

FIRM CHARACTERISTICS AND CORPORATE RESERVE OF QUOTED OIL AND GAS FIRMS IN NIGERIA

Chukwuka Lilian Ijeoma¹; Okegbe, Theophilus O¹; Amahalu, Nestor Ndubuisi¹; Obi, Juliet Chinyere¹

¹ Department of Accountancy, Nnamdi Azikiwe University Awka, Anambra State, Nigeria

Abstract

This study examined the relationship between Firm Characteristics and Corporate Reserve of quoted Oil and Gas firms in Nigeria for eleven (11) years period spanning from 2010-2020. Specifically, three objectives were formulated. Purposively, eleven (11) quoted Oil and Gas firms constituted the sample size of this study between 2010 and 2020. *Ex-Post facto* research design was adopted while secondary data were extracted from the annual reports and accounts of the sampled Oil and Gas firms and were analysed using E-Views 10.0 statistical software. This study utilised descriptive statistics and inferential statistics via Pearson correlation and multiple regression analysis. Findings from the empirical analysis showed that there is a significant and positive relationship between firm size, liquidity, leverage and retained earnings at 5% level of significance respectively. It was recommended amongst others that for firms to sustain the positive relationship between firm Characteristics and corporate reserve, firms need to change from the basic resources-driven growth model to the knowledge-based growth model in the context of the globalization process and increasing competition pressure for higher economic performance.

Keywords: Firm Size, Liquidity, Leverage, Retained Earnings

Background of the Study

Companies all over the world are increasingly becoming aware of the importance of financial management, with emphasis on investment and retention policies, as a veritable tool for efficient business management, this soft landing for the firms are created in the forms of reserves to help it embark on projects that will help propel the organization. Corporate reserves are liquid assets (cash) held by firms in order to meet expected future payments and/or emergency needs (Ezechukwu & Amahalu, 2020). Reserves also known as retained earnings are portions of a business's profits which have been set aside to strengthen the business's financial position. It is the profit achieved by a company where a certain amount of it is put back into the business which can help the business in their rainy days. Reserves are often used to purchase fixed assets, to repay debts or to fund expansions, bonuses, and dividend repayments. Firms create capital reserve for long-term capital investment projects or other large anticipated future expenditures.

The reserve is made to guarantee availability of fund to finance their anticipated projects which might include fixed asset replacements that are not expenditure on purchase of goods or period expenses. Oil and gas firms invest so much on heavy equipment and fixed assets resulting in huge capital outlay which has to be accumulated over time.

Firm characteristics are those attributes such as firm size, leverage, liquidity, sales growth, capital, firm age, dividend, market share, off balance sheet activities, operating expenses, among others, that affect the operations of a firm (Ezechukwu & Amahalu, 2017). It is concerned with the ability of firms to source for funds to be used as capital to finance their operations and settle their short terms financial obligations as at when due using their current assets in order to gain the confidence of creditors and other lenders of funds as well as minimization of operating expenses for performance improvement. Several strands of literatures have examined the relationship between firm characteristics and corporate reserve and yet no conclusion has been reached. For example, Mohammadreza, Faraji, Sajadpour and Alipour (2020); Haj, Ayadi and Hussainey (2019) recorded a negative relationship between firm characteristics and financial performance. Fama and French (2021); Issal, Ayadi and Hussainey (2020) found a non-significant relationship between firm characteristics and financial performance, while Mbonu and Amahalu, (2021a); Okegbe, Eneh and Amahalu (2019) reported that firm characteristics have a positive relationship with firm performance. The divergent views of these studies lead to a gap in literature which this study tends to fill. It is against this that this study sought to determine the relationship between firm characteristics and corporate reserves of quoted oil and gas firms Nigeria.

Objectives of the study

The main objective of this study is to ascertain the relationship between Firm Characteristics and Corporate Reserve of quoted Oil and Gas firms in Nigeria.

. The specific objectives were to:

- i. Determine the relationship between Firm Size and Retained Earnings of quoted Oil and Gas firms in Nigeria
- ii. Ascertain the relationship between Liquidity and Retained Earnings of quoted Oil and Gas firms in Nigeria
- iii. Assess the relationship between Leverage and Retained Earnings of quoted Oil and Gas firms in Nigeria

Research Hypotheses

The following null hypotheses were formulated to proffer solutions to the research questions

H₀₁: There is no significant relationship between Firm Size and Retained Earnings of quoted Oil and Gas firms in Nigeria

H₀₂: There is no significant relationship between Liquidity and Retained Earnings of quoted Oil and Gas firms in Nigeria

H₀₃: There is no significant relationship between Leverage and Retained Earnings of quoted Oil and Gas firms in Nigeria

Conceptual Review

Firm Characteristics

Firm characteristics can be defined as the wide varieties of information disclosed in the financial statement of business entities that serve as the predictors of the firms' quality of accounting information and performance (Gabriel & Nucu, 2020). Firm characteristics can also be defined as the behavioral patterns of company's operation which can enable them to achieve their objectives throughout the period of their operations. Also firm characteristics refer to the various accounting information reported by firms in their financial statements for a particular accounting period which can send a message to various stakeholders of firms about their performance. Company's characteristics vary from one business entity to another. The company's characteristics can be determined based on the relevant information disclosed on its financial statements for a particular accounting period (Egolom, Amahalu & Obi 2019).

Firm Size

A firm is a for-profit business organization such as a corporation, limited liability company (LLC), or partnership that provides professional services (Will, 2020). The size of a business unit means the size of a business firm. It means the scale or volume of operation turned out by a single firm. The term 'size of business' refers to the scale of organization and operations of a business enterprise. One of the most important entrepreneurial decisions in organizing a business is realizing its 'size' as it affects in company and profitability of business enterprises. In an industry there are firms of varying sizes. The costs of production in these firms of different sizes vary. Economists are concerned with the best size of a business unit, that is, a firm in which the average cost of production per unit is the lowest (Amahalu, Abiahu., Okika & Obi, 2016).

Liquidity

Liquidity refers to the efficiency or ease with which an asset or security can be converted into ready cash without affecting its market price. The most liquid asset of all is cash itself. Liquidity is a measure companies uses to examine their ability to cover short-term financial obligations (Okoye, Amahalu, Nweze & Obi , 2016). It's a measure of business's ability to convert assets or anything a company owns with financial value into cash. Liquid assets can be quickly and easily changed into currency.

Leverage

Leverage simply means the presence of debt in the capital structure of a firm. Similarly, in other words, we can also call it the existence of fixed-charge bearing capital which may include preference shares along with debentures and term loans. Leverage is an investment strategy of using borrowed money specifically, the use of various financial instruments or borrowed capital to increase the potential return of an investment. Leverage can also refer to the amount of debt a firm uses to finance assets (Omabu, Okoye & Amahalu, 2021). Leverage is the use of debt (borrowed capital) in order to undertake an investment or project. The result is to multiply the potential returns from a project. At the same time, leverage will also multiply the potential downside risk in case the investment does not pan out. When one refers to a company, property, or investment as highly leveraged, it means that item has more debt than equity (Will, 2021).

Corporate Reserves

Reserves are portions of a company's profits that are set aside for specific or general purposes. Reserve means an appropriation of profits or other surpluses to strengthen the liquid resources of the business enterprise and not for meeting any liability, contingency or any commitment of the business (Sharma, 2021). Reserve means the amount set aside out of profit and other surpluses, which are not earmarked in any way to meet any particular liability known to exist on the date of Balance Sheet Corporate reserve also known as retained earnings refer to the portion of a company's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out as dividends to shareholders. Retained earnings is retention ratio or retained surplus which represent the percentage of net earnings not paid out as dividends but retained by the company to be reinvested in its core business, or to pay debt. This is recorded under shareholders' equity on the statement of financial position

Retained Earnings

Retained earnings also referred to as revenue reserve is the reserve that is created out of the profits of the company generated from its operating activities during a period of time and retained for the purpose of expanding its business or to meet out contingencies in the future. It is created from the net profit generated from the company's core operations. Companies create revenue reserves to quickly expand the business. It is one of the best resources for internal finance (Ndulue, Okoye & Amahalu, 2021). Revenue reserve is that portion of the net earnings of a corporation that is reserved by the firm rather than disperses it to shareholders as dividends.

Firm Characteristics and Corporate Reserve

Internal financing which involves a firm using its reserved profit has no financial obligation on the firm as the firm does not have to pay the costs associated with external funds. However, the use of revenue reserves is against the wishes of shareholders for an increased dividend payout. Dividend payout issues had been a very pertinent decision in the performance appraisal of firms (Mbonu, & Amahalu, 2021b). Dividend payout policy stipulates how dividends are revenue reserves are handled in a firm. Revenue reserve is a major source of finance for the growth of a firm. Huerger and Moreno (2017) submit that the level of internally sourced funds conveys information about the growth prospects of companies. Firms that want to attain the highest possible growth pay lower dividends, reinvest a significant proportion of their revenues and provide a greater percentage of their total returns in the form of capital gains. Firms with a few investment opportunities would pay more dividend than firms with lots of investment opportunities because they have profitable uses for the capital (Honjo, 2018). Revenue reserve has no transaction cost and bankruptcy cost, hence, it is the cheapest source of finance available to a firm. Amahalu and Ezechukwu (2017) state that the more organizations reserve a proportion of their revenue for investment in research and development, the more they grow and expand. Hathaway, Bell-Masterson and Stangler (2013) found a negative relationship between retained earnings and firm performance.

Theoretical Framework

Agency Theory

Agency theory which was developed by Jensen and Meckling (1976) is concerned with contractual relationship between two or more persons called the agent(s) to perform some services on behalf of the principal. Jensen and Meckling (1976), states that in agency theory, agents have more information than principals and this information asymmetry adversely affects the principals' ability to monitor whether or not their interests are being properly served by the agents. Agency theory opines that moral hazard constitutes a situation where to maximize their own wealth; agents may face the dilemma of acting against the interests of their principals (Amahalu & Obi, 2020a). Since principals do not have access to all available information at the time a decision is being made by an agent, they are unable to determine whether the agent's actions are in the best interest of the firm. To reduce the likelihood of the moral hazard, principals and agents engage in contracting to achieve optimality, including the establishment of monitoring processes such as auditing (Amahalu & Obi, 2020b).

Empirical Review

Lotto (2020) investigated the determinants of dividend policy in Tanzania for the period 2008–2017. The study reported profitability, liquidity, firm size, leverage, firm growth, previous dividend, and GDP as the major determinants of corporate dividend policy. The regression results showed that leverage, firm growth, and GDP are negatively related to dividend payout ratio while firm size, profitability, liquidity, and lagged dividend are positively related to dividend policy.

Magerakis, Gkillas, Tsagkanos and Siriopoulos (2020) used panel data regression analysis on a sample of 6629 non-financial and non-utility listed companies in the United Kingdom from 2010 to 2018 to study the financial determinants of cash holdings. The study found that the correlation between cash and size is negative and significant at the 1% level, indicating that larger firms are associated with lower cash holdings. Smaller firms (size) tend to have higher cash, larger cash flows, and lower growth opportunities. It was also found that cash was negatively correlated with leverage.

Wang, Wang and Sheng (2021) examined the relationship between corporate financialization and reserve using microeconomic non-financial panel data from Chinese firms in the 2007 to 2018 period. The panel least square regression results showed a positive relationship between corporate financialization and corporate reserve at 5% level of significance.

Methodology

Research Design

The research design that was employed in this study was *ex-post facto* research design. *Ex-post facto* research design would be utilised in order to establish a meaningful relationship between firm characteristics and corporate reserves and the effect thereof. This study was treated as *ex-post facto* research since it basically relied on secondary data.

Population of the Study

The population of this study consisted of all the twelve (12) oil and gas companies listed on the Nigerian Stock Exchange as at 31st December, 2020. They include: 11 Plc (formerly Mobil Oil Plc); Anino International Plc; Capital Oil Plc; Conoil Plc; Eterna Plc; Ardova Plc (formerly Forte Oil Plc); Japaul Oil & Maritime Services; MRS Oil Nigeria Plc; Oando Plc; Rak Unity Petroleum Company Plc; Seplat Petroleum Development Company Plc; Total Nigeria Plc.

Sample Size and Sampling Technique

Purposive sampling technique was adopted to select eleven (11) listed oil and gas companies that consistently filed their annual reports with the Nigerian Stock Exchange for the study period (2010-2020), these are: 11 Plc (formerly Mobil Oil Plc); Anino International Plc; Capital Oil Plc; Conoil Plc; Eterna Plc; Japaul Oil & Maritime Services; MRS Oil Nigeria Plc; Oando Plc; Rak Unity Petroleum Company Plc; Seplat Petroleum Development Company Plc; Total Nigeria Plc.

Source of Data

This study basically utilised secondary data that were extracted from the annual reports and statements of account of the sample listed oil and gas companies.

Table 1 Measurement of Variables

Variable	Symbol	Variable Type	Formula
Firm Size	FSZ	Independent	Natural log of total assets
Liquidity (Current Ratio)	LQD	Independent	$\frac{\text{Currents Assets}}{\text{Current Liabilities}}$
Leverage	LEV	Independent	$\frac{\text{Total Debt}}{\text{Total Equity}}$
Retained Earnings	REN	Dependent	Current Retained Earnings + Profit/Loss – Dividends

Model Specification

This study adapted the model of Mbonu and Amahalu (2021):

$$DER = \beta_0 + \beta_1 FSZ + \beta_2 LIQ + \beta_3 RVG + \mu_{it} \quad \text{eq (i)}$$

Where

DER = Debt-to-Equity Ratio

RVG = Revenue Growth Reserve

Thus, the following models were constructed in line with the objectives of the study

$$\begin{aligned} \text{REN}_{it} &= \beta_0 + \beta_1 \text{FSZ}_{it} + \mu_{it} && - && - && - && \mathbf{H_{01}} \\ \text{REN}_{it} &= \beta_0 + \beta_1 \text{LIQ}_{it} + \mu_{it} && - && - && - && \mathbf{H_{02}} \\ \text{REN}_{it} &= \beta_0 + \beta_1 \text{LEV}_{it} + \mu_{it} && - && - && - && \mathbf{H_{03}} \end{aligned}$$

Thus,

$$\text{REN}_{it} = \beta_0 + \beta_1 \text{FSZ}_{it} + \beta_2 \text{LIQ}_{it} + \beta_3 \text{LEV}_{it} + \mu_{it} \quad - \quad - \quad - \quad \mathbf{H_{04}}$$

Where:

β_0 = Constant term (intercept) of the study model

β_1 - β_3 = Coefficients of the independent variable

μ_{it} = Error term (Stochastic Term) of firm i at time t

REN_{it} = Retained Earnings of firm i at time t

FSZ_{it} = Firm Size of firm i at time t

LIQ_{it} = Liquidity of firm i at time t

LEV = Leverage of firm i at time t

Data Presentation and Analysis

Table 2: Pearson Correlation Matrix

	REN	FSZ	LIQ	LEV
REN	1.0000			
FSZ	0.5648	1.0000		
LIQ	0.0973	0.0511	1.0000	
LEV	0.0366	-0.0483	-0.2965	1.0000

Source: E-Views 10.0 Correlation Output, 2021

Interpretation

The result of the Pearson correlation matrix in table 2 revealed the existence of a positive relationship between FSZ (0.5648), LIQ (0.0973), LEV (0.0366) and REN respectively.

Test of Hypothesis

Table 3 Multiple Regression analysis showing the relationship FSZ, LIQ, LEV and REN

Dependent Variable: REN

Method: Least Squares

Date: 12/04/21 Time: 16:52

Sample: 2010 2020

Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.63321	0.350956	33.14718	0.0000
FSZ	3.383211	0.763550	4.430898	0.0016
LIQ	4.481253	1.177537	3.805615	0.0042
LEV	4.463739	1.461363	3.054504	0.0157
R-squared	0.635705	Mean dependent var		4.512727
Adjusted R-squared	0.551007	S.D. dependent var		3.198975
S.E. of regression	3.116323	Akaike info criterion		5.386472
Sum squared resid	67.98028	Schwarz criterion		5.531161
Log likelihood	-25.62560	Hannan-Quinn criter.		5.295266
F-statistic	21.79160	Durbin-Watson stat		1.753785
Prob(F-statistic)	0.000000			

Source: E-Views 10.0 Regression Output, 2021

Interpretation of Regression Analysis

Table 3 shows that there is a significant positive relationship between FSZ, LIQ, LEV and REN of quoted Oil and Gas firms in Nigeria. This can be observed from the beta coefficient of (β_1) of 3.383211 with p value of 0.0016 which is significant at 5% level of significance for FSZ. LIQ has a beta coefficient (β_2) of 4.481253 with p value of 0.0042 which is significant at 5% level of significance. Similarly, LEV has a beta coefficient (β_3) of 4.463739 with p value of 0.0157 which is significant at 5% level of significance. Overall, the combined and the overall effect of the regressors - FSZ, LIQ and LEV on REN of quoted Oil and Gas firms in Nigeria, is shown on the model probability summary of the regression results. The F-statistic of 21.79160 with an associated Prob(F-statistic) of 0.000000 is statistically significant at 5%, which reveals that the model is well fitted, while the coefficient of determination, the adjusted R^2 of 0.551007, explains the individual variation of the dependent variable (REN) as a result of the changes in the independent variables (FSZ, LIQ and LEV). It can be said that FSZ, LIQ and LEV have combined predictive power of 55.10% in affecting REN of quoted Oil and Gas firms in Nigeria, while the remaining 44.90% is accounted for by other factors which are not captured in the model.

Decision

Since the P-value of the test = 0.000000 is less than 0.05 (5%), this study upholds that firm characteristics have a significant and positive relationship with corporate reserve of quoted Oil and Gas firms in Nigeria at 5% level of significance.

Summary of Findings, Conclusion and Recommendations

Findings

Based on the analysis of data, the following findings emerged:

- i. There is a positive relationship between Firm Size and Retained Earnings of quoted Oil and Gas firms in Nigeria.
- ii. There is a positive relationship between Liquidity and Retained Earnings of quoted Oil and Gas firms in Nigeria.

- iii. There is a positive relationship between Leverage and Retained Earnings of quoted Oil and Gas firms in Nigeria.

Conclusion

This study examined the relationship between Firm Characteristics and Corporate Reserve of quoted Oil and Gas firms in Nigeria. This study obtained data from annual reports and account and publications from Nigeria stock exchange for the Oil and Gas that operated during 2010-2020. In addition, the effects of specific firm characteristics, such as firm size, liquidity and leverage on retained earnings were assessed. To determine the relationship that exists amongst the variables, Pearson correlation coefficient, and multiple regression estimate were employed. This study revealed that there is a significant and positive relationship between firm size, liquidity, leverage and retained earnings at 5% level of significance respectively.

Recommendations

The following recommendations were made in line with the findings and conclusion of this study:

- i. In order to sustain the positive relationship between firm size and corporate reserve, firms need to change from the basic resources-driven growth model to the knowledge-based growth model in the context of the globalization process and increasing competition pressure for higher economic performance.
- ii. Regulatory authority should put in place appropriate policy with compliance measures to check high volume of cash transaction and cash hoarding prevalent in the economy. This is important because liquidity management is cumbersome and may be ineffective in an economy that operate solely on large volume of cash transaction or conducts a large proportion of its transactions in cash.
- iii. Increasing investments in companies' assets by focusing on internal financing, such that large-sized companies with low leverage will have a good performance.

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