings, with estimated oil reserves between 24 billion and 31.5 billion. They produce 90 million tons per year. And with an economy based so explicitly around one product, it is almost impossible for it not to affect Nigeria's structure and culture (Opaluwa, 2018).

The oil sector can also contribute to development of oil rich economies by providing intermediate inputs to the rest of the economy. These intermediate inputs include crude oil, gas, and liquid feed stocks, as well as oil and gas into the refining, petrochemical, electricity and energy-intensive industries, respectively (Al-Moneef, 2019). This channel is critical to developing countries' growth and development. For instance, many petrochemical industries' outputs are crucial to the development of manufacturing industries. Likewise, the provision of electricity and other basic utilities at favourable prices is of considerable importance in the process of growing and nurturing the service and manufacturing sub-sectors. Growth and development in oil-rich economies could be enhanced through oil market contributions (Oyejide, 218).

2.1.2 Inflation

The concept of inflation has been defined as a persistent rise in the general price level of goods and services in a country over a long period of time (Ahuja, 2021). Inflation has been inherently linked to money supply in an economy and it is a situation when there is a continuous rise in price of goods and services for a longer period of time and not for a shorter period of time. Inflation has been widely described as an economic situation when the increase in money supply is faster than the new production of goods and services in the same economy (Emmanuel & Edet, 2019).

Abel (2025) viewed inflation as the decline of purchasing power of a given currency over time. It involves a quantitative estimate of the rate at which the decline in purchasing power occurs can be reflected in the increase of an average price level of a basket of selected goods and services in an economy over some period of time. The rise in the general level of prices, often expressed as a percentage, means that a unit of currency effectively buys less than it did in prior periods. Nasiha (2021) on the other hand viewed inflation refers to a general progressive increase in prices of goods and services in an economy. When the general price level rises, each unit of currency buys fewer goods and services; consequently, inflation corresponds to a reduction in the purchasing power of money. Boyd et al. (2021) asserted that inflation rate shows the rate of change in prices in the economy. Documented evidence shows that an economy's performance measures and inflation rate are negatively correlated when the inflation rate is very high enough. However, consumer price index was employed to measure inflation in this study.

2.1.3 Consumer Price Index

Consumer Price Index (CPI) measures the retail prices of a fixed market basket of several thousand of good and services purchased by households. Inflation is usually separated into two parts (Orajaka & Okeke, 2017). It measures the monthly change in prices paid by consumers. The CPI is one of the most popular measures of inflation and deflation. The CPI report uses a different survey methodology, prices sample and

Economic Development Research Journal
ISSN: 2997-6669|
Volume 14 Issue 3, July-September, 2026
Journal Homepage: https://ethanpublication.com/journals/E24/
Official Journal of Ethan Publication

index weights than the producer price index (PPI), which measures change in the prices received by nation's producers of goods and services (Oraka, 2019).

The CPI is widely used by financial market participants to gauge inflation and by the Federal Reserve to calibrate its monetary policy. Businesses and consumers also use the CPI to make informed economic decisions. Since CPI measures the change in consumers' purchasing power, it is often a key factor in pay negotiations. The CPI and its components are also used as a deflator for other economic indicators, including retail sales and hourly/weekly earnings, to separate fundamental change from that reflecting change in prices (Nasiha, 2021).

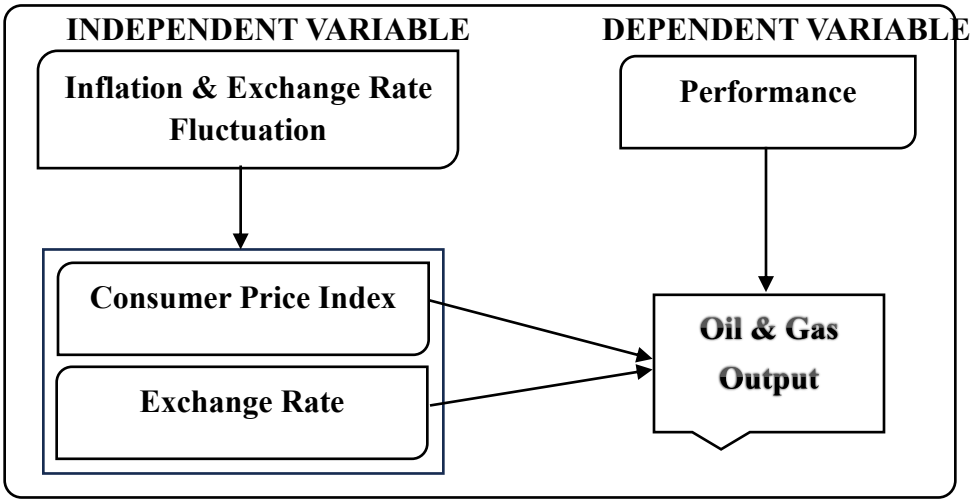
2.1.4 Exchange Rate

An exchange rate implies the price of one currency in terms of another. In the Nigerian context, it is the units of naira needed to purchase one unit of another country's currency (Oloyede, 2019). The exchange rate is the amount of foreign currency that may be bought for one unit of the domestic currency or the cost of purchasing one unit of the foreign currency in the domestic currency (Soderstine, 2019).

The exchange rate is an important decision-making variable in every nation, thus making it a crucial issue for any country that desires economic growth. The exchange rate is a reflection of the strength of a currency when measured against another country's currency; usually determined in principle by the interplay of supply and demand in a free market environment (Campbell, 2020).

Onyeizugbe and Umeagugesi (2024) asserted that no currency is allowed to float, so nation monetary authorities regulate currency between the fixed and floating exchange rate systems and other regimes, such as dual managed. Fluctuations in exchange rate will cause weak purchasing power and hence, negatively impact on investment in import of inputs. On the other hand, changes in industrial output level will also affect investment in import of inputs and invariably the exchange rate.

2.2 Conceptual Model



Source: Researchers' Design, 2026

2.2 Theoretical Framework

Resource Curse Theory

The resource curse theory or paradox of plenty takes it root in the works of Przeworski Adam in 1991. A paradox is said to exist when countries and regions with abundance of natural resources specifically non-renewable resources like minerals and fuels, tend to have less economic growth and worse development outcomes than countries with fewer natural resources (Akujuru, 2025). Przeworski (1991) argues that this happens as a result of neglect of other economic sectors thereby causing a decline in the competitiveness of these sectors. This decline in competitiveness of other sector he attributes to an appreciation of the real exchange rate of the revenue from this sole resource often leading to volatility of revenues caused by market swings, mismanagement by government's corrupt and unstable institutions and agencies.

This theory is relevant to this study because the idea that Nigeria's rich natural resource of oil has been more of a curse than a blessing cannot be easily dismissed. This is evident in the fact that despite the huge revenues that have accrued over the years from this resource, it has not been feasible to develop the other non-oil productive sector; consequently, the nation has been unable to transform the accrued rich oil revenue into real term sustained development and growth. A larger proportion of its populace still grapples with poverty with attendant high level of unemployment, corruption and gross mismanagement of government funds.

2.3 Empirical Review

Ubok-Udom (2018) examined the relationship between exchange rate variation and growth of the domestic output in Nigeria (1971-2016) expressing growth of domestic output as a linear function of variations in the average nominal exchange rate. He however used dummy variables to capture the periods of currency depreciation. The empirical result showed that all coefficients of the major explanatory variables have negative signs.

Adeleke et al. (2019) examined the effect of crude oil price shocks on the macroeconomic performance of the eight largest producers of crude oil in Africa (Algeria, Angola, Egypt, Equatorial Gabon, Guinea Nigeria and Congo Republic) with the exclusion of Sudan due to data constraints. They utilized the Hamilton Index (1996) and a Panel Structural Vector Auto-regression model in the investigation which covered thirty-seven years (1980 and 2016) - a period with high crude oil price volatility. The results revealed different reaction of output to oil price shocks. The response of structural inflation was sharper than monetary inflation and both investment and outputs recorded significant decline in response to negative oil price shocks.

Odusola and Akinlo (2019) examined the linkage among exchange rate, inflation and output in Nigeria. A structural VAR model was employed which captured the interactions between exchange rate and output. Evidence from the contemporaneous models showed a contractionary impact of the parallel exchange rate on Industrial output only in the short term. Prices, parallel exchange rate and lending rate were found to be important sources of perturbations in the official exchange rate. In addition, output and parallel exchange rate were significant determinants of inflation dynamics in Nigeria.

Onakoya and Agunbiade (2020) assessed the impact of the Nigerian oil sector performance on the macroeconomic variables between 1980 and 2017 in light of this overdependence. It carried out pre-

estimation tests namely descriptive statistics in order to understand the nature of the variables. The Augmented Dickey Fuller and Phillip Perron tests were also deployed to determine stationarity level of the variables. The long-run co-integration test was conducted after determining the optimal lag. The Error Correction model technique was applied to determine the possible existence of short-run relationship among the variables. The Toda Yamamoto modified Wald's test was employed in order to know the direction of causality. The Impulse Response Function together with other post-estimation tests was also used. The result showed a uni-causality direction from oil revenue in the direction of all the macroeconomic variables. It also revealed significant positive long run relationship between the oil sector and both GDP and unemployment. The other variables were however inversely associated.

Osareti and Sodik (2020) investigated the simultaneous influence of oil price and exchange rate and the impact of the different exchange rate regimes adopted in Nigeria on corporate performance, using the structural vector autoregressive/historical decomposition framework. The literature in these areas is sparse. Result from this study suggests that oil price shocks have negative influence on corporate performance with a very short-term positive influence. Exchange rate shocks have positive impact on corporate performance with an instantaneous negative effect. Also, fixed exchange regimes are associated with a downturn in corporate performance, while flexible regimes are associated with improved corporate performance.

Agbo (2021) examined the effect of oil price fluctuations on the Nigerian exchange rate movements using monthly secondary data for the period from January 1997 to August, 2020. The two variables were tested and found stationary at first difference but not at second difference. Consequently, the study employed the Nonlinear Autoregressive Distributed Lag approach for the estimation. The results suggest that while both an increase and decrease of oil price will have an opposite impact on the exchange rate, only the impact created on exchange rate by a decrease in oil price is significant. Hence, a decrease in oil price has a greater and stronger impact on exchange rate than an increase in oil price in Nigeria. The results also show the existence of asymmetry between oil price changes and exchange rate movements.

Paul (2022) conducted a study on the impact of review of petroleum product prices on inflation rate in Nigeria. The study made use of the data from 1980 to 2020 It was also discovered that there exists positive relationship between the prices of PMS (premium motor spirit) and inflation in the short run in Nigeria. The study therefore concludes that rises in petroleum products prices, significantly impact inflation in short run in Nigeria.

Eregha, et al. (2025) conducted a study on petroleum products prices and inflationary dynamics in Nigeria. The study found that the price of Premium Motor Spirit (PMS) remained stable until the entry of the military into the administration of the country when the then military heads of state arbitrarily increased the prices of petroleum products. The study also found that there exists high positive relationship between the prices of PMS and AGO and inflation in Nigeria. The study concludes that rises in petroleum products prices, especially PMS and AGO, significantly impact inflation in Nigeria.

Economic Development Research Journal
ISSN: 2997-6669|
Volume 14 Issue 3, July-September, 2026
Journal Homepage: https://ethanpublication.com/journals/E24/
Official Journal of Ethan Publication

Given the lack of agreement on inflation, exchange rate fluctuation and performance of Nigerian oil and gas sector as determined by the results of the aforementioned empirical review, this study aimed to add to the body of knowledge through testing of the following null hypotheses:

Ho_1: Consumer price index has no significant effect on Nigerian oil and gas output

Ho_2: Exchange rate does not significantly affect Nigerian oil and gas output

3. METHODOLOGY

The study used an ex-post facto research strategy to collect crucial information on the status of a particular phenomenon after a period of naturally occurring therapy without changing the situation. The CBN Statistical Bulletin was used to collect the secondary data employed by this study. The data were collected for 34 years, covering from 1991 to 2024. Furthermore, a model was employed to calculate the cumulative impact of inflation and exchange rate proxies on the Nigerian oil and gas sector's performance. Consumer price index and exchange rate was employed to measure inflation and exchange rate fluctuation, while oil and gas output was used to measure the oil and gas sector's performance in Nigeria. The relationship between the proxies was estimated using Ordinary Least Square (OLS) regression, which looks like this:

$OGO = f(CPI, EXR)$ ……. i

The model has been developed to suit the study as follows:

$OGO = \alpha + \beta_{1CPI} + \beta_{2EXR} + e$…….ii

Where:

OGO = Oil and Gas Output

CPI = Consumer Price Index

EXR = Exchange Rate

α = Intercept

β_1, β_2 = Coefficient of Regression

e = error term

4. RESULTS

The analysis to evaluate digital currency and Nigeria's economic growth is presented in this section. Descriptive, correlation, and regression analyses were conducted, and a variety of robustness checks were discussed, in order to improve the validity of the findings.

4.1 Presentation of Results

Table 1 Descriptive Results

	OGO	CPI	EXR
Mean	4.849381	3.767728	2.530582
Median	4.844521	4.003950	2.157078
Maximum	4.884710	4.665641	3.566158
Minimum	4.827064	2.505408	1.941611
Std. Dev.	0.018474	0.810659	0.620779

Economic Development Research Journal
ISSN: 2997-6669|
Volume 14 Issue 3, July-September, 2026
Journal Homepage: https://ethanpublication.com/journals/E24/
Official Journal of Ethan Publication

Skewness	0.708290	-0.465461	0.611701
Kurtosis	2.401153	1.731846	1.693086
Jarque-Bera	0.985549	1.031180	1.335306
Probability	0.610929	0.597148	0.512911
Sum	48.49381	37.67728	25.30582
Sum Sq. Dev.	0.003072	5.914510	3.468301
Observations	34	34	34

Source: E-views 12 Results, 2026

The descriptive findings are displayed in the above table together with the parameters' minimum, maximum, average, standard deviation, and Jarque-Bera. OGO, CPI and EXR had average values of 4.849381, 3.767728 and 2.530582, respectively, according to the findings. It was clear from the average value that, among the independent variables, CPI is a good predictor of the dependent variable (OGO) since its greatest average value is 3.767728, whereas EXR's is 2.530582. Additionally, 4.884710, 4.665641, and 3.566158 were the variables' maximum values, respectively. The variables' minimum values, however, are 4.827064, 2.505408, and 1.941611, in that order. Due to the fact that the Jarque-Bera probability values (0.610929, 0.597148 and 0.512911) are larger than the 0.05 significant threshold, the analysis also found that the data obtained for all the variables are normally distributed. Additionally, displayed were the standard deviation numbers, which were 0.018474, 0.810659 and 0.620779, respectively.

Table 2 Correlation Results

	OGO	CPI	EXR
OGO	1.000000	0.719702	0.807654
CPI	0.719702	1.000000	0.824728
EXR	0.807654	0.824728	1.000000

Source: E-views 12 Results, 2026

The correlation results between OGO, CPI, and EXR—the adopted variables—are shown in Table 2 above. With correlation values of 0.719702 and 0.807654, respectively, the data demonstrated that CPI, and EXR all had favorable relationships with OGO.

Table 5 Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	0.978479	0.204385	4.788875	0.0000
EXR	-1.183260	0.368202	-3.212474	0.0044
C	4.753592	0.042982	110.5953	0.0000
R-squared	0.795972	Mean dependent var		4.849381
Adjusted R-squared	0.632750	S.D. dependent var		0.018474
S.E. of regression	0.011196	Akaike info criterion		-5.839750

Economic Development Research Journal
ISSN: 2997-6669|
Volume 14 Issue 3, July-September, 2026
Journal Homepage: https://ethanpublication.com/journals/E24/
Official Journal of Ethan Publication

Sum squared resid	0.000627	Schwarz criterion	-5.688458
Log likelihood	34.19875	Hannan-Quinn criter.	-6.005718
F-statistic	17.17418	Durbin-Watson stat	2.013075
Prob(F-statistic)	0.000011		

Source: E-views 12 Results, 2026

The regression model's coefficient that was previously specified is included in the table above has been described as follows:

$OGO = 4.753592 + 0.978479_{CPI} - 1.183260_{EXR}$

Using coefficient value of 0.978479, the preceding equation demonstrates that CPI have a positive effect on OGO, but EXR has a negative effect with a coefficient value of -1.183260. This implies that Nigeria's oil and gas output will rise by 0.978479, if each CPI increases by one unit, whereas a one-unit increase in EXR would cause the OGO to fall by 1.183260. Additionally, the regression's R-squared percentage was 0.795972, indicating that CPI and EXR can account for 79.60% of the overall changes in the Nigerian OGO, with additional characteristics not included in this study accounting for the remaining 20.40%. With an F-statistic of 17.17418 and a p-value of 0.000011, the study's model can be regarded as statistically significant because the p-value is less than the 0.05 threshold. However, because the value of the Durbin-Watson statistic is greater than 1.5, it indicates that there is the absence of auto-correlation. This implies even more that the variables employed by the study are doing well. It is possible to classify the p-values of the CPI and EXR (0.0000 and 0.0044) as statistically significant because they fall below the 0.05 significant threshold.

4.2 Interpretation of Results

Test of Hypotheses

Ho_1: Consumer price index has no significant effect on Nigerian oil and gas output

According to the regression table, the CPI's p-value was 0.0000, which was considered statistically significant because it was lesser than the 0.05 cutoff. The aforementioned null hypothesis is therefore not accepted, and the study restates that consumer price index has significant effect on Nigerian oil and gas output.

Ho_2: Exchange rate does not significantly affect Nigerian oil and gas output

The regression table also showed that EXR had a p-value of 0.0044, which was considered statistically significant because the value was lesser than the 0.05 significant threshold. Consequently, fails to accept the second hypothesis stated above and therefore reiterates that exchange rate significantly affects Nigerian oil and gas output

4.3 Discussion of Results

This study focused on the effect of inflation and exchange rate fluctuation on performance of Oil and Gas sector in Nigeria. Exchange rate fluctuation was measured using exchange rate (EXR), inflation rate was measured using consumer price index (CPI) while performance of oil and gas was measured using oil and

gas output (OGO). Some of the empirical studies on the study reveal different results while some results are related to the findings of this study, as discussed below:

It was found that the Nigerian oil and gas output is negatively and significantly affected by exchange rate as the p-value of revealed from the regression result falls below 0.05 significant level. This outcome is in consistent with the resource curse theory which assumes that countries with abundance of natural resources specifically non-renewable resources like minerals and fuels, tend to have less economic growth and worse development outcomes than countries with fewer natural resources. In addition, the results of studies conducted by Onakoya & Agunbiade (2020), Osareti & Sodik (2020), Agbo (2021), Paul (2022) and Eregha, et al. (2025) are connected to this outcome; however, the findings of Adeleke, et al. (2019) and Odusola & Akinlo (2019) does not relate with the findings of this study.

According to the study's findings, consumer price index as a proxy of inflation, has significant and positive effect on Nigeria's oil and gas output, using 5% level of statistical significance. This outcome is not related to the findings of Ubok-Udom (2018), Odusola & Akinlo (2019) and Onakoya & Agunbiade (2020), but it is related to the research conducted by Osareti and Sodik (2020), Agbo (2021), and Paul (2022).

5. CONCLUSION AND RECOMMENDATIONS

Conclusion

Exchange rate was revealed from the findings to have a p-value of 0.0044 which was interpreted to be statistically significant at 5% significant level. With this, the study therefore concludes that the exchange rate fluctuation significantly affects performance (measured by oil and gas output) of Nigerian oil and gas sector. It was revealed from the findings that consumer price index has a matching p-value of 0.0000 which falls below 0.05 significant threshold and was considered statistically significant, according to the study's findings. Thus, the study therefore concludes that consumer price index, as a measurement of inflation can be used to forecast the Nigeria's oil and gas output.

Recommendations

The government's efforts should be geared toward maintaining stable and sustainable exchange rates, since the stability of this would significantly enhance oil and gas output as revealed by the study's findings. In addition, more policy attention should be taken into consideration for proper management of the inflation in Nigeria. This could be achieved by ensuring the existence of consistent monetary and fiscal policy.

REFERENCES

Adegbemi, B. O., & Hassan, A. A. (2020). Macroeconomic variables, the oil, and the agricultural sectors in Nigeria. *Canadian Center of Science and Education, Asian Social Science, 16*(1), 27-37.

Adeleke, W. D., Ngalawa, E., & Kutu, S. O. (2019). Oil price shocks and macroeconomic performance in Nigeria. *Nigerian Economic and Financial Review*, *2*(1), 565-624.

Adenekan, A. T., Hilili, M. J., & Okereke, A. N. (2020). Oil price, exchange rate and stock market performance in Nigeria. *Economic and Financial Review, 58*(4), 75-83.

Agbo, E. I. (2021). Effect of oil price fluctuations on Nigeria's exchange rate movements. C*ontemporary Journal of Management, 4*(2), 63-72.

Ahmed, H. J., & Zarma, I. M. (1997). Role of oil price shocks on macroeconomic activities: SVAR approach to the Malaysian economy and monetary responses. *Energy policy*, *39*(12), 8062-8069.

Ahuja, N., Sharma, A. R., & Baylin, S. B. (2016). Epigenetic therapeutics: a new weapon in the war against cancer. *Annual Review of Medicine*, *67*, 73-89.

Akinlo O. O., & Lawal, Q. A. (2015). Impact of exchange rate on industrial production in Nigeria 1986-2010. *International Business and Management*, *10*(1), 104-110.

Alzyoud, H., Wang, E. Z., & Basso, M. G. (2018). Dynamics of Canadian oil price and its impact on exchange rate and stock market. *International Journal of Energy Economics and Policy*, *8*(3), 107-114.

Anifowose, I. A. (2024). On the inflation and inflation uncertainty hypothesis in the West African Monetary Zone (WAMZ) economies. *West African Financial and Economic Review, 9*(1), 91-104.

Augustine, O. (2025). Exchange rate fluctuations, oil prices and economic performance: Empirical evidence from Nigeria. *International Journal of Energy Economics and Policy, 6*(4), 2146-4553. https://doi.org/10.1016/j.ijep.2025.06.016

Azeez, B. A., Kolapo, F. T., & Ajayi, L. B. (2022). Effect of exchange rate volatility on macroeconomic performance in Nigeria. *Interdisciplinary Journal of Contemporary Research in Business, 4*(1), 149-155.

Central Bank of Nigeria, (2010). *CBN Statistical Bulletin, Various Edition*. Abuja: Central Bank of Nigeria.

Campbell, A. (2020). Exchange rates and trade balance: Evidence from some developing countries. *Economic Letters, 34*(1), 271–75. https://doi.org/10.1016/j.eel.2020.12.010271-75

Emmanuel, E. D., & Edet, J. (2019). Empirical investigation of determinants of financial performance of oil and gas companies in Nigeria. *East African Scholars Journal of Economics, Business and Management*, *112*(3), 45-58.

Eregha, B., Mesagan, E., & Ayoola, O. (2025). Petroleum products prices and inflationary. *International Journal of Energy Economics and Policy, 6*(4), 2146-4553. https://doi.org/10.1016/j.ijep.2025.04.016

Etim, O. E., Ihenyen, C., & Nsima, J. U. (2020). Financial performance determinants at the Nigerian oil and gas sector. *East African Scholars Journal of Economics, Business and Management, 8*(3), 25-34.

Fakiyesi, S. O. (2025). The impact of monetary policy on current account balance. *Journal of Humanities and Social Sciences*, *7*, 67–72. https://doi.org/10.1016/j.hhss.2025.

Iyoha, I. (2016). The impact of exchange rate variation on trade balance: Evidence from Nigeria, 1970–2005. *Journal of Research in National Development, 9*, 393–403. https://doi.org/10.1016/j.jrnd.2016.09.010.

Kothari, C. R., & Garg, A. (2014). Research methodology: Methods and techniques. *New Age International Journal, 9*(2), 14-21.

Milton, M. (2017). Markov-Perfect industry dynamics: A framework for empirical work. *Review of Economic Studies*, *62*(1), 53-82.

Mahmoodi, A. (2017). Oil price reduction impacts on the Iranian economy. *Journal of Iranian Energy Economics, 35*(2), 353-74.

Mba-Afolabi, J. (2019). The oil price of hike blunder. *Newswatch*, *18*, 8–16.

Muraina, S. A. (2018). Determinants of listed deposit money banks profitability in Nigeria. *International Journal of Finance and Banking Research*, *4*(3), 40-56.

Nwosu, C. P. (2019). Import of fuel prices on inflation: Evidences from Nigeria. *Research Department, Central Bank of Nigeria*. http://ssm.com/abstract=1365820.

Obadan, M. I. (2006). Overview of exchange rate management in Nigeria from 1986 to date. *CBN Economic and Financial Review*, *30*(3), 1-9.

Odusola, A. F., & Akinlo, A. E. (2016). Output, inflation, and exchange rate in developing countries: An application to Nigeria. *The Development Economies, 4*(1), 199-222.

Ogbulu, A. O. (2018). Oil price and stock market performance in Nigeria: An empirical analysis. *American Journal of Social and Management Sciences*, *4*(1), 20-41.

Ojo, A. A. (2020). Spillover from oil market to stock market in Nigeria: Evidence from Granger causality in risk. *The Journal of Developing Areas*, *49*(3), 81-101.

Oladipupo, A. O., & Faith, O. O. (2021). Impact of exchange rate on balance of payment in Nigeria. *African Research Review, 5*(1), 73–88. https://doi.org/10.1016/j.aarr.2021.01.03.

Olayungbo, D. O. (2019). Effects of global oil price on exchange rate, trade balance, and reserves in Nigeria: A frequency domain causality approach. *Journal of Risk and Financial Management*, *12*(43), 16-28.

Oloyede, D. O. (2019). Empirical analysis of the demand for petroleum products in Nigeria. *Central Bank of Nigeria Journal Publication*, 33-57.

Omeke, P. C., & Ugwunyi, C. U. (2025). Money, price and output: A causality test for Nigeria. *American Journal of Scientific Research*, *33*(8) 78-87.

Onakoya, A. B., & Agunbiade, O. A. (2020). Oil sector and Nigerian macroeconomic variable. *International Journal of Economics, Management and Accounting, 28*(1), 35-62.

Onoh, E. S. (2017). Evaluation of firms' corporate financial indicators and operational performance of selected firms in Nigeria. *Research Journal of Finance and Accounting, 9*(4), 20-29.

Onyeizugbe, I. O., & Umeagugesi, F. A. (2024). Oil price volatility and stock price volatility: Evidence from Nigeria. *Academic Journal of Interdisciplinary Studies*, *4*(1), 253-260.

Opaluwa, W. E., Umeh, F., & Abu, Y. O. (2020). Impact of exchange rate on balance of payment in Nigeria. *African Research Review, 5*(4), 73–88. https://doi.org/10.1016/j.afr.2020.03.007

Osaretin, K. O., & Sodik, A. O. (2020). Corporate performance in Nigeria: The effect of oil price and exchange rate fluctuations. *International Journal of Economics and Financial Issues,4*(2), 12-45.

Oyejide, A. F. (2025). Exchange rate fluctuations, oil prices and economic performance: Empirical evidence from Nigeria. *International Journal of Energy Economics and Policy*, *5*(2), 502-506.

Paul, A. F. (2021). Modeling oil price US stock nexus: A Varma Bekka arch approach. *Energy Economics*, *5*(3), 1-12.

Paul, E. (2020). Impact of review of petroleum product prices on inflation rate in Nigeria. *International Journal of Economics and Financial Issues, 2*(4), *15-25.*

Raheem, A. I., & Adebiyi, M. A. (2016). Analysis of the relationship between oil price, exchange rate and stock market in Nigeria. *International Journal of Energy Economics and Policy*, *3*(3), 31-50.

Ubok-Udom, O. O. (2018). Inflation and unemployment nexus in Nigeria: Another test of the Phillips Curve. *Asian Economic and Financial Review*, *5*(5), 766-778.