OIL VALUE VARIATIONS AND COST-EFFECTIVENESS TOWARDS WEALTH CREATION OF OIL AND GAS VENDING CORPORATIONS

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Abstract:
The study investigated the effect of oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations. The main objective of the study was to determine whether oil value variation impact on cost-effectiveness in the processes of wealth creation in oil and gas vending corporations in Nigeria. Data were obtained from secondary sources such as annual financial reports of corporations which were within the coverage years of investigation. Simple regression technique was used to analyze the data collected. The findings revealed that, oil value variations do not significantly affect cost-effectiveness in the processes of wealth creation of oil and gas vending corporations under consideration. Based on the findings, the study recommended that the management of companies should devise effective strategies in regulating and controlling the effect of oil value variations on their corporate cost-effectiveness towards wealth creation.

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1. Introduction

Oil constitutes one of the essential parts of the universal economy and it is undeniably relevant to the smooth functioning of the globalized world. Virtually, everything from making of equipment to the production of plastics can be sketched to oil and its derivatives. Oil makes its effect felt on practically every individual's life and sends ripples through the stock market. The effect of oil is not one direction though and unraveling all the effects is not an easy task. At the end it is tough to be sure if a specific effect is due to oil or some other factor.

Oil is considered to be the most valuable goods in the world. Oil is the lifeline for development of any economy, whether it is developing or developed. Oil is the product which is used in energy sectors, transportation etc., so it is a main product for our economies and societies, for a continued growth. Oil values have constantly been unstable over the periods. The economists and observers point of view is that the volatility seen in last decades was never been before. In the era of industrialization, oil values were the basic indicator of any financial activity. Oil values have been very unpredictable and considerably changing over the years. Fluctuations in the price of crude oil have significant implications for several types of economic activities. It could be seen that the public has been predominantly concerned about oil values instabilities as these have major impact on the economy especially monotonous economy like ours. Basically, the intrinsic value of a security depends on some essential variables affecting the firm, the industry and the economy in general. The differences in the intrinsic value and the market value create room for profit. Economic theory indicates that, changes in oil value affect economic activity either positively or negatively through both supply and demand channels. Supply side effects could be explained based on the fact that oil is an important input in production. Therefore, oil value increases reduce the demand for oil, decreasing productivity of other input factors which induce firms to lower output. Furthermore, oil value changes have demand side effects through consumption and determination of optimal capital structure and or investment (Asuquo, 2008 & 2011b).

Consumption is affected indirectly by its positive relation with disposal income. When the oil value increases, an income transfer occurs from oil importing countries to oil exporting countries. Therefore, consumption in oil importing countries decrease and the magnitude of this effect is greater the more the shocks are perceived to be long-lasting. Oil value increases also have an adverse effect on investment by increasing firm's cost. In addition to these supply and demand effects oil value changes could influence the economy through foreign exchange markets and inflation. There is an impact of oil value shocks on output and real wages with a simple aggregative model by assuming imperfect competition in the product market. Allowing for a modest degree of imperfect competition can account for declines in output and real wages after oil value shocks. On

the other hand, an imperfect competition model can explain the effects of oil value shocks on the US economy greater extent than a stochastic growth model.

Oil is included as an imported productive input and oil value as well as interest rates is assumed to be set by the international market. With respect to the exogenous oil value shocks, their model reproduces Spanish GDP closely from 1970 to the mid 1980's, while it replicates less for the period 1985 - 1998. In addition, they showed that oil value increases have a negative and significant effect on welfare. One crucial variable the fundamentalist takes into consideration is earnings, because earnings depends on the relationship between expected sales and cost which are mainly determined by several factors affecting the company both internal and external factors (Ferderer, 1996; Balke, Brown & Yucel, 2002; Asuquo, 2012a).

An economic recession is attributed to oil value increases and deflationary monetary policy when considering the argument that economic declines are caused by oil value shockwaves and monetary policy shocks. They use four different measures of oil value shockwaves: the log of the nominal producer price index for crude oil and products. The net oil value increase is the most appropriate indicator for the investigation of the macroeconomic effect of oil values, in that oil value shocks are followed by an output decline and value increase. They also check how systematic monetary policy changes affect the economy and then determine what portion of the last five US recessions are attributed to oil value shockwaves and the Government monetary policy shockwaves. They find that the majority of the impact of an oil value shock on the economy is explained by deflationary monetary policy in response to inflationary pressures caused by oil price shocks (Asuquo, 2012b & 2012c; Bernanke, Mark & Watson, 1997).

Davis and Haltiwanger (2001) examined the response of job creation and destruction to separately defined, positive and negative oil value shocks with plant-level census data on employment, capital per employee, energy use, age and size of plant, and product durability, at the four-digit level. Examining the job creation and destruction between aggregate and allocated transmission mechanisms, they find that aggregate channels would increase job destruction and reduce job creation in response to an oil price increase, while an oil value decrease reduces job destruction and increases job creation symmetrically. However, allocated channels would increase both job creation and destruction asymmetrically in response to both price increases and decreases.

Ferderer (1996); Balke, Brown & Yucel (2002) study the asymmetric effects of oil value shocks on GNP by analyzing the response of interest rates to oil value shocks. They believe monetary policy responds to the oil value increases, while not to oil value decreases. In the impulse response function analysis, response of short-term interest rates to the oil value increases and decreases is asymmetric, which means that oil value shocks influence the GDP through interest rates asymmetrically.

Jones and Kaul (1996) test on the rationality of stock prices as to whether they reflect the impact of news on current and future real cash flows, thereby finding that oil price increases in the post war period have a significant detrimental effect for the US, UK,

Canadian and Japanese stock market. Increase in oil values is a form of wealth transfer from oil importing economies to oil exporting economies. Thus, the impact of oil value shockwaves on the exchange rate would depend on the distribution of oil imports across oil importing economies. The effects of changes in oil value always impacted substantially on the real exchange rate and money supply in the long run, with fewer effects on output and inflation. Oil value increases act as inflation tax, which will lead consumers to source for alternative energies, increase risk and uncertainty which adversely affect stock prices and reduce wealth. They adopted an international multi-factor model that allowed for both conditional and unconditional risk factors to explore the link between oil price risk and emerging stock market returns. They found strong evidence that oil price risk impacts stock price returns in emerging markets (Asuquo, 2012a; Asuquo & Arzizeh, 2012, Asuquo & Effiong, 2010).

Jones and Kaul (1996) studied the stock markets of the United States, Japan, Canada and the United Kingdom and their reaction to oil price shocks; the hypothesis is that oil shocks are absorbed by current and future changes in real cash flows and/or in expected returns. Then, stock returns should vary across time due to changes in current and expected returns. The evidence supports that the stock markets of Canada and the United States capture the impact of oil shocks into their cash flows, because oil prices don't have an effect on real stock returns. In case of the United Kingdom and Japan the evidence shows that their stock markets tend to overreact to oil price changes.

Earning quality and financial progress can be ascertained by evaluating the company concern earnings for some period in order to measure how consistent the company operates either by comparing projected earnings with the actual earnings for each year and also evaluating the financial progress for given period using standard magnitude variance analysis (Asuquo, 2008; Ball & Shivakumar (2005); Ahmed, Song & Stevens, 2009). Many financial analysts considered earnings to be better when the current inflow is above the recognition of revenue in the future and the quality is bad when the cash inflow is below the recognition of revenue in the future. Nevertheless, in order to access true earnings power, the financial analyst must carry out proper scrutiny of the earnings reported by management. The quality of reported earnings can be higher if management recognized revenue or expenditure either prematurely or choose a deliberate accounting treatment over a more conservative one. Based on these, financial analyst should be particularly worried of the changes in accounting policy and taking note of the termination of auditor contract resulting from disagreement over proposed accounting changes and the recognition revenue.

Corporate earnings manipulation most times does not occur because of deliberate fraud, but through application of unsuitable accounting concepts or aggressive interpretations of the accounting terms which most times constitute one major ways by which earnings are altered unintentionally. The outcome has been misstatement of the financial statements carried out by people that has previously been considered honest. Unnecessary pressure on the Chief Financial Officer to meet up estimated numbers through creative reporting has led many to be involved in unethical and fraudulent

activities which are a clear indication of management involvement, though forensic accounting investigations and practices can curb these unethical practices (Asuquo & Akpan, 2011).

Earnings manipulations begin from capital budgeting processes towards achievement wealth maximization objectives (Uwah & Asuquo, 2016) to innocent acts or little manipulation of financial statement to the extent of criminal acts which is done deliberately to boost revenue and under estimate expenses, aimed at deceiving users of financial statement. Earnings manipulation which could be approached by determination of optimal capital structure; can also occur when companies intentionally inflate their revenue to show good profit or appealing earnings per share figure without considering instability in oil and gas values. They achieve this by adopting vague accounting principles and policies or creative accounting and management, without necessarily following prescribed financial reporting standards and observing the effects of financial reporting and practices on the performance of their organization (Asuquo, 2008; 2011a & 2011b; Asuquo, 2013).

2. Materials and Method

2.1 Research design
The study was designed to investigate the effect of corporate earnings on share price of selected oil and gas vending corporations in the Nigerian stock exchange market, the researchers used ex-post facto research design because direct control of the variables is not possible. The research merely studies the independent variables in retrospect to establish relation, and the influence on the dependent variable.

2.2 Research population
The target population of the study comprised of thirteen (13) quoted oil and gas vending corporations that are continuously listed in the Nigerian Stock Exchange.

2.3 Sampling procedures and sample size determination
The sampling technique that was adopted for this study is the convenience sampling technique and the sample size for the study comprised of two (2) quoted oil and gas marketing firms that are continuously listed in the Nigerian stock Exchange. This sampling technique and sample size adopted were limited to two companies because of availability of up-to-date data.

2.4 Method of data collection
Ex-post facto design was adopted for the study where secondary data were extracted from published annual reports of the two (2) oil and gas vending corporations selected for the study, daily trading reports by Nigerian Stock exchange, share price history of some individual corporations and Nigerian stock exchange facts books are sources used for the study. The secondary data were analyzed in line with formulated hypotheses

which enable the researchers to proffer solutions to the research questions that were formulated.

2.5 Model specification

In line with the objectives of the study, the model is stated thus:

PR = f (OV);

Where:
PR = profit;
OV = oil price;

$$PR = b_0 + b_1 OV + U_t$$

Further,
PR = dependent variable;
OV = independent variable;
b_0 = regression constant
b_1 = regression coefficient or parameter;
U_t = stochastic error term

2.6 Techniques of data analysis

The data were collected from the various sources for the two (2) oil and gas vending corporations in Nigeria. The study adopted ordinary least square of simple regression statistical technique to statistically analyze the relationship between dependent and independent variables.

3. Results and Discussion

3.1 Data presentation

The tables below show the presentation of data on oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria for thirty years.

Table 1 (empirical data): Vending Corporation A

Years (Y)	Profit after tax (PA) N	Oil Value (OV)'bbl N
1	185,765,876.00	127.9209
2	185,543,765.00	149.7214
3	189,765,912.00	149.7048
4	190,432,765.00	182.7404
5	191,342,765.00	282.509
6	192,453,342.00	346.7849
7	193,603,556.00	369.0654
8	229,233,964.00	444.1481

9	256,766,552.00	412.8454
10	178,239,584.00	268.8092
11	173,555,980.00	381.7616
12	387,819,920.00	604.164
13	335,293,520.00	506.0968
14	1,058,193,480.00	2,249.3537
15	2,187,502,470.00	2,857.6857
16	3,444,880,000.00	4,902.80
17	4,154,950,000.00	5,817.85
18	5,275,620,000.00	8,147.16
19	3,255,000,000.00	8,457.40
20	4,393,000,000.00	11,080.275
21	3,968,000,000.00	9,615.88
22	5,252,000,000.00	11,723.4569
23	4,377,000,000.00	16,986.7395
24	6,567,000,000.00	17,325.3878
25	5,372,000,000.00	16,733.2829
26	32,520,000,000.00	17,765.505
27	16,551,000,000.00	12,347.755
28	8,154,293,000.00	12,635.60
29	7,518,733,000.00	18,903.60
30	20,840,000,000.00	26,376.84

Source: OPEC annual average value of crude oil per barrel, CBN annual average exchange rate bulletin, NSE quoted companies bulletin & Vending corporations annual reports.

Table 2: The relation between oil price and profit after tax of Vending corporation B

Years (Y)	Profit after tax (PAT) Billion N	Oil Value (OV)'bbl Billion N
1	10,125,564.00	127.9209
2	10,321,765.00	149.7214
3	10,365,543.00	149.7048
4	10,654,342.00	182.7404
5	10,654,765.00	282.509
6	11,412,675.00	346.7849
7	11,432,765.00	369.0654
8	11,543,786.00	444.1481
9	12,434,543.00	412.8454
10	12,650,108.00	268.8092
11	17,705,774.00	381.7616
12	32,697,684.00	604.164
13	853,357,000.00	506.0968
14	1,013,249,000.00	2,249.3537
15	450,389,000.00	2,857.6857
16	824,446,000.00	4,902.80
17	1,045,626,000.00	5,817.85
18	1,312,647,000.00	8,147.16
19	1,959,314,000.00	8,457.40
20	(225,426,000.00)	11,080.275
21	1,050,000,000.00	9,615.88
22	2,887,683,000.00	11,723.4569

23	2,028,109,000.00	16,986.7395
24	205,121,000.00	17,325.3878
25	634,418,000.00	16,733.2829
26	746,404,000.00	17,765.505
27	935,625,000.00	12,347.755
28	1,465,905,000.00	12,635.60
29	1,385,056,000.00	18,903.60
30	1,264,941,000.00	26,376.84

Source: OPEC annual average price of Crude oil per barrel, CBN annual average exchange rate bulletin, NSE quoted company bulletin & various company annual reports.

Table 3: The regression results on the effect oil value variations and
cost-effectiveness toward wealth creation of oil and gas (Vending Corporation A)

Dependent variable: LPAT				
Variable	coefficient	std error	t-stat.	prob.
C	0.921842	1.098061	0.1839518	0.0102
OV	0.051834	0.0282386	0.183559	0.0060
R^2 = 0.0981770, R^2 (adj.) = 0.979284, SER = 0.278468, F-stat = 3.949248, DW = 1.173048.				

Source: Fieldwork & Researchers' Computation.

The coefficient of determination (R^2) is 0.981770, and an adjusted R^2 of 0.979284. It shows that 98 per cent of variations in the observed behavior of PAT is jointly explained by the independent variable namely OV. This shows that the model fits the data well and has a tight fit. Also, the f-statistic is used to test for the significance of such good or tight fit. The model reports on effectively high f-statistic value of 3.94, which when compared with the table value. This indicates that high-adjusted R^2 value is better would have caused by chance; therefore, the model is statistically robust. Using this criterion, therefore, oil price is significant at 1 per cent level. Specifically, a one percent increase in oil value (0.05 per cent) will prop up the earnings more than proportionate percentage point. The constant term indicates that if the variable is held constant, earnings will be improved by 0.92. The DW statistic (1.17) is used to test for the serial correlation in the residuals of the model. The calculated DW 1.17 and the decision rule is that if the calculated DW falls outside du and 4-du, then there is a serial correlation in the residuals. This shows that calculated DW falls outsides and this indicates that the estimates should be taken with caution. The goodness of fit of the model as indicated by the R-squared shows a good fit of the model that the model fits the data well. For the overall significant of the model, the ANOVA on the f-statistic is used. Hence, the model did not occur by chance, it actually confirms that the model fits the data well. The a priori expectations about the signs of the parameter estimates are confirmation to economic theory.

Table 4: The regression results on the effect
of oil value on profit after tax (Vending Corporation B)

Dependent variable: LPAT				
Variable	coefficient	std error	t-stat.	prob.
C	14.62536	2.851874	5.128334	0.0000
OV	11.15815	0.795639	14.02413	0.0000
R^2 = 0.967805, R2 (adj.) = 0.948458, SER = 354784.9, F-stat = 103.5417, DW = 2.0722				

Source: Fieldwork & Researchers' Computation.

The R^2 of 0.967805 is jointly explained by the independent variable namely; OV. this shows that the model fits the data well and has a tight fit. Also, the f-statistic is used to test for the significance of such good or tight fit. The model reports on effectively high f-statistic value of 103.5 which when compared with the table value. This indicates that the high adjusted value is better than would have occurred by chance; therefore, the model is statistically robust.

Using this criterion, therefore, OV (oil value) is significant at one per cent level. Specifically, a one percentage increase in oil price 11.1per cent will prop up the earnings more than proportionate percentage point. The constant term indicates that if the variable is held constant, the earnings will be improved by 14.62. The DW statistic is used to test for the serial correlation in the residuals of the model. The calculated DW (2.07) falls outside normal region and then there is a serial correlation in the residuals. This shows that calculated DW falls outside and this indicates that the estimates should be taken with caution. The goodness of fit of the model as indicated by the R-squared shows a good fit of the model and the model fits the data well. For the overall significant of the model, the ANOVA on the f-statistic is used. Hence, the model did not occur by chance, it actually confirms that the model fits the data well. The a priori expectations about the signs of the parameter estimates are confirmation to economic theory.

3.2 Test of hypotheses
In order to test the hypotheses of the study, the following decision rule is stated: The decision rule is to reject the null hypothesis if the t-calculated is > t-tabulated, and accept the null hypothesis if the t-calculated < t-tabulated.

A. Hypothesis one of Vending Corporation A
H0: There is no significant effect between oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.
H1: There is significant effect between oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.

Results: t-calculated for OV = 0.183, t-critical at 28df 0.01 = 2.048. Based on these results and decision rule, the null hypothesis is rejected, and it is concluded that there is no significant effect between oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.

B. Hypothesis one of vending corporation B

H_0: There is no significant effect between oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.

H_1: There is significant effect between oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.

From the tested hypothesis in vending corporation A, it is shown that there is no significant effect oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria.

4. Discussion of Findings

The major findings of this study include: there is no significant effect on oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria (Corporation A); and there is a significant effect on oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria (Corporation B). The study examined the effect of oil value variations and cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria. Oil is one of the essential parts of the global economy and environment and is being extracted from the land, which must be sustained. Oil is undeniably pertinent to the functioning of the globalized world and required sustainability reporting to ensure wealth creation which consequently affects the corporate performance of oil and producing corporations (Asuquo, Dada & Onyeogaziri, 2018). It is the life line for development of any economy, and is used in energy sectors, transportation etc. the oil price is the spot price of a barrel of benchmark crude oil, a reference price for buyers and sellers of crude oil, and these could be affected by the type of transfer price and the international tax policies and practices of the oil and gas vending multinational corporations as noted by (Udoayang, Akpanuko & Asuquo, 2009). The study concluded that oil value has a significant effect on cost-effectiveness towards wealth creation of oil and gas vending corporations in Nigeria. Based on the findings, the study recommended that management of companies should devise effective strategies in controlling the effect of oil value on corporate earnings.

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