RELATIONSHIP BETEEN DIVIDEND PAYOUT RATE AND EARNINGS IN THE OIL AND GAS SECTORS IN NIGERIA

By

GODWIN EMEZANENA IBOMA
Dept. of Social Sciences, Delta State Polytechnic, Otefe-Oghara

&
MOSES EKARUWE
Dept. of Accountancy, Delta State Polytechnic, Otefe-Oghara

Abstract

The study is concerned with the examination of relationship between dividend payout rate and earnings in the gas and oil sectors in Nigeria. It employs Vector Autoregressive (VAR) model on time series data for Nigeria. The test of descriptive statistics and the Unit root test were carried out on the data set. The correlation and co-integration test were also used to ascertain the direction and strength of the relationship between the variables while unrestricted VAR, the impulse response and the variance decomposition were used to ascertain the dynamic relationship between dividend payout and earnings. The findings reveals that all the variables were integrated of order two that is 1(2), with positive relationship between the variables. There is a co-integrating relationship between the variables. Also, the further result reveal that the past values of Earnings Per Share (EPS), Total Dividend Per Share (TDPS) and Earnings Per Share (EPS02) nominal shock contribute significantly to EPS appreciation in the oil industry in Nigeria during the period under consideration. The study therefore concludes that the endogenous variables considered in the model are significant determinant of EPS in the Nigeria oil industry. It therefore recommends that a policy that pay attention in this area formulated in order to achieve the desired objectives of increasing EPS in Nigeria oil industry and boost economy growth in the long run.

Keywords: Earnings per share, Total dividend per share, Oil and gas sectors, Vector autoregressive model and Variance decomposition

Introduction

Crude oil is the largest source of energy today all over the world. It powers the global economy and its industrialization processes. According to Abubakar& Umar (2013), the fluctuation in the price of crude oil is expected to

have significant impact on both imports and the exports of the product in any country. They further stated that Nigeria as oil producing nation has the largest oil production in Africa and the 6th among Organization of Petroleum Exporting Countries (OPEC) membership (Abubakar& Umar, 2013), Oliver Inyiama&, Ugah (2015). The impact of the fluctuation prices of crude oil in OPEC,its export has almost got the economy of Nigeria on its' knees. The dependence of Nigeria on crude oil production and export, could qualify her to be suffering from what is known as Dutch Diseased Economy (DDE). According to Adebisi,Adesola and Okwong (2012), the Dutch Diseased Economy is that whose original exports were tradable agricultural goods and later shift to the export of a booming sector that consequently leads to the appreciation of the real exchange rate and the near extinction of the original agricultural exporting sector. In it view he emphasized that the expansion of Nigeria's petroleum exports due to the discovering of crude oil drained resources from other parts of the economy and brought about a rise in urbanization to the new oil centers as well as generated an appreciable exchange rate that culminated into a decline in the competitiveness of non-oil exports and of import-competing industries.

As a company's ability to consistently pay out dividend over time, it revealed information about the management's assessment of the firm's future prospects, and send signals to the market about its fundaments. Investigation the key determinants of dividend policy may be regarded as a puzzle over years. Researching into the use of corporate dividend policy has no doubt increased our understanding of the concept of it and its constituents, despite persistence of the puzzle. This may be the reason for the school of thought's position that researchers have contributed to the multiple paradoxes of corporate dividend policy. Some investors believe in capital accretion in form of capital gains, than annual dividend that may tend to eat deep into corporate investible funds and pruning down the planned level of financial performance. Mlonzi, Kruger and Nthoesane (2011) believe that earnings may provide critical information to shareholders on firm past performances and at the same time used extensively in forecasting future performance and in equity valuation. They emphasized the primary role of earnings and dividend payout propensity to provide some predictive information about future earnings to both present and potential investors in making investment decisions. As a result, the declaration of intended dividend by directors at the Annual General Meeting is expected to serve as an indication that the firm is healthy and capable of sustaining and improving the current level of financial performance in both short-run and long-run. This was the view supported by the signaling theory.

To Nwidobie (2013), the higher these dividends, the more satisfied are these owners who ascertain that financial investments of the companies are rewarding and attractive to non-owners to invest in. To him the dividend payments are associated with firms that have good corporate governance, believing that firms in legal regimes that focus on protecting investors are likely to earn more and pay even higher dividends than firms in legal regimes with less investor protection. Gill, Biger&Tibrewala, (2010) talking ofshareholder'swealth, the conventional assertion is that a properly managed dividend policy had an impact on share prices and shareholders' wealth. This study however aims at evaluating the relationship regardingto causality, magnitude and nature of influence, between earnings and dividend payout rates in the Nigeria Oil and Gas Sector.

Review of Related Literature

AhmaduAbubakar and AbdulkarimGarba (2017) in Ross (1977),opined in propounding the Signaling theory created a theoretical model, which had its root from the information asymmetry between managers as fund users and shareholders as fund providers. The theory ascertains that managers have access to information relating to the value of the firm's assets than other outside agents and investors. Managers seek to use dividend pay-out policies to signal to the shareholders, the financial performance of their firms. Similarly, firms could reveal the strategies used in pursuing their vision and attaining their mission. To Islam, Aamir, Ahmad and Saeed (2012) the determinants of dividend policy in Karachi stock exchange and State Banks in Pakistan was investigated. Their results show that Payout Ratio (PR), Earnings Per Share (EPS), growth and sale positively influenced dividend payout while profitability and debt to equity negatively influence dividend payout. Maladjian and Khoury (2014) examined the determinants of dividend payout in the Lebanese Banks listed on the Beirut Stock Exchange. Usingthe OLS and dynamic panel data, discovered that the dividend payout policies affects positivelyfirm size, risk and previous year's dividends, but negatively affects the opportunity for growth and profitability. Alzomaia, M. and Al-Khadhiri, A. (2013),examinedthe profitability, size, tax, investment opportunities and life cycle stages of the firm as determinants of dividend policy in non-financial and sub-sectors of non-financial sector of Pakistan. They used panel data regression analysis and it was discovered that profitability, tax, size and investment opportunities influencethe determinants of dividend policy most.

A research into whether there are significant abnormal returns around the public announcement of earnings and to ascertain whether the efficient

capital market hypothesis applies to Alternative Public Equity Exchange (ALtX) for small and medium-sized companies was conducted by Mlonzi, Kruger and Nthoesane (2011) in Johannesburg Stock Exchange (JSE) in South Africa. Their study focus on companies listed on JSE-ALtXstock market that announced annual earnings between 1st January and 31st December 2009 using Capital Asset Pricing Model (CAPM). Evidence empirically reveals that there is a negative share price reaction to earnings announcements on the small ALtX stock market. The ALtX similarly reveal a weak form of market efficiency. The study concludes that during recession, shareholders' wealth is eroded in the small ALtX market.Though, the weak form of market efficiency gives an opportunity for entrepreneurs and investors to investigate the market for profits when the market is performing very well. Nuredin (2012) andAlzomaia, & Al-Khadhiri (2013), similarly employed a mixed approach to find the determinants of dividend policy such as profitability, growth, liquidity, size and leverage in Ethiopia, Bangladesh and Poland in insurance and banking sectors adopting thecorrelation analysis, OLS and panel regression techniques. Their findings reveal that profitability, dividend payout ratios and liquidity significantly influence dividend policy positively.

Gill, Biger and Tibrewala (2010) investigated the determinants of dividend policies and payout in France and America. Their study used the OLS regression and the findings reveal that earnings per share, dividend from the previous year and indebtedness are significant determinants of dividend policies. Profit margin, tax, and market-to-book ratio are determinants of dividend payout significantly. Musiega, Alala, Musiega, Maokomba and Egessa (2013),Tsuji (2010)and Al-Kuwari (2009) investigated the determinants of dividend payout and policy of non-financial firms and electrical appliances industry in Kenya and Japan and the GCC counties. Using purposive sampling for sample of 30 non-financial companies, descriptive statistics and multiple regressions,it was found that return on equity, current earnings and firms' growth correlated positively to dividend payout. Though, business risk and size were the determinants of dividend payout in Kenya, while value-weighted dividend yields, value weighted non-payers' size, and value-weighted after-tax earnings-to-total-asset ratios are the determinants of dividend policy in the Japanese electrical appliances industry.

The analysis reveal that most of the existing studies concentrated in developed countries of Europe and America with less emphasis on emerging economies of Africa especially Nigeria. It was also discovered that the methodology are more concerned on assessing relationships and evaluating effects of the independent variables on the dependent variable. However,

looking at these gaps, this study aims at carrying out an analysis on the relationship between earnings and dividend payout rate in Nigeria Oil and Gas Sector from 2005 to 2015 using the Vector Autoregressive framework (VAR).

Methodology

The research work was conducted in the petroleum sector of Nigeria using eight companies listed in Nigeria Stock Exchange - African Petroleum Plc, AfroilPlc, Chevron Oil Nigeria Plc, ConoilPlc, Eterna Oil & Gas Plc, Mobil Oil Nigeria Plc, OandoPlc and Total Nigeria Plc. Data availability are the key to an ex post research of this nature, hence Mobil, Total and Conoil Company were among the selected and used for data collection and analysis while other companies in the sector had scanty information on the variables under consideration. Annual data were obtained for Earnings per share (EPS) and Dividend per share (DPS) from the annual report and accounts of the selected companies.

EPS is measured as: $EPS = \frac{Proposed\ Dividend}{Outstading\ Shares}$ …….…….. (1)

While DPS is measured as: $DPS = \frac{Net\ Profit\ after\ Tax - Preference\ Dividend}{Number\ of\ Outstading\ Shares}$ ……..……. (2)

Model Specification

The Asset Pricing Model as the theoretical framework was adopted for this study. The Engle-Granger (2001) two step error correction model method was also is employed for model estimation. The models are:

$\Delta EPS_t = \alpha_0 + \alpha_1 DPS + \alpha_2 U_{t-1} + \varepsilon_t$ …… (3)

$\Delta EPS_t = \alpha_0 + \alpha_1 DPS + \alpha_2 RES_{t-1} + \varepsilon_t$…….(4)

Where; Δ = first difference analysis on the respective variables.

α_1 = coefficient of the short-run relationship between the dependent and independent variable

α_2 = coefficient of the long run relationship between the variables with a priori expectation of -1

U_{t-1} or RES_{t-1} = residual from the linear integrated in order I(1) and ε_t = disturbance term.

Result

Descriptive Statistics

Table 1: Summary Statistics

	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
Mean	197.182	293.809	664.090	850.3	673.541	956.092
Median	194	400	720	841	730	1000
Maximum	289	507	998	1206	1120	1402
Minimum	79	104	290	611	140	328
Std. Dev.	104.583	153.635	201.853	170.071	340.150	318.451
Skewness	0.424	-0.492	-0.410	0.332	-0.226	-0.363
Kurtosis	1.544	1.901	2.005	2.530	1.666	2.000
Jarque-Bera	3.463	2.976	2.310	0.822	2.675	2.103
Probability	0.167	0.213	0.3113	0.615	0.253	0.342

Source: E-view 9

The Jarque-Bera (JB) test in table 1above is a test of the distribution of the error term. It uses the first 4 moments of the distribution – the mean, standard deviation, skewness and kurtosis. The results of the JB test had probability greater than 0.05, and the normality assumptions of the regression residuals for all the estimated equations were not rejected. The variables used for the regression residuals followed a normal distribution, which meant that the OLS estimates obtained were efficient and consistent.

Correlation Analysis

The correlation matrix above shows the strength and direction of relationship between the variables. It is reveal that EPS have strong positive relationship with MOBIL-DPS (r = 0.72), CONOIL-DPS (r = 0.82), EPS01 (r = 0.41), TOTAL-DPS (r = 0.97) and EPS02 (r = 0.91) respectively. This means that an increase in the variables will increase EPS.

Table 2: Correlation Matrix

	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02

MOBIL_DPS	1	0.7197	0.2532	-0.1213	0.6589	0.7618
EPS	0.7197	1	0.8225	0.4082	0.9742	0.9108
CONOIL_DPS	0.2532	0.8224	1	0.7968	0.8824	0.7142
EPS01	-0.1214	0.4082	0.7968	1	0.5076	0.2752
TOTAL_DPS	0.6588	0.9742	0.8824	0.5076	1	0.9044
EPS02	0.7618	0.9108	0.7142	0.2752	0.9044	1

Source: E-view 9

Stationarity Test

The result of the ADF and Philip Peron unit root test is presented in table 4.3 and 4.4 respectively.

Table 3:**Augmented Dickey-Fuller (ADF) and Philip-Peron (PP) Unit Root Tests**

	ADF Unit Root			**PP Unit Root Test**		
Variables	Adf Stat	Order of Diff	Remark	PP Stat	Order of Diff	Remark
MOBIL-DPS	1.97592	1(0)	Non-Stationary	1.97592	1(0)	Non-Stationary
	8.06887	1(1)	Non-Stationary	8.41233	1(1)	Non-Stationary
	16.5698*	**1(2)**	**Stationary**	**17.2510***	**1(2)**	**Stationary**
EPS	0.61972	1(0)	Non-Stationary	0.05986	1(0)	Non-Stationary
	12.3967**	**1(1)**	**Stationary**	**56.4019***	**1(1)**	**Stationary**
	11.8554***	**1(2)**	**Stationary**	**55.2620***	**1(2)**	**Stationary**
CONOIL-DPS	1.80474	1(0)	Non-Stationary	1.72027	1(0)	Non-Stationary
	9.68093	1(1)	Non-Stationary	9.44047	1(1)	Non-Stationary

	19.6668*	**1(2)**	**Stationary**	**19.6668***	**1(2)**	**Stationary**
	3.95637	1(0)	Non-Stationary	3.65496	1(0)	Non-Stationary
EPS01	3.02932	1(1)	Non-Stationary	0.15519	1(1)	Non-Stationary
	6.75709* **	**1(2)**	**Stationary**	**6.62161***	**1(2)**	**Stationary**
	2.73612	1(0)	Non-Stationary	2.95914	1(0)	Non-Stationary
TOTAL-DPS	10.0127	1(1)	Non-Stationary	18.5065*	1(1)	S**tationary**
	13.4753**	**1(2)**	**Stationary**	**26.3091***	**1(2)**	**Stationary**
	12.1520**	**1(0)**	**Stationary**	**12.1520***	**1(0)**	**Stationary**
EPS02	**29.6882***	**1(1)**	**Stationary**	**49.5709***	**1(1)**	**Stationary**
	12.1420**	**1(2)**	**Stationary**	**55.2620***	**1(2)**	**Stationary**

*, ** and *** indicates stationary at 1%, 5% and 10% respectively

Source: E-view 9

Looking at the ADF and PP statistic it reveal that at levels, only EPS02 was stationary and after differencing twice all the variables considered became stationary at order two that is 1(2). Since it is required theoretically that all variables must be integrated of the same order in VAR model, the ADF and PP are selected for the purpose for the study because they met these criteria.

Co-integration Test

The Pedroni, Kao and ADF Test were used to ascertain the long run relationship between the variables under consideration; the result is presented as follows;

Table 4:**Panel Co-integration Tests**

Pedroni Residual Cointegration Test				
Estimation	Statistic	Prob	Weighted Stat	Prob
Panel v-Statistic	0.14084	0.444	0.1408	0.444
Panel rho-Statistic	2.2253	0.987	2.2253	0.987
Panel PP-Statistic	-6.1102*	0.000	-6.1102	0.000
Panel ADF-Statistic	NA	NA	NA	NA

Kao Residual Cointegration Test				
ADF	4.8496*	0.0000		
Augmented Dickey-Fuller Test Equation				
RESID(-1)	-5.2441*	0.0000		
*stationary at 1% level of significance				

Source: E-view 9

The Pedroni Residual test on the panel PP-stat rejects the null hypothesis of no co-integrating relationship between the variables. But the Kao and ADF rejects the null hypothesis of no co-integrating relationship between the variables. Therefore, this means the variables converge in the long-run that is any variable that deviate after short-run shock will adjust back to equilibrium in the long-run.In table 5, the EPS modelshows the dynamic interaction between earnings and dividend payouts. It also reveals that the 1 and 2period lag used for MOBIL-DPS (-1) and MOBIL-DPS (-2) have no significant causality with current year EPS at 1% and 5% significance level. This does not spur EPS in the oil and gas sector significantly in Nigeria. Similarly, the 1 and 2 period lag for EPS (-1) and EPS (-2) has a significant causality with current year EPS. Their corresponding t-statistic value is> 2. This implies that how oil firms manage their previous year EPS influence on current year EPS positively. Similar, the 1 and 2 period lag for CONOIL-DPS and EPS01 have a non-significant causality relationship with current year EPS. This also implies that management attention to CONOIL and EPS01 in Nigeria economy has not yielded the desire result in promoting EPS in Nigeria oil industry.

Similarly, for the 1 and 2 period lag for TOTAL-DPS and EPS02, only the 1 year lag for TOTAL-DPS (-1) and EPS (-1)) that have a significant causality with current year EPS. This implies that an increase in the variables could spur up EPS during the period. The coefficient of determination (R^2) and Adjusted (R^2) for EPS model are 94% and 87% respectively. This means that all the variables employed in the EPS model account for about 87% approximately of total systematic change in EPS in Nigeria. The F-statistic is significant at a value of 13.83 at 1% level. This implies that there is a significant relationship between all endogenous variables. Therefore, the overall goodness-of-fit of the model was on the affirmative.

Vector Autoregressive Estimation (VAR)

Table 5: Vector Autoregressive Result

	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
MOBIL-DPS(-1)	0.118677	0.027913	-0.118131	-0.218665	0.008027	0.110818
	(0.09139)	(0.03450)	(0.13428)	(0.20888)	(0.12350)	(0.15090)
	[1.29861]	[0.80917]	[-0.87977]	[-1.04687]	[0.06500]	[0.73436]
MOBIL-DPS(-2)	0.004852	-0.003488	-0.005989	-0.022463	0.010659	0.034058
	(0.04905)	(0.01849)	(0.07197)	(0.11196)	(0.06620)	(0.08089)
	[0.09891]	[-0.18864]	[-0.08322]	[-0.20063]	[0.16100]	[0.42104]
EPS(-1)	0.443014	0.280833*	-0.115444	-0.416872	0.540956	0.776381
	(0.19431)	(0.07442)	(0.28786)	(0.44774)	(0.26511)	(0.32362)
	[2.27991]	[3.77376]	[-0.40105]	[-0.93106]	[2.04046]	[2.39902]
EPS(-2)	0.060515	0.100503*	0.121555	0.028504	0.282702	0.234069
	(0.11731)	(0.04504)	(0.17378)	(0.27034)	(0.15990)	(0.19538)
	[0.51587]	[2.23162]	[0.69947]	[0.10544]	[1.76798]	[1.19801]
CONOIL-DPS(-1)	-0.032227	0.016138	0.067151	0.095203	0.039990	-0.001443
	(0.06080)	(0.02314)	(0.09081)	(0.14013)	(0.08286)	(0.10123)
	[-0.53002]	[0.69744]	[0.73943]	[0.67937]	[0.48262]	[-0.01425]
CONOIL-DPS(-2)	0.004344	0.013929	0.010165	0.003423	0.019040	-0.001663
	(0.03261)	(0.01241)	(0.04878)	(0.07516)	(0.04444)	(0.05431)
	[0.13319]	[1.12217]	[0.20838]	[0.04554]	[0.42839]	[-0.03062]
EPS01(-1)	-0.011047	0.001311	0.001031	0.015120	-0.028438	-0.018894
	(0.03989)	(0.01518)	(0.05910)	(0.09273)	(0.05436)	(0.06642)

	[-0.27692]	[0.08633]	[0.01745]	[0.16306]	[-0.52316]	[-0.28446]
EPS01(-2)	-0.001829	0.004080	-0.001430	-0.010887	-0.003223	-0.008670
	(0.02115)	(0.00805)	(0.03133)	(0.04922)	(0.02882)	(0.03522)
	[-0.08650]	[0.50688]	[-0.04563]	[-0.22120]	[-0.11183]	[-0.24619]
TOTAL-DPS(-1)	0.051154	0.054690*	0.060276	0.082733	0.142397	0.102530
	(0.06504)	(0.02478)	(0.09637)	(0.14990)	(0.08936)	(0.10831)
	[0.78650]	[2.20729]	[0.62545]	[0.55192]	[1.59360]	[0.94662]
TOTAL-DPS(-2)	0.017908	0.020277	0.004619	-0.015586	0.035340	0.028304
	(0.03497)	(0.01331)	(0.05181)	(0.08060)	(0.04811)	(0.05824)
	[0.51205]	[1.52293]	[0.08915]	[-0.19337]	[0.73457]	[0.48599]
EPS02(-1)	-0.021459	0.044658*	0.103476	0.071862	0.137789	-0.010519
	(0.05318)	(0.02025)	(0.07878)	(0.12256)	(0.07248)	(0.08926)
	[-0.40353]	[2.20562]	[1.31346]	[0.58633]	[1.90119]	[-0.11784]
EPS02(-2)	0.007729	0.006601	0.008413	0.010291	0.028942	0.023894
	(0.02891)	(0.01100)	(0.04282)	(0.06662)	(0.03939)	(0.04859)
	[0.26739]	[0.59991]	[0.19645]	[0.15448]	[0.73466]	[0.49171]
C	-8.285629	176.2535	602.1019	917.0948	190.8848	640.3803
	(74.6183)	(28.4134)	(110.587)	(172.235)	(101.703)	(124.389)
	[-0.11104]	[6.20317]	[5.44458]	[5.32468]	[1.87689]	[5.14821]
R-squared	0.749656	0.937859	0.403685	0.250638	0.869457	0.794797
Adj. R-squared	0.476553	0.870069	-0.246840	-0.566847	0.727047	0.570940
F-statistic	2.744959	13.83475	0.620553	0.306597	6.105312	3.550464

Standard errors are in ( ) while t-statistic are in [ ]

Impulse Response (IRF)

The IRF was used to traces how the changes in one variable impact on current and future values of the endogenous variables in the model and the results are presented in table 6 below. The impulse response of MOBIL-DPS to other variables from table 6 shows the impulse response of MOBIL-DPS to EPS, CONOIL-DPS, EPS01, TOTAL-DPS and EPS02. With the impulse is MOBIL-DPS, every response of EPS and TOTAL-DPS are all positive at each time responsive period. Almost all responses of CONOIL-DPS and EPS02 are positive except for period 2, and the value fluctuates around the zero line while every response of EPS01 is negative at each time responsive period.

Table 6: Impulse Response of Mobile-DPS

Response of MOBIL-DPS:						
Period	**MOBIL-DPS**	**EPS**	**CONOIL-DPS**	**EPS01**	**TOTAL-DPS**	**EPS02**
1	55.00535	0.000000	0.000000	0.000000	0.000000	0.000000
2	9.747997	12.64775	-0.955000	-0.048450	1.603275	-0.782640
3	2.913713	6.767139	3.587466	-2.088699	1.312344	1.025281
4	0.871374	5.439290	3.499947	-1.539323	0.993176	0.809188
5	0.674402	3.937069	2.619700	-1.268704	0.721195	0.686294
6	0.517855	3.002074	1.966112	-0.955028	0.540516	0.516487
7	0.400239	2.279804	1.490608	-0.725142	0.410031	0.392340
8	0.303379	1.733236	1.132957	-0.550172	0.311670	0.297602
9	0.230250	1.316575	0.860911	-0.418022	0.236810	0.226128
10	0.174836	1.000119	0.654019	-0.317559	0.179893	0.171783

With hen the impulse of EPS in table 7, the response of MOBI-DPS has an obvious fluctuation. We experience a highest positive effect on the 1st month and a lowest positive effect on the 10th month. The response of CONOIL-DPS has a smooth fluctuation and these are more varied on the third half of the year while all the response of EPS01 are negative and smooth in change. The response of TOTAL-DPS and EPS02 are positive and the change is smooth. And with the impulse of CONOIL-DPS in table 8, the response of MOBIL-DPS has also shown an obvious fluctuation. There is highest positive effect on the 4th month, lowest negative effect on the 3rd month and almost all responses of EPS are positive except for the 2nd year while there is distinctive effect on

the 2nd half year. The response of TOTAL-DPS and EPS02 has a smooth fluctuation and is positive while that of EPS01 were all negative.

Table 7: Impulse Response of EPS

Response of EPS:

Period	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
1	4.510935	23.34724	0.000000	0.000000	0.000000	0.000000
2	2.069487	7.048947	5.484567	-2.739266	1.345843	1.628723
3	0.189280	7.457998	5.087050	-1.870475	1.318583	0.998343
4	0.775447	4.719845	3.302309	-1.655236	0.889209	0.908925
5	0.622477	3.782609	2.465278	-1.190944	0.674261	0.644059
6	0.506895	2.838226	1.857828	-0.908854	0.510991	0.492302
7	0.378616	2.169529	1.416459	-0.686795	0.389666	0.371395
8	0.288071	1.645097	1.076029	-0.522645	0.295990	0.282746
9	0.218432	1.250296	0.817577	-0.396900	0.224877	0.214696
10	0.166027	0.949592	0.621004	-0.301554	0.170811	0.163128

Table 8: Impulse Response of Conoil-DPS

Response of CONOIL-DPS:

Period	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
1	-65.07519	32.51949	59.04271	0.000000	0.000000	0.000000
2	-9.265791	-3.940489	10.47362	-5.538740	1.187734	3.773917
3	-1.043772	3.269143	2.115951	-1.258366	0.343810	0.730585
4	0.794555	1.820674	1.112297	-0.853783	0.296819	0.491624
5	0.338810	1.859910	1.110725	-0.506499	0.309622	0.269673
6	0.243229	1.318975	0.868760	-0.421992	0.239856	0.228611
7	0.170976	1.014822	0.664189	-0.319120	0.182484	0.172398
8	0.133741	0.765114	0.501558	-0.243980	0.137879	0.132056
9	0.101640	0.582485	0.380819	-0.184873	0.104732	0.100003
10	0.077390	0.442269	0.289223	-0.140476	0.079554	0.075995

With the impulse is EPS01 in table 9, then every response of MOBIL-DPS, EPS, TOTAL-DPS and CONOIL-DPS are all positive at each time responsive period except for the 1st and 2nd period for EPS and CONOIL-DPS. All response of EPS02 are negative except for period 2 and 3 and the value fluctuate around the line zero.

Table 9: Impulse Response of EPS01

Response of EPS01:						
Period	**MOBIL_DPS**	**EPS**	**CONOIL_DPS**	**EPS01**	**TOTAL_DPS**	**EPS02**
1	-70.04907	44.77422	119.6647	33.13652	0.000000	0.000000
2	-20.40512	-6.365650	14.17257	-3.907389	2.012481	2.620895
3	-3.166529	-4.727646	-1.417108	-0.931423	-0.778640	0.654610
4	0.074229	-2.094040	-1.658841	0.421517	-0.488394	-0.193327
5	-0.069401	-1.256785	-0.973921	0.460850	-0.257897	-0.250511
6	-0.157161	-0.968021	-0.646667	0.324678	-0.175324	-0.176771
7	-0.135958	-0.746886	-0.484751	0.238892	-0.133413	-0.129398
8	-0.101210	-0.570026	-0.371282	0.180462	-0.102272	-0.097587
9	-0.075807	-0.432944	-0.282985	0.137303	-0.077866	-0.074261
10	-0.057431	-	-0.215026	0.10437	-0.059144	-

		0.328764		8		0.056462

Table10: Impulse Response of Total-DPS

Response of TOTAL-DPS:

Period	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
1	-18.75947	49.11851	56.46075	-13.16677	29.05705	0.000000
2	4.028616	11.08144	10.96905	-9.181325	3.386973	5.025363
3	4.302806	15.68573	8.537503	-5.014163	2.501074	2.669447
4	2.765095	11.48240	7.136041	-3.654869	2.038946	1.967351
5	1.594720	9.077462	5.842314	-2.777348	1.619359	1.493404
6	1.186658	6.761109	4.439018	-2.154555	1.222110	1.165577
7	0.893381	5.154563	3.371835	-1.634310	0.927134	0.883856
8	0.684068	3.908880	2.557263	-1.242603	0.703346	0.672284
9	0.519342	2.971395	1.942840	-0.943311	0.534390	0.510274
10	0.394656	2.256838	1.475843	-0.716664	0.405945	0.387685

Withthe impulse is EPS01 in table 10, every response of MOBIL-DPS, EPS, CONOIL-DPS and EPS02 are all positive at each responsive period except for the 1st period for MOBIL-DPS while all responses of EPS01 are negative.

While in table 11, on the impulse response of EPS02 almost all the response of MOBIL-DPS, EPS, CONOIL-DPS and TOTAL-DPS are positive except for the 1st period of EPS and TOTAL-DPS. All responses of EPS01 were negative and that of EPS02 are positive except for the 2nd period.

Table 11: Impulse Response of EPS02

Response of EPS02:						
Period	MOBIL-DPS	EPS	CONOIL-DPS	EPS01	TOTAL-DPS	EPS02
1	32.13940	-62.19566	28.82036	-46.18719	-5.447832	36.47143
2	8.753670	22.92384	3.139704	-1.490228	3.036524	-0.383631
3	7.288578	12.82203	6.112054	-4.739499	2.190402	2.513541
4	2.227581	11.10198	6.678261	-3.023716	1.935384	1.581202

5	1.424798	8.126664	5.352210	-2.559292	1.480563	1.380691
6	1.048066	6.134748	4.030065	-1.948834	1.107946	1.053662
7	0.812084	4.659689	3.050077	-1.482271	0.838555	0.801994
8	0.619555	3.539888	2.314648	-1.124522	0.636665	0.608346
9	0.470450	2.689988	1.758829	-0.854043	0.483795	0.461991
10	0.357269	2.043292	1.336174	-0.648803	0.367530	0.350971
Cholesky Ordering: MOBIL-DPS EPS CONOIL-DPS EPS01 TOTAL-DPS EPS02						

Variance Decomposition (VDC)

The results of the forecast error variance decomposition of the endogenous variables generated by the 6 variable, reduced VAR form model are shown in table. The impulse response functions trace the effects of a shock to one endogenous variable on other variables in the VAR, while the alternative variance decomposition was used to measures the proportion of forecast error variance in one variable explained by innovations in itself and the other variables. The results revealed that the percentage of variance explained by own shock for EPS falls to about 96% in the 1st quarter and continues to fall until it ends with an average of 84% at the end of the 10th period. This is evidence that EPS is endogenous with the remaining factors accounting for the volatility in EPS to varying degrees.

Table 12: Variance Decomposition of EPS: VAR (in percent of total variance)

Variance Decomposition of EPS:							
Period	**S.E.**	**MOBIL-DPS**	**EPS**	**CONOIL-DPS**	**EPS01**	**TOTAL-DPS**	**EPS02**
1	23.77903	3.598693	96.40131	0.000000	0.000000	0.000000	0.000000
2	25.71888	3.723774	89.91937	4.547583	1.134395	0.273832	0.401043
3	27.37207	3.292329	86.80949	7.468804	1.468474	0.473813	0.487090
4	28.06012	3.209220	85.43373	8.492037	1.745310	0.551284	0.568420
5	28.4680	3.16571	84.7681	9.000315	1.87065	0.59169	0.60343

	8	2	9		8	4	0
6	28.69713	3.146580	84.39861	9.276332	1.941219	0.613993	0.623265
7	28.82955	3.134986	84.19135	9.432705	1.980178	0.626634	0.634148
8	28.90555	3.128455	84.07312	9.521743	2.002471	0.633829	0.640386
9	28.94934	3.124690	84.00548	9.572717	2.015214	0.637947	0.643950
10	28.97458	3.122533	83.96663	9.601986	2.022537	0.640311	0.645999

Source: E-view 9

The VDC reveal the significant role of the nominal variables. At the 2nd quarter, the fraction of EPS forecast error variance attributable to variations in CONOIL-DPS is only about 5.0% approximately. It however, increases from the 3rdquarter up to about 7.5% and at the end of the 10thquarter, the contribution averages around 9.60%. The variance of TOTAL-DPS accounts for only about 27% in the 2nd quarter and increases to about 60% in the 5th quarter and increases further in the long-term to value of about 64% on average. The variance of MOBIL-DPS accounts for about 3.7% in the 2nd quarter decreases to about 3.2% in the 5th quarter and further decreases in the long-term to an average value of 3.1%. The overall finding is an evidence of the importance of nominal variables in EPS contributing to fluctuations in Nigeria.

The essence of this is that a number of scholars and investors in Nigeria have no knowledge and idea of dividend policy and their application in the country. As a result, they dash into investment without knowing the outcome of their investment. Revitalizing education per say is the only means through which the gap can be closed. This will enhance the understanding of dividend policy by scholars and investors thereby aiding economic development in Nigeria.

Conclusion and Policy Implication

The assumption that there are numerous variables that may affect earnings per share (EPS) and that there are different channels through which the Earnings Per Share (EPS) fluctuations of a firm can be shown and that the ultimate effect on firm performance may be lessened depending on the policy of the management in the industry concerned. This study adopted the Vector

Autoregressive (VAR) data based on annual time series for Nigeria to analyze the relative importance of the relationship between dividend payout rate and earnings in the oil and gas sector in Nigeria. The original test of the descriptive statistics and unit root were carried out. The correlation and co-integration test were also used to ascertain the direction and strength of the relationship between the variables. The unrestricted VAR, impulse response and variance decomposition were used to ascertain the dynamic relationship between dividends ratio and earnings.

The findings reveal that all the variables were integrated of order 1(2), with strong positive relationship between the variables. There is an evidence of a co-integrating relationship between the variables. The result further reveal that the past values of EPS, TOTAL-DPS and EPS02 nominal shock significantly contributes to EPS appreciation in the oil industry in Nigeria. Similar, the impulse response of EPS has a positive effect on the endogenous variables while except for EPS01. The impulse responses of MOBIL-DPS, CONOIL-DPS, TOTAL-DPS and EPS02 have a positive effect on EPS, and EPS01 has a negative effect on EPS. Based on the analysis, the study concludes that the endogenous variables used in the model are significant determinant of EPS in the Nigeria oil industry.

Policy Recommendations

The study recommends the follows:

1. The policy on EPS01 should be properly and seriously checked by the management of oil industry in Nigeria as it is one of the causes EPS decline in the industry.
2. Policy attention to MOBIL-DPS, CONOIL-DPS, TOTAL-DPS and EPS02 by the management is in the right direction. However, more serious policy attention should be paid to the achievement the desired objectives of increasing EPS in Nigeria oil industry to boost economy growth.
3. Lastly a more serious effort should be made to improve EPS and dividends payout to propagate awareness that promote investment in the oil sector in Nigeria economy.

References

Abubakar, J. and Umar, A. (2013), Crude Oil Prices and Foreign Exchange Rates: Evidence of Cointegration and Causality from Nigeria, *Financial Management*, 27(3), 73-82.

Adebisi,Adesola and Okwong (2012), An Empirical Study of Dividend Policy of Quoted Companies in Nigeria, *Global Journal of Social Sciences,* VOL. 8, No. 1

Adefila, J.J., Oladipo, J.A. &Adeoti, J.O. (2013). The effect of dividend policy on the market price of shares in Nigeria: Case study of fifteen quoted companies, Money Banks in Nigeria, Lapai *Journal of Management Science*, Vol. 7, No. 3, pp. 424-434

AhmaduAbubakar and AbdulkarimGarba (2017), Dividend Policy and Stock Price of Quoted Deposit

Al-Malkawi, H. N. (2007), Determinant of corporate dividend policy in Jordan, *Journal of Economicand Administrative*,23(3), 44-71.

Al-Kuwari, D (2009), Determinants of the Dividend Policy in Emerging Stock Exchanges: The Case of GCC Countries", *Global Economy & Finance Journal*, 2(2).38-63.

Alzomaia, M. and Al-Khadhiri, A. (2013), Determination of Dividend Policy: The Evidence from Saudi Arabia, *International Journal of Business and Social Science* 4(1).

Engle R.F., & Granger, C.W.J. (2001), Co-integration and the Error Correction Presentation, Estimation and Testing, *Econometric* pp. 255-276

Gill, A., Biger, N. and Tibrewala, R. (2010). Determinants of Dividend Payout Ratios: Evidence from United States", *The Open Business Journal*, 3, 8-14.

Islam, T., Aamir, M., Ahmad, A. and Saeed, M. (2012), Determinants and Motivators of dividend Policy: A Pakistan Cement Industry, *Mediterranean Journal of Social Sciences 3(2), 103-108.*

Maladjian, C. and El Khoury, R. (2014). Determinants of the Dividend Policy: An Empirical Study on the Lebanese Listed Banks, *International Journal of Economics and Finance*; 6(4); 240-256.

Mlonzi, V.F., Kruger, J. and Nthoesane, M.G. (2011).“Share price reaction to earnings announcement on the JSE-ALtX: A test for market efficiency”, *Southern African Business Review,* (15), 3.

Musiega, M.G., Alala, O.B., Musiega, D., Maokomba, O. C., and Egessa, R. (2013). Determinants of Dividend Payout Policy among Non-Financial Firms On Nairobi Securities Exchange, Kenya, *International Journal OfScientific & Technology Research,* 2(10), 253-266

Nuredin, M., (2012). Determinants of Dividend Policy of Insurance Companies in Ethiopia, A thesis Submitted to the Department of Accounting and Finance in partial fulfillment of the requirements for the Degree of Master of Science (Accounting and Finance) Addis Ababa University, Ethiopia.

Nwidobie, B. M. (2013). Agency Conflict and Corporate Dividend Policy Decisions In Nigeria, *Asian Economic and Financial Review*, 3(8):1110-1121.

Oliver Ike Inyiama&, Ugah Helen (2015), Interactions between Earnings and Dividend Payout Rate in the Oil and Gas Sector: Evidence from Nigeria (2004-2014), *International Journal of Finance and Accounting* 2015, 4(5): 253-261

Tsuji, C. (2010). What Are The Determinants Of Dividend Policy? The Case Of The Japanese Electrical Appliances Industry, *Business and Economics Journal,* 9, 1-16.