

The Effect of Global Oil Price Volatility on NNPC Ltd Marketing Strategy

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ABSTRACT

The study examines the effect of Global oil prices volatility on Nigeria National Petroleum Company Limited (NNPCL) marketing strategy. The study specifically determines how global oil price volatility effect on product, pricing and place strategy of NNPCL. The study adopted a survey research design. The population of the study was 5,566 staff. The sample size was 373 determine using Taro Yamani. The study adopted Stratified and random sampling technique, while data were collected via structured questionnaire from the respondent. Data were analyzed using ordinary regression analysis to test the formulated hypotheses. The findings revealed that Global oil price volatility has positive significant effect on Nigeria National Petroleum Company Limited (NNPCL) product strategy. Hypotheses two indicate that Global oil price volatility has positive significant effect on NNPCL pricing strategy. The third hypotheses further showed that global oil price volatility has positive significant effect on NNPCL place strategy.). The study concludes that global oil price volatility has positive significant effect on product strategy, pricing strategy and place strategy of Nigeria National Petroleum Company Limited (NNPCL) . The study recommends that Nigeria National Petroleum Company Limited should embark on diversifying its product portfolio to include other petroleum products, such as petrochemicals, lubricant and biofuels to mitigate the effect of global oil price volatility. Nigeria National Petroleum Company Limited should adopt a dynamic pricing strategy that takes into account changes in global oil prices, demand and supply. Nigeria National Petroleum Company Limited can form strategic partnerships with other oil companies, logistic providers, and retailers to improve its distribution network to various places and reduce costs.

INTRODUCTION

Crude oil, commonly referred to as fossil fuel or simply “oil,” is a naturally occurring resource found in varying quantities across different regions of the world. Although it has little utility in its raw form, once refined into products like petrol, diesel, jet fuel, and gas, it becomes highly valuable. Oil is characterized by its volatility, sensitivity to market changes, and capital-intensive nature (Ighosewe et al., 2021). Since the significant price surges of the 1970s and 1980s, oil prices have remained unstable, as seen in 2007 and early 2008 when prices fluctuated drastically. Such volatility influences global economies, prompting government interventions and strategic shifts in business operations. As a result, institutions such as central banks and think tanks have carried out quantitative research on oil price

instability (Robert & Masami, 2008; Abdullateef & Salawudeen, 2020).

Oil price fluctuation is not new to the industry and poses challenges to decision-making in investment and strategic planning. Corporate leaders must adopt resilient strategies to mitigate risks stemming from market disruptions due to declining oil prices (Klein, 2018; Salawudeen & Suleiman, 2025). Since the 1980s, the oil industry has seen periods of both high optimism and sharp downturns, compelling stakeholders to constantly innovate to remain competitive (Yussif, 2020;). Oil remains a vital global economic asset as it serves as a primary energy source for industrial and household use. This importance has made oil prices highly responsive to supply and demand dynamics, leading to ongoing debates

among economists, policymakers, and marketing strategists about its impact on economic growth.

The Organization of Petroleum Exporting Countries (OPEC) has consistently worked to stabilize oil prices, yet its member countries continue to suffer from price volatility. Historical patterns show that oil prices soared during 1973 and 1981 but dropped significantly afterward, with a 57.85% decline by 1994 from the 1981 levels, which severely affected the economies of oil-dependent nations (Iwayemi, 1992, as cited in Abdullahi, 2017). Multiple factors contribute to fluctuations in oil production and pricing, including demand-supply shifts, technological advances, geopolitical tensions, weather conditions, currency exchange rates, interest rates, worker strikes, and incidents like oil spills or pipeline vandalism (Usoro & Ekong, 2022; Salawudeen et al., 2020). Events such as wars (e.g., Russia-Ukraine), OPEC pricing policies, speculative trading, and market uncertainties also play roles (Fesharaki & Hoffman, 1985). While these changes may not drastically alter overall production levels, they complicate forecasting and strategic planning for oil firms.

In response, this study focuses on the impact of oil price volatility on the marketing strategies of the Nigerian National Petroleum Company Limited (NNPC). Marketing strategies are essential for success in the oil and gas sector, helping firms build brand identity, gain competitive advantage, and respond to environmental changes (Kotler & Keller, 2016). These strategies guide organizational efforts in adapting to market shifts and leveraging their strengths. Marketing involves aligning the elements of the marketing mix with environmental factors to achieve effective market positioning (Levie, 2006). Organizations make use of strategic tools such as the 4Ps Product, Price, Place, and Promotion to navigate competition and maintain relevance (Kotler, 2000; McCarthy, 2002). Though marketing may appear straightforward, it is a complex and dynamic process (Kotler & Connor, 1997). Porter (2008) argues that firms adopt marketing strategies to find market positions that shield them from competitive pressures while manipulating those forces to their advantage.

Despite the relevance of oil price volatility to marketing strategy, it remains underexplored in current research. This study aims to fill that gap by investigating how fluctuating oil prices affect the marketing strategies of NNPC Ltd.

Objectives of the Study

The main objective of this study is to examine the effect of global oil price volatility on NNPC Ltd marketing strategy. The specific objectives are to:

- i) Determine the effect of global oil price volatility on NNPC Ltd product strategy.
- ii) Ascertain the effect of global oil price volatility on NNPC Ltd pricing strategy.
- iii) Assess the effect of global oil price volatility on NNPC Ltd place strategy.

1.3 Research Hypotheses

H₀₁: *Global oil price volatility has no significant influence on NNPC Ltd product strategy*

H₀₂: *Global oil price volatility has no significant effect on NNPC Ltd pricing strategy*

H₀₃: *Global oil price volatility has no significant effect on NNPC Ltd place strategy*

LITERATURE REVIEW

Global Oil Price Volatility

According to Manasseh et al. (2019); Apeh and Otu, (2025), oil price volatility refers to the persistent fluctuations either upward or downward in global oil prices over extended periods, often followed by relatively stable phases. These fluctuations are typically triggered by changes in global oil supply and demand, often influenced by political instability in oil-producing Middle Eastern nations and rising consumption in Asian countries. (Keji, 2018; Apeh and Adekeye, 2019) noted that such price swings can disrupt the smooth distribution of commodities across international markets. Similarly, (Nwanna and Eyedayi, 2016; Aminu & Salawudeen, 2019) described oil price decline as an unexpected and significant shift in global economic conditions, which may negatively impact national economies through adverse changes in trade terms, reduced global export demand, or higher international interest rates.

Demand and Supply

Lutz (2009) observed that fluctuations in global oil demand and supply influence oil prices. When supply exceeds demand, surplus oil is stored for future use, and when demand surpasses supply, stored reserves help bridge

the gap. Although non-OPEC countries produce about 60% of the world's oil, they lack the reserve capacity to control prices and can only react to market changes. In contrast, OPEC exerts substantial control over oil prices, especially when non-OPEC supply drops.

Speculative Buying

Speculative buying occurs when investors engage in trading oil futures, affecting oil prices through increased speculative demand. (Lutz, 2009; Aminu & Salawudeen, 2019) explained that geopolitical tensions particularly in regions like the Middle East can lead speculators to expect future supply disruptions, pushing prices upward regardless of actual production levels. A notable example is the price surge in 2008 caused by speculation, which later dropped in 2009 due to insufficient demand to sustain those high prices.

Foreign Exchange Rate

Global oil transactions are predominantly carried out in US dollars. Therefore, a weaker dollar generally boosts oil demand and raises prices, while a stronger dollar reduces real incomes in importing countries, lowering demand and prices. This dollar-oil price relationship significantly affects the economies of oil-exporting nations, either positively or negatively.

Prices of Alternative Commodities

The high cost and complexity of oil extraction have prompted industrialized countries to seek alternative energy sources like coal and solar power. As oil prices rise, cheaper energy alternatives become more attractive, reducing oil demand and ultimately leading to lower prices.

OPEC Activities

OPEC plays a major role in determining global oil prices, as it supplies around 40% of the market. By adjusting output among its member countries, OPEC can manipulate oil prices. Fattouh (2011) pointed out that OPEC's decision to cut supply in 2006 was largely responsible for the oil price increase experienced in 2007 and 2008.

Marketing Strategy

Ayuba (2015) described marketing strategy as the efficient use of limited organizational resources to maximize profit and gain a competitive edge. Nzalibe et al. (2011); Apeh and Obochi, 2024 expanded this view by including pricing, sales, and distribution activities that help a company increase market share for existing products,

enter new markets, and develop new products profitably.

Product Strategy

Kotler and Armstrong (2006); Apeh and Ibrahim, (2022) defined a product as anything offered to satisfy consumer wants or needs. A product strategy, they argued, is not merely a list of product features but a detailed plan guiding the development and marketing of products that ensure competitive advantage and fulfil business growth objectives.

Pricing Strategy

Kotler (2007) defined price as the amount charged for delivering and promoting a product. According to (Kotler et al., 2005; Salawudeen & Dandago, 2020), it represents the monetary value exchanged for a product. (Jones, 2007; Apeh et al., 2021) emphasized that product pricing is crucial to its marketability, especially in markets where similar alternatives exist and prices are highly responsive to change.

Place Strategy

Jones (2007) stated that 'place' refers to how customers access products or services. It involves all logistics and decisions related to making products available to end-users. Similarly, Kotler and Armstrong (2006) and (Osugwu, 2006; Abdullateef & Salawudeen, 2020) identified place (or distribution) as a key marketing mix element, involving interconnected organizations ensuring that goods reach consumers efficiently.

Theoretical Basis for the Study

Dutch Disease Theory

This study is grounded in the Dutch Disease Theory developed by Corden and Neary (1982), which explains how resource booms such as oil or gas discoveries can lead to the decline of other economic sectors like manufacturing. Originally referencing the Netherlands' economic downturn after discovering North Sea oil, the theory suggests that an inflow of wealth from resource exports causes currency appreciation, making other exports less competitive. Kareem (2010) added that while resource booms contribute to this phenomenon, it's not always clear to what extent other sectors shrink solely due to resource extraction. Ismail (2021) further defined Dutch disease as the process whereby a once-thriving resource sector experiences a downturn following an initial boom, negatively impacting national competitiveness and economic diversity.

Empirical Review

Chen et al. (2024) analyzed the impact of oil price and economic policy uncertainties on business investment using a global sample of 4,017 energy firms from 1996 to 2022. Their findings, based on generalized linear models, revealed that both oil price uncertainty (OPU) and economic policy uncertainty (EPU) negatively affected corporate investments, particularly in oil-producing countries. The study highlights that market volatility and global financial crises intensify the negative impact of OPU and EPU. These results suggest policymakers must develop strategies that account for these uncertainties to achieve energy transitions and environmental goals.

Reenu et al. (2024) studied how crude oil price volatility affects economic growth in OECD countries between 2000 and 2022. Using several panel data estimation techniques, including one- and two-step system GMM, they found that oil price volatility has a detrimental effect on economic growth. The study emphasizes the importance of understanding oil market volatility and offers policy recommendations for mitigating its negative impact.

Okon and Okon (2023) employed time series analysis to investigate the relationship between crude oil prices and key economic indicators in Nigeria from 2006 to 2022, focusing on Real GDP, inflation, and interest rates. Their findings indicate a positive trend in Real GDP, reflecting economic expansion, while identifying the influence of oil price movements on macroeconomic performance.

$$PS = a + \beta_1 DSI + \beta_2 SB + \beta_3 FEXHR + \beta_4 OPEC + e \dots \dots \dots 1$$

$$PRS = a + \beta_1 DSI + \beta_2 SB + \beta_3 FEXR + \beta_4 OPEC + e \dots \dots \dots 2$$

$$PLS = a + \beta_1 DSI + \beta_2 SB + \beta_3 FEXR + \beta_4 OPEC + e \dots \dots \dots 4$$

Where PS= Product strategy, PRS = pricing strategy, PLS = place strategy. DSI = Demand and Supply Imbalances, SB = Speculating buying, EXHR = Exchange rate, and OPEC= Organization of petroleum exporting Countries.

METHODOLOGY

Research Design

This study adopts survey research design. The target population of the study was 5,566 staff comprising of 451 management staff, 2,005 middle level staff and 3,110 line staff of NNPC Ltd, Nigeria. The sample size was 373 determine using Taro Yamanne as follow:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

N = Population

n = Sample size

$$e = (0.05)^2$$

$$n = \frac{5,566}{1 + 5,566(0.05)^2}$$

$$\frac{5,566}{1 + 5,566(0.0025)}$$

$$\frac{5,566}{1 + 13.915}$$

$$\frac{5,566}{14.915} = 373 \text{ Approximately}$$

The study adopted Stratified and random sampling technique, while data were collected via structured questionnaire from the respondent. Data were analyzed using ordinary regression analysis to test the formulated hypotheses. The level of significance was set at 5% as bases for acceptance or rejection. The research instrument was tested for reliability and validity using Cronbach Alpha. The study independent variable is Global oil volatility proxies with demand and supply, speculative buying, foreign exchange rate and OPEC regulations. While the dependent variable is marketing strategies proxy by Product Strategy, Pricing Strategy, and Place Strategy. Estimation of the study variable.

RESULTS AND DISCUSSIONS

Tests of Hypotheses

H₀₁ : Global oil price volatility has no significant influence on NNPC Ltd product strategy.

Table 4.2.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.932	.868	.865		2. 273

Predictors: (Constant), *Global* oil price volatility

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	367.804	1	367.804	265.80	.000**
1 Residual	52.125	388	0.134		
Total	419.929	389			

. Dependent Variable: NNPC Ltd product strategy.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.317	2.854		5.055	.000**
	Global oil price volatility	.521	.032	.0722	16.307	.000**

a. Dependent Variable NNPC Ltd product strategy

From the results on table 4.2, the model summary shows the correlation (R) is .932 which is positive and very strong. This means that There is a positive significant relationship between *Global* oil price volatility (GOPV) and NNPC Ltd product strategy. The coefficient of determination (R²) shows that *Global* oil price volatility (GOPV) influence NNPC Ltd product strategy by 86.8% with a standard error of 2.273 is significant. The ANOVA output showed an F- statistics of (265.80) at a

significant value of .000 showed that the data is good fit for the model. Finally, the regression coefficients output is statistically significant as the sig value of. .000<0.05) and a T statistic (16.307) is significant in achieving NNPC Ltd product strategy. This means that the null hypothesis is rejected and alternative one accepted. Therefore, *Global* oil price volatility (GOPV) have positive significant effect on NNPC Ltd product strategy.

H₀₂: Global oil price volatility has no significant effect on NNPC Ltd pricing strategy

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.875 ^a	.766	.764		1.279

a. Predictors: (Constant) *Global* oil price volatility

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	179.116	1	179.116	109.97	.000**
Residual	64.376	388	0.166		
Total	243.492	389			

. Dependent Variable: NNPC Ltd product strategy.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.301	2.164		1.063	0.288
Global oil price volatility	.422	.040	.063	1.488	.000

a. Dependent Variable: on NNPC Ltd pricing strategy

Similarly, from the results, the model summary shows the correlation (R) is .875 which is very strong. This means there is positive and significant relationship between *Global* oil price volatility and *on* NNPC Ltd pricing strategy. Also, the coefficient of determination (R^2) shows that *Global* oil price volatility influence NNPC Ltd pricing strategy by 76.6% with a standard error of (1.279) is significant while the 23.4% is attributed to other factors not noted in the model. The ANOVA output showed

an F- statistics of 109.97 at a significant value of .000 indicated that the data is good fit for the model. The regression coefficients output is statistically significant at sig value (P-value) is less than 0.05 (i.e. $0.000 < 0.05$) and a T statistic (1.488) is significant in achieving NNPC Ltd pricing strategy. This means that the null hypothesis is rejected and alternative one accepted. Therefore, *Global* oil price volatility (GOPV) have positive significant effect on the NNPC Ltd pricing strategy.

H₀₃: Global oil price volatility has no significant effect on NNPC Ltd place strategy

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.896 ^a	.803	.801	2.110

a. Predictors: (Constant), *Global* oil price volatility

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	152.431	1	152.431	68.09	.000**
1 Residual	236.893	388	0.611		
Total	389.324	389			

. Dependent Variable: NNPC Ltd product strategy.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.567	2.043		2.236	.026
	Global oil price volatility	.673	.0513	.734	13.135	.000

a. Dependent Variable: *on* NNPC Ltd place strategy

The model summary shows the correlation R (.896) which is very strong. This means that there is positive significant relationship between Global oil volatility and NNPC Ltd place strategy of *on* NNPC Ltd place strategy. The coefficient of determination (R²) shows that Global oil price volatility (GOPV) influence NNPC Ltd place strategy by 80.3%. given a standard error of (2.11) is significant while the 19.7% is attributed to other factors not noted in the model. The ANOVA output showed an F- statistics of (68.09) *at a significant value of .000* indicated that the data is good fit for the model. The regression coefficients output is statistically significant as the sig value (P-value) less than 0.05 (i.e. 0.000<0.05) and a T statistic (13.135) is significant in achieving NNPC Ltd place strategy. This implied that the null hypothesis is rejected and alternative accepted. Therefore, Global oil price volatility (GOPV) have positive significant effect on the NNPC Ltd place strategy.

Discussion of Findings

The results of the first hypothesis indicate that global oil price volatility (GOPV) has a significant positive impact on the product strategy of NNPC Ltd, with the coefficient of determination (R²) showing that GOPV

accounts for 86.8% of the variation in the company's product strategy. Similarly, the second hypothesis reveals that GOPV significantly and positively affects NNPC Ltd's pricing strategy, with a determination coefficient of 76.6%. The third hypothesis shows that GOPV also has a significant positive influence on NNPC Ltd's place (distribution) strategy, as 80.3% of its variation is explained by changes in global oil prices.

These findings imply that fluctuations in global oil prices—resulting from supply and demand imbalances, speculative trading, exchange rate fluctuations, and OPEC regulations—play a major role in shaping NNPC Ltd's marketing strategies. Specifically, GOPV strongly influences the company's product strategy (such as production quantity decisions), pricing strategy (adjustments in fuel prices), and place strategy (addressing challenges like product diversion to neighboring countries). The study shows that the product strategy is the most affected, followed by place and pricing strategies. These results align with the conclusions of studies conducted by Chen et al. (2024), Okon and Okon (2023), and Reenu et al. (2024).

Conclusion

This study investigated the impact of global oil price volatility on the marketing strategies of the Nigerian National Petroleum Company Limited (NNPC Ltd), specifically focusing on product, pricing, and place strategies. The findings conclude that global oil price volatility has a statistically significant and positive influence on all three marketing strategy components of NNPC.

Recommendations

- i. NNPC Ltd should consider expanding its product portfolio to include alternatives such as petrochemicals, lubricants, and biofuels, which can serve as a buffer against the adverse effects of global oil price fluctuations.
- ii. The company should implement a flexible pricing system that adjusts in response to changes in global oil prices and shifts in supply and demand to maintain market stability.
- iii. NNPC Ltd is encouraged to develop strategic alliances with other oil firms, logistics providers, and retail distributors to strengthen its distribution network, reduce operational costs, and enhance product availability across different regions.

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