THE INFLUENCE OF CORPORATE GOVERNANCE ON FIRM VALUE: EVIDENCE FROM QUOTED NIGERIAN PETROLEUM COMPANIES

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ABSTRACT: In this study, we investigated the relationship between corporate governance and firm value of Nigeria quoted petroleum companies. This study used seven quoted petroleum companies in Nigeria that have consistently published their audited annual financial reports between 2008 to 2013 and to ensure adequate observation for statistical testing, we adopted a panel multiple regression analysis to identify how the possible firm’s specific corporate governance attributes influence firms value in the selected Nigerian quoted petroleum companies. To this end, we conducted descriptive statistics, correlation matrix and panel regression analysis. In drawing our conclusion we used the random effect panel regression based on the hausman test, we observed that Directors shareholding had an insignificant and negative influence on the value of quoted petroleum companies in Nigeria. Board Size was had a positive and significant influence on the value of petroleum listed companies in Nigeria. In the case of Board gender, we discovered that large number of female in the board had a positive but insignificant impact on firm value of listed petroleum companies in Nigeria. Board Independence was also found to be positively impacting on firm value but its impact was statistically insignificant. We also observed that ownership concentration which a strong issue in corporate governance had a negative but insignificant influence on firm value of petroleum quoted companies in Nigeria. In the case of our control variables, The Log of total assets which proxies firm size had negative and significant impacts on firm value. This study therefore makes the following conclusions.

INTRODUCTION

The country assessment of 2008 on Nigeria’s Corporate Governance Report on the Observance of Standards and Codes (ROSC) benchmarks, laws and practice against the
Organization for Economic Cooperation and Development (OECD) principles of corporate governance focused primarily on the firms listed on the Nigeria Stock Exchange (NSE). The ROSC examined the set of rules and incentives by which management of firms are directed, controlled. Also the relationship among the board of directors, controlling shareholders, minority shareholders and other stakeholders (ROSC, 2004).

International good corporate governance practice revolves around four key elements: strong and professional boards of directors, strong shareholder rights, together with high levels of transparency and disclosure, all supported by a strong legal and enforcement framework. As such good corporate governance can enhance investor trust, attract outside investment, and demonstrate a country’s commitment to observe international standards. Ultimately, good corporate governance contributes to sustainable economic development through enhancing the performance of firms thereby increasing their access to outside capital (Anya, 2002).

A sound corporate governance practice is particularly significant and important for the Nigerian petroleum industry considering that its operations are volatile and riskier than many other types of firms; the character of assets and liabilities are more opaque, leading to an asymmetry of information, less transparency and a greater ability to obscure existing and developing problems. Therefore good corporate governance complements effective supervision and allows supervisors to better allocate scarce resources (Anya, 2002).

In its full implementation, we believe good corporate governance should protect the interests of stakeholders, build and maintain public confidence, and ultimately contribute to the integrity and stability of the Nigerian petroleum industry. In several studies as by Black (2001), Gompers, Ishii and Metrick (2003), Wolfgang, Gugler and Hirschvogl (2004) and Bauer, Frijns, Otten and Tourani-Rad (2008), they had argued that the quality of governance components in the form of an efficient board of directors and appropriate ownership structure in a firm can increase firm value, as such, Black (2001) concluded that there are significant effects of the quality of governance components to firm value especially in countries with weak laws and weak governance behavior.

Gompers, Ishii and Metrick (2003) showed that there is a positive relationship between governance index and corporate performance in the long-term. Wolfgang, Gugler and Hirschvogl (2004) found that a firm’s rating has positive effect on firm value and returns to shareholders. Related to the influence of the quality of governance components on firm value, Berghe and Ridder (1999) stated that firms that performed poorly could be attributed to a poor governance culture. The effectiveness of the implementation of firm governance is desirable to management and other stakeholders of the firm because the implementation of good corporate governance may fail if firms in the same environment differ in the implementation quality of its governance components (Silveira, Leal, Silva and Barros, 2007).

Similarly, in studies by Heinrich (2002) and Ahunwan (2003), they clearly identified economic, market behavior, regulatory framework and social differences, in addition to the nature, direction, processes and magnitude of activities associated with the operations of firms. In view of the above, it is important to investigate the impact of corporate governance components as board size and composition, audit committee independence, institutional shareholdings,
ownership concentration, managerial shareholding and the effect of foreign ownership on the value of listed petroleum firms in Nigeria.

The sensitivity of Nigeria’s petroleum resources is clearly reflected in its importance to the Nigerian economy, because it still remains a major foreign exchange earner, contributing over 80% of government revenues and providing for the development of Nigeria’s infrastructures and other industries (Anya, 2002; Chukwu, 2002; Mathiason, 2006). According to the British Petroleum (BP) Statistical Energy Survey, Nigeria as a leading oil and gas producer in Africa currently ranks as the tenth largest oil producer in the world with proved oil reserves of about 37.2 billion barrels and estimates in excess of 187.5 trillion standard cubic feet of natural gas at the end of 2011 (Mbendi, 2014).

The foregoing underscores the vast investments potentials of the Nigerian petroleum industry, hence, investment decisions in the industry is likely to be influenced by firm value—which is the firms’ economic performance, and financial accounting information reported in annual financial statements which contains various variables and measures that indicates performance, and these variables and measures serve as yardsticks for the assessment of firms in the Nigerian petroleum industry by various stakeholders (Lehmann and Weigand, 2000).

These indicators as observed by Brennan and Schwartz (1985), Breuer (1999) and Xie, Davidson and DaDalt (2003) relative to some pre-established benchmarks, rules, and mechanisms influence the integrity of the financial statements as the primary source of information that captures firm value and ensures protection for shareholders, investors and suppliers.

The integrity of the financial statements depend largely on the quality of the financial information it contains. As such a new code of best corporate governance practices was introduced in the United States of America (US) in 2002 by the Sarbanes-Oxley Act and was also introduced in Nigeria in 2003. The code was introduced with a view to improving the monitoring of managers and protecting shareholders’ investments.

Corporate governance in the form of index had been widely used by researchers. Grzybkowski and Wojcik (2006) in their study of governance components for information technology firms mentioned that the rating methodology used by the rating agency was far from transparent, as such Grzybkowski and Wojcik (2006) then proposed a model for measuring the governance component implementation quality, called the Internet Based of Corporate Governance (IBCG) rating, which was fixed based on the OECD principles of corporate governance. The IBCG rating model which is an interaction between corporate governance with internet technology consisted of 120 criteria divided into five major components: board of directors, executive management, shareholders, transparency and technical accessibility.

**Statement of the Problem**

Corporate governance has become an important policy concern in Nigeria especially given a number of events that have raised the profile of corporate governance reforms. These events include the growth and decline in the Nigerian equity market, and the expansion in the number of shareholders, together with a variety of corporate scandals (ROSC, 2008). In a survey of disclosure practices commissioned by the World Bank (WB) and the International Finance
Centre (IFC), the survey suggested a relatively high compliance with several governance principles, but in practice certain problems remained. Among these are a number of governance practices that affected board performance, problems with the execution of certain shareholders rights, the disclosure of ownership of listed firms on the NSE, problematic implementation of firm audit committee, together with a relatively weak enforcement of some aspects of the corporate governance framework (ROSC, 2008).

So far evidence has shown that the existing literature on how good corporate governance contributes to improving firm value has several limitations (Rashid, 2008). Again, there are limited evidence that corporate governance practices across firms but within a single industry importantly affects firm value. In addition, in emerging economies such as in Nigeria, even with careful studies results have often failed to find statistically significant effects of corporate governance on firm value, and when significant results are found, they are often economically small.


Some other scholars examined monitoring mechanisms and transparency standards across firms in emerging markets; for example, Koller and Love (2002) and Black, Gledson-de-Carvalho and Gorga (2010) indicated that better corporate governance practices are significantly related to higher firm value and operating performance in emerging markets.

In Nigeria the SEC Code of Corporate Governance 2003 reviewed in 2012 addressed for firms listed on the NSE, identified weak corporate governance as a constraint to good corporate governance practice also associated volatilities in the Nigerian petroleum industry which includes crude oil theft, oil bunkering, pipe-line vandalism and the high rate of kidnapping of oil-workers, all impact on investment decisions in the Nigerian petroleum industry.

We have so far not been able to identify any study that had investigated the relationship between corporate governance components and its contribution to firm value for the Nigerian petroleum firms; and further, there has not been reported in literature any comparative analyses of the relevance of agency theory in shedding light on corporate governance components of board size, board composition, audit committee independence, institutional shareholding, ownership concentration, managerial shareholding and foreign ownership and firm value relations for firms in the Nigerian petroleum industry. Therefore, there is a need to undertake an empirical study of corporate governance components and their relation to firm value by incorporating the variables that are relevant to listed petroleum firms operating in Nigerian.
LITERATURE REVIEW

In this chapter, the conceptual issues that are relevant in understanding the research problems have been discussed..

Concept of Firm Governance

With the complexity of operations, owners’ roles are completely relinquished to managers who are saddled with the responsibility of utilizing the resources of the firm in the best interest of the shareholders. The separation of ownership from control turns the owner into principal, and the controller into an agent. Corporate governance arises as a consequence of the agency problem to mitigate the unavoidable conflict. As such Schleifer and Vishny (1997) argued that managers and shareholders should be able to enter into a binding contract that will ensure that shareholders’ interests in the firm are fully represented. Corporate governance as a concept does not have a consensus definition because of the inherent differences in firm structures and regulatory framework across industries and countries. However, these differences in definitions generally arise because of the disparities in economic, legal, social, and cultural settings of industries that operate in different countries. Supporters of this perspective such as Schleifer and Vishny (1997: 737-783) defined corporate governance as “the mechanism by which suppliers of funds exert control on managers in order to ensure that their capital is not only safe from being expropriated but can also earn a return on their investment.” This definition examined only one side of the argument by considering only the relevance of suppliers of funds and ignoring the important aspect of managers and the governance components that will lead to the convergence of managers’ and shareholders’ interests.

Characteristics of Firm Value

The term value refers to the utility or the benefit that can be derived from a good or an object (Wild, 1992). In finance, the term value refers to the price for which a good or object can be exchanged. Firm value is derived from the market’s expectations of firm performance, and accounting measures provides the necessary information for the market to form these expectations. Thus, the book value of equity represents past performance and current earnings are indicative of future performance. Therefore, these measures are commonly used as the basis for firm valuation (Penman, 1980; Easton and Harris, 1991; Wild, 1992; Ohlson, 1995).

The economic consequences of corporate governance are therefore reflected in firm value; as such accounting information must reflect firm value on the basis of the financial statements. However, for accounting information to reflect firm value a financial statement must be value relevant. Ball and Brown (1968) who were the first to attempt a value relevance test were motivated by their disagreement with a common opinion at the time that accounting income numbers cannot be defined substantively, and that they lack meaning and are therefore of doubtful utility. Thus, in their study they compared abnormal stock returns of firms with positive and negative unexpected incomes; their results clearly showed that stock returns are associated with earnings.

A firm’s financial performance is important, because its corporate governance components affects the functioning of the entire corporate body, that is why the study on
corporate governance focused also on policy systems which not only facilitates the operations of the firm but more importantly, enhances its value (Gompers, Ishii, and Metrick, 2003; Bebchuk, Cohen, and Ferrel, 2009. As the conceptual framework predicated the relevance of accounting information to decision makers; then low value relevance may be attributed to low reliability (Kormendi and Lipe, 1987; Collins and Kothari, 1989; Easton and Harris, 1991).

Bishop, Faff, Oliver and Twite (2004) and Bose (2004) suggested Tobin’s Q amongst a variety of methods widely used for firm valuation. Tobin’s Q as defined by Bhagat and Jefferis (2002), Gompers, Ishii and Metric (2003) and Beiner and Schmid (2005) is the ratio of market value of assets (equity and debt) to the replacement value of assets. According to Sarkar and Sarkar (2000) debt as an important component in the Tobin’s Q can be accurately valued. As such Tobin’s Q is widely used for firm valuation since the variables show the financial strength of the firm and thus serves as a proxy for firm value. A value of Tobin’s Q greater than one shows that a firm had created value for its shareholders; on the contrary, a value of the variable lower than one shows that the firm had not performed creditably. Tobin’s Q has been used as a dependent variable in several studies about corporate governance and firm value relationship (Agrawal and Knoeber, 1996; Loderer and Peyer, 2002; Beiner and Schmid, 2005).

Different researchers in literature calculate the proxy for Tobin’s Q in different ways. Capulongrd, Edwards, Webb and Zhuang (2000) used the ratio between market value of equity and debt to the replacement cost of assets as the proxy for Tobin’s Q. On the contrary, Klapper and Love (2004) calculated Tobin’s Q by taking the ratio of market value of equity and total assets of a firm. Similarly, Gompers, Ishii and Metric (2003) used the proxy for Tobin’s Q as a ratio between market value of assets to the book value of assets-the market value of assets was thus calculated by adding the market value of equity and book value of debt.

In their study, Klapper and Love (2004) found a positive effect of corporate governance on firm value as measured by Tobin’s Q, and another important finding is that corporate governance practices at firm level had meaning in emerging economies (Nigeria) than in the developed countries; this is consistent with the results of the study by Durnev and Kim (2002) concluded that firms that practice good corporate governance will have increased firm value. The results of these studies support the agency theory which suggests the importance of monitoring the relationship between agent and principal, and applying good corporate governance practices by the board is one of the implementation of the contract between agent and principal. Therefore, firms that implement good corporate governance practices would be in a better position to provide quality financial reports to investors thereby increasing the credibility of the financial statements.

Therefore, it can be predicted that the better the corporate governance practices adopted by a firm the higher the firm value. We therefore employed Doidge, Karolyi and Stulz’s (2001) approximation to calculate the Tobin’s Q as:

$$Tobin's\ Q_i = \frac{(TA_i - BE_i) + MV_E}{TA_i}$$

Where

- TA = book value of the total assets of a firm.
- BE = book value of a firm’s equity.
MVE = product of a firm’s share price and the number of outstanding common shares. We are particularly interested in using Tobin’s Q in order to gain comparative insights on the effectiveness variant of corporate governance components on firms in the Nigerian petroleum industry.

Governance Components and Firm Value

Corporate governance is an important factor that affects firm value. The components play an important role in affecting firm value by decreasing the agency cost (Yammeesri and Herath, 2010). The Organization for Economic Cooperation and Development (OECD) principles for corporate governance (1999) emphasized achieving social and economic sustainability by creating ample job opportunities in the economy, therefore firms can improve shareholders value and provide benefits to society by following the principles of corporate governance. Further, the disclosure of transparent financial information, the maintaining occupational health and safety, and developing the social and economic culture in an organization can also generate value for the shareholders.

Economic theory suggests that a firm is a nexus of contracts among the different parties and that the need for a regulatory framework for corporate governance arises due to the presence of incomplete contracts in the financial markets (Aghion and Tirole, 1997). This need is intensified by other factors such as market failure; under developed institutions together with incomplete contracts among different parties in the firm such as managers, shareholders suppliers and other stakeholders. All these affect firm value in a negative manner (Aghion and Bolton, 1992; Nam and Nam, 2004). Therefore, the correct procedure of contracting among the different parties in a market can decrease the agency cost, thereby increasing the value to shareholders (Zingales, 1998).

Corporate governance components stress that the control of the board is affected by several factors such as size, composition and the audit committee independence. The ownership structure component of firm governance includes institutional shareholding, ownership concentration, managerial shareholding and foreign ownership. Consequently, corporate governance encompasses the board of directors and an ownership structure (Makhija and Patton, 2004).

Board Size and Firm Value

The board of directors and its effectiveness as a governance component is one of the most widely studied topics in corporate governance literature, and this refers to the number of directors on the board. As a variable widely used in the literature offirm governance, its value is found by counting the number of directors on the board in afirm as argued by Pfeffer (1972) and Chaganti, Mahajan and Sharma (1985). Several research had focused on board characteristics such as size, composition, diversity, CEO duality and frequency of meetings and their relationship to firm value, with size and composition being the aspects most studied. Literature presents contradicting arguments on the relationship between board characteristics such as board size and composition and firm value (Short and Keasey, 1999; Adams and Mehran, 2002; Xie, Davidson and DaDalt, 2003; Miguel, Pindado and Torre, 2004; Wang, Chuang and Lee, 2010).
Board size plays an important role in corporate monitoring, as such Jensen (1976), Yermack (1996) and Eisenberg, Sundgren and Wells (1998) and Mak and Kusnadi (2005) argued that as board size increases it becomes less efficient due to slower decision making, but other studies such as Wintoki (2007) and Coles, Daniel and Naveen (2008) contended that size is not related to firm value by arguing that size is dependent on each individual firm’s need of advising or monitoring, size, and age.

On the other hand we agree with Coles, Daniel and Naveen (2008) who provided evidence that both very large and very small board sizes affect firm value. They believed that this happens due to business complexity. In support of Coles, Daniel and Naveen (2008), Raheja (2005) suggested that there is no optimal board size, since board size tends to depend on either advising or monitoring needs and this changes from firm to firm.

**Board Independence and Firm Value**

The management of any firm requires a board with strategic vision, in addition to efficient monitoring. Prior studies as those by Kogan and Wallach (1966) and Moscovici and Zavalloni (1969) on group decision making showed that it is generally harder for larger groups to reach an agreement, therefore final decisions of larger groups usually include more compromises which tend to be less extreme in smaller groups.

Literature on board composition and its relationship to firm value is mostly focused on board independence as measured by the proportion of non-executive directors on the board. On board composition, the Sarbanes-Oxley Act (2002) following agency theory principles proposed and set a requirement of a larger percentage of non-executive directors, because it was believed that a larger proportion of non-executive directors lead to greater board independence and better monitoring. This was supported by the belief that non-executive directors are less prone to be entrenched or allied with managers thus they are able to perform better monitoring and advising task (Dalton, Daily, Johnson and Ellstrand, 1999). Authors such as Weisbach (1988), Byrd and Hickman (1992) and Brickley, Coles and Terry (1994) supported this argument by mentioning that under special circumstances boards with a higher proportion of non-executive members add value to shareholders.

However, it is important to note that boards with too many members engender problems of coordination, control, and flexibility in decision-making. Also large boards give excessive control to the CEO, thereby harming efficiency (Yermack, 1996; Fernandez, Gómez, and Fernández, 1997; Eisenberg, Sundgren and Wells, 1998). Hence, the effect of board size on firm value is a trade-off between the advantages of monitoring and advising as against the disadvantages of coordination, control and decision making. Thus for supervisory boards, we differ with the general assumption that smaller boards are more effective at monitoring. This is due to lower co-ordination costs which produces better firm value as was confirmed in studies by Yermack (1996) and Eisenberg, Sundgren and Wells (1998).

This view is however not shared by all researchers though, as Dalton, Dailly, Johnson and Ellstrand (1999) and Coles, Daniel and Naveen (2008) argued that larger boards may be better for firms with greater advising requirements. Composition is also considered when discussing the advising requirements, because a distinction is made with regards to the independence of executive and non-executive directors. Due to this clear separation of outside
and inside directors and the one-board structure, studies on board size and composition had provided an excellent basis to explore their effects on board members. Based on the hypothesis that higher independence of directors should enable a more objective and thorough supervision, the impact of the share of inside to outside directors on firm value is measured. To this end, Hermelin and Weisbach (2003) found no significant relationship between non-executive directors and firm value as measured by Tobin’s Q, given that the monitoring and advisory functions of the board differ with firm characteristics and across industries. Thus, larger, growing and older firms devote more effort to stakeholder interest and less to monitoring managers (Adams, 2003). On the other hand, similar firms in the same industry have similar board structures, giving rise to similar governance practices among firms with similar characteristics (Macey & O’Hara, 2003).

The problem of research on the independence of directors remains that the degree of independence is unobservable (Hermalin and Weisbach, 2003). However in a survey of the study carried out on board composition and performance by Coles, Daniel and Naveen (2008), it was confirmed that this problem had no stringent impact on firm value. This builds on Raheja (2005) who argued that the optimal board structure is determined by the trade-off between maximizing the incentive for insiders to reveal their private information, minimizing coordination costs among outsiders and maximizing the ability of outsiders to reject inferior projects.

Composition of the board of directors is measured by using the proportion of non-executive directors, which is defined as the number of non-executive directors out of the total number of directors. Non-executive directors are often nominated for their beneficial impact on firm value, since their independence should minimize the inherent conflicts of interest between managers and shareholders (Linck, Netter and Yang, 2005).

**Board Gender and Firm Value**

Diversity on the board is clearly well encouraged in corporate governance literature. Such diversity as is often advocated include: combination of executive, independent and non-executive directors, diversity of experience and expertise and skill (Rhodes and Peckel, 2010). Other areas of diversity often ignored include: Social diversity, racial diversity and gender diversity.

**METHODOLOGY**

This study adopted the correlational research design in order to establish the link between corporate governance components and firm value. A correlational research design is used for measuring and establishing statistical relationships, association or the variability between two or more variables. It is most appropriate for this study because it allowed for the testing of expected relationships between and among variables, and it allowed for the making of predictions regarding these relationships; and being a positivist approach it is associated with scientific, experimental, quantitative and deductive frameworks where researchers seek specific quantifiable observations, by the use of statistics and experiments to test the hypotheses (Habbash, 2010).
The correlational research design enabled the researcher to test the adopted theory against the sampled observations which made the findings more generalized to the study’s population as a whole; and since this study investigated the impact of corporate governance components on firm value, the correlational research design was deemed to be the most appropriate.

Techniques of Data Analysis

In this study the Ordinary Least Square (OLS) multiple regression model as a tool for data analysis was used to reveal the relationship between corporate governance components, control variables and firm value. The regression specified the relationship among the dependent variable, independent variables and control variables. This method is very relevant and has dominated empirical research especially where the dependent variable is continuous.

Further, the study used Hausman Specification test to determine the choice between fixed effect (least square dummy variable) and random effect (generalized least square) regressions. This is in recognition of the fact that there is a trade-off between the efficiency of the random effect approach and the consistency of the fixed effect approach (Habbash, 2011). The fixed effect regression represents a common unbiased control for omitted variables in a panel set (Yermack, 1996). An important assumption of the fixed effect model is that those time-invariant characteristics are unique to the individual firms and should not be correlated with other firms’ characteristics. It removes the effect of those time-invariant characteristics from the predictor variables so that we were able to assess the predictors’ net effect.

The rationale behind random effects model is that, unlike the fixed effects model, the variation across entities is assumed to be random and uncorrelated with the predictor or independent variables included in the model, hence the role of the Hausman Specification test is to check for strict exogeneity. Thus, an essential assumption for selecting the random-effect estimation is that the unobserved heterogeneity should not be correlated with the independent variable. It is argued that if the researcher has a reason to believe that differences across the entities have some influence on the explained variable, and then the random effect regression should be used. If no correlation is found, random effects should be employed but if correlation exists, fixed-effects should be employed.

Additional robustness tests adopted in this research included the test for multicollinearity using the Variance Inflation Factor (VIF) and the Breuscht-Pagan/Cock-Weisberg test for heteroskedasticity to check for the fitness of model and reliability of findings. The study also checked for the presence of autocorrelation. A number of analyses was also carried out based on descriptive statistics which included the analysis of mean scores, standard deviation, minimum and maximum, correlation matrix together with the regression results. Also the statistical package E-views 7.0 was used to estimate the variables.

Model Specification

The study examined the relationship between corporate governance components and firm value. The general multi-factor valuation model is:

\[ \text{VOC} = f(\text{CGC}, \epsilon) \]

Where: \( \text{VOC} = \text{value of a firm} \)
CGC = corporate governance components  
ɛ = error term.

The model shows that the dependent variable firm value (regressand) can be affected by the independent variables (regressors) which are the corporate governance variables.

Two (2) control variables, return on assets and return on equity are included to control for exogenous factors in view of their direct relationship with firm value. Thus;

\[ \text{VOC} = f (\text{CGC}, \text{COV}, \varepsilon) \]  

Where VOC, (firm value) will be measured by Tobin’s Q, CGC (corporate governance components) stands for board size, board composition, audit committee independence, institutional shareholding, ownership concentration, managerial ownership and foreign ownership, while COV (control variables) represents return on assets and return on equity.

The functional relationship suggests that firm value can be affected by corporate governance components and the control variables. It specifies that the firm value (Tobin’s Q) depends on the corporate governance components and the control variables for the sampled firms. The functional relationship between the variables is given in the following regression equation as:

\[
Y_{it} = \alpha + \beta_1 X_{it} + \beta_2 X_{it} + \beta_3 X_{it} + \beta_4 X_{it} + \beta_5 X_{it} + \beta_6 X_{it} + \beta_7 X_{it} + \beta_8 X_{it} + \beta_9 X_{it} + \varepsilon_{it} \]

By incorporating the dependent and independent variables into the equation, the model of the study is as follows:

\[
\text{Tobin’s Q} = \alpha + \beta_1 \text{BSZ}_{it} + \beta_2 \text{BCP}_{it} + \beta_3 \text{BSZ}_{it} + \beta_5 \text{OWC}_{it} + \beta_6 \text{MSH}_{it} + \beta_9 \text{SIZE}_{it} + \varepsilon_{it} \]

Where: Tobin’s Q = Value of firm i at time t  
BSZ = Board size of firm i at time t  
BCP = Board composition of firm i at time t  
OWC = Ownership concentration of firm i at time t  
MSH = Directors shareholding of firm i at time t  
SIZE = Log of total asset of firm i at time  
\( a, \beta \) = Parameters to be estimated  
\varepsilon = error term

The sign of \( \beta_1 \) is negative as literature suggests a negative relationship between firm value and a bigger board. \( \beta_2 \) being the coefficient of board composition has a negative relationship with firm value. \( \beta_3, \beta_4, \beta_5, \beta_6, \) and \( \beta_7 \) are positive as audit committee independence, institutional shareholders, ownership concentration, managerial shareholding and foreign ownership did not harm firm value. Similarly \( \beta_8 \) and \( \beta_9 \) are positive as return on assets and return on equity has a positive relationship with firm value for the sampled firms.

### Variable Measurement

The dependent and independent variables of the study are measured as follows:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Measurement</th>
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<tr>
<td>Firm Value</td>
<td>Modified Tobin’s Q</td>
<td>Book value of total assets less book value of</td>
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equity, and market value of equity divided by total assets Doidge, Karolyi and Stulz (2001).

<table>
<thead>
<tr>
<th>Firm Value</th>
<th>TobinQ</th>
<th>Market Capitalization/Book Value of Equity</th>
</tr>
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<tbody>
<tr>
<td>BSZ</td>
<td>Board Size</td>
<td>Number of directors on the board (Pfeffer, 1972; Chaganti, Mahajan and Sharma, 1985).</td>
</tr>
<tr>
<td>BCP</td>
<td>Board Composition</td>
<td>The percentage of non-executive directors to total board size (Linck, Netter and Yang, 2005).</td>
</tr>
<tr>
<td>Board Gender</td>
<td>Ownership Concentration</td>
<td>The proportion of shares owned by the largest shareholders to total number of shares issued expressed as a percentage (Shleifer and Vishny, 1997).</td>
</tr>
<tr>
<td>MSH</td>
<td>Directors Shareholding</td>
<td>Total number of shares owned by management staff of a given firm to total number of shares issued expressed as a percentage (Morck, Shleifer and Vishny, 1988).</td>
</tr>
<tr>
<td>SIZE</td>
<td>Firm Size</td>
<td>Log of Total Asset</td>
</tr>
</tbody>
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Robustness Tests

Some tests were carried out to improve the robustness of the regression result. These tests included the:

(i) Multi collinearity Test: According to Cuthbertson (1996), multicollinearity takes place in a model when the independent variables are related to each other as such multicollinearity will arise in this study if the independent variables are related to each other. Multicollinearity will be detected when the model has a high $R^2$, but insignificant $t$ ratios for the studied variables. A high standard error of the variables will also be a sign of high collinearity. In contrast, indeterminate coefficients with large standard errors will show a perfect collinearity in all the variables (Gujarati, 1995). We will use correlation matrix table to test for perfect collinearity.

(ii) Autocorrelation Test: The relation of the error term in the first time period will be checked with the error term of the model in the next time period to detect autocorrelation within the model. The problem of autocorrelation will emerge if the error terms of the model for two different time periods are related to each other. The estimators of the model will be inefficient in the presence of autocorrelation, but remain consistent and unbiased. In addition, the econometric results of the hypotheses will not be robust in the presence of autocorrelation.

The Durbin Watson Test will be used to detect autocorrelation in the corporate governance firm value model. A value of Durbin Watson statistic lower or higher than two will show the presence of autocorrelation. In case of its presence new variables will be introduced to solve the problem.
Heteroscedasticity: The variance of the error term of the model will also be observed. The variable variance often leads to the problem of heteroscedasticity. The estimators of the modeling this case will be inefficient but will remain unbiased and will consistently make the results of study unreliable. White diagonal measures will be used to take care of the heteroscedasticity. Likewise this treatment will be used to correct the variance of the error term of the model. In this study, we also conducted some preliminary analysis, such as descriptive statistics and correlation matrix.

Added to the above, the variables for this study include Tobins Q performance metrics (TobinQ and TobinQ₁) as the dependent variables while the corporate governance metrics that are the independent variables were Directors shareholdings (DIRHOD), Board size (BSZ), Board independence (BOIND), Number of Female on the boards (FBD), Ownership Concentration (OWNC) and one control variables which is firm size (Log SIZE, proxied by log of total assets). In other to explore the pooled data collected from our sampled companies audited financial statement, we conducted a descriptive statistical analysis and Table 4.1 provides the summary of the descriptive statistics of the sampled 7 Nigerian quoted companies for over a six-year period (2008 to 2013).

DATA ANALYSIS AND INTERPRETATION
This chapter consists of the analysis of data. The data analysis consist of descriptive statistic, correlation and regression techniques.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
<th>Std. Dev</th>
<th>JB (P-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TobinQ</td>
<td>91.29</td>
<td>3330.158</td>
<td>0.276</td>
<td>513.0401</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>Tobin Q₁ (%)</td>
<td>30.89</td>
<td>1170.236</td>
<td>0.807</td>
<td>180.2285</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>DIRHOD</td>
<td>0.08</td>
<td>0.6007</td>
<td>0</td>
<td>0.158304</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>BSZ</td>
<td>8.88</td>
<td>16</td>
<td>5</td>
<td>2.795478</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>FBD</td>
<td>0.86</td>
<td>3</td>
<td>0</td>
<td>0.607732</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>BOIND</td>
<td>0.60</td>
<td>1</td>
<td>0.25</td>
<td>0.202741</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>OWNC</td>
<td>0.57</td>
<td>0.74</td>
<td>0</td>
<td>0.182468</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>LOGSIZE</td>
<td>7.74</td>
<td>8.7722</td>
<td>6.9675</td>
<td>0.440987</td>
<td>(0.0)*</td>
</tr>
<tr>
<td>No. of Cross Sections</td>
<td>7</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All data observations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: MachameStat® and various audited financial statements

Note: *1% Level of Significance, ** 5% Level of Significance, *** 10 % Level of Significance

Table 4.1 shows the mean (average) for each of the variables, their maximum values, minimum values, standard deviation and Jarque-Bera (JB) statistics (normality test). The results in Table 4.1 provided some insight into the nature of the selected Nigerian quoted oil companies that were used in this study. Firstly, the large difference between the maximum and minimum values of log of total assets (LOGSIZE) shows that the sampled quoted companies in
this study are not dominated by either large or small companies. Secondly, it was observed that on the average over the six-year period (2008-2013), the sampled quoted companies in Nigeria were characterized by both large boards (16) and small boards (3). We also observed that the maximum number of females on the boards of our sampled firms was 3. This shows that none of our sampled companies had a large female board representation and this also indicate that woman are not well represented in the board of most quoted companies in Nigeria. A look at the two firm value performance indicators in table 4.1, shows that on the average over the six-year period, Tobin Q and Tobin Q₁ of the sampled quoted companies were 91.29014 and 30.89519 respectively, while their maximum and minimum values clearly show that there is a wide dispersion in the firm value performance of our sampled quoted companies. This confirms that our sample companies are heterogeneous and our selected estimation techniques most take into consideration the cross-section effect of each company. This therefore justifies our use of panel regression rather than pooled regression estimation techniques.

Lastly, in table 4.1, the Jarque-Bera (JB) which test for normality or the existence of outliers or extreme values among the variables, shows that all the variables are normally distributed at 1% level of significance except board size, board independence as well as log size which was insignificant at 10%. This means that not all the variables outlier is no likely to distort our conclusion and is therefore not reliable for drawing generalization. This also implies that a least square estimation can be used to estimate the panel regression models.

Correlation Analysis

In examining the association among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in Table 4. 2.

### TABLE 4. 2: Pearson Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>TOBINQ</th>
<th>TOBINQ2</th>
<th>DIRHOD</th>
<th>BSZ</th>
<th>FBD</th>
<th>BOIND</th>
<th>OWNC</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOBINQ</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOBINQ2</td>
<td>100%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIRHOD</td>
<td>-9%</td>
<td>-9%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSZ</td>
<td>7%</td>
<td>7%</td>
<td>2%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FBD</td>
<td>4%</td>
<td>4%</td>
<td>19%</td>
<td>45%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOIND</td>
<td>26%</td>
<td>25%</td>
<td>17%</td>
<td>-24%</td>
<td>-6%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OWNC</td>
<td>-7%</td>
<td>-7%</td>
<td>0%</td>
<td>-7%</td>
<td>-44%</td>
<td>-4%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-17%</td>
<td>-16%</td>
<td>5%</td>
<td>79%</td>
<td>58%</td>
<td>-41%</td>
<td>-27%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Author (2015)

The use of correlation matrix in most regression analysis is to check for multicollinearity and to explore the association between the each explanatory variable and the dependent variable. Table 4.2 focuses on the correlation between firm’s value performance indicators (TobinQ and TobinQ₁), corporate governance (BOARDSIZE, DIRHOD, BOIND, OWNC and FBD) and the three control variables (LOGSIZE).

The findings from the correlation matrix table, shows that quoted companies with directors holdings (DIRHOD: TOBINQ = -0.09) was negatively and weakly associated with firms value performance and was also negatively and weakly associated with firm value indicator...
(TOBINQ₁ = -0.09). This implies that most quoted companies with more directors holdings are not likely to be companies with strong positive firms value performance. In the case of Board size (BOARDSIZE: TOBINQ = 0.07) we observed that, board size was positively and weakly associated with firm’s performance (TOBINQ) and was also positively and weakly associated with firm value indicator (TOBINQ₁ = 0.07). This suggests that most quoted companies in our sample with large board of directors are not likely to be companies with strong positive value performance. A look at Board independence (BOIND; TOBINQ = 26%, indicate that firms value was positively and weakly correlated with board independence. While Board independence was positively but also weakly associated with firms value (BOIND; TOBINQ₁ = 25%). This implies that most quoted companies with more independent board of directors are not likely to be companies with strong positive value performance.

We also observed that in the case of board gender diversity, that is in terms of the number of female on the board of companies. The weak and negative association between board gender and firm’s value (FBD, TOBINQ = 4%) show that companies with improving value are not associated with more women in their board. The association between board gender and firm’s value indicator (FBD, TOBINQ = 4%) was positive but weak. This means that appointing women with reputation and management experience into quoted companies’ boards could be a corporate governance mechanism to improve value for shareholders as these women would bring their broad experience and education to the board which would provide a good and fertile ground for competitive and superior decision making in the firm. Also, Ownership Concentration (OWNC: TOBINQ = -0.07) was negatively and weakly associated with firms value performance and was also negatively and weakly associated with firm value indicator (TOBINQ₁ = -0.07). This implies that most quoted companies with more ownership concentration are not likely to be companies with strong positive firms value performance.

A close look at the correlation matrix also revealed low firm’s value are more likely associated with large companies ( Log SIZE; TOBINQ = -0.17). While Large companies are more associated with large board (BOARDSIZE; Log SIZE= 0.79)

In checking for multicolinearity, we notice that no two explanatory variables were perfectly correlated. This includes both corporate governance and our control variables. This means that there is the absence of multicolinearity problem in our model. Multicolinearity between explanatory variables may result to wrong signs or implausible magnitudes in the estimated model coefficients, and the bias of the standard errors of the coefficients.

**Panel Multiple Regression Results**

However, to examine the cause-effect relationships between the dependent variables (Tobin Q and Tobin Q₁) and corporate governance variables and our control variables and to also test our formulated hypotheses, we used a panel multiple regression analysis since the data had both time series (2008 to 2013) and cross-sectional properties (7 quoted companies). The panel data regression results obtained is decomposed into two: Tobin Q and Tobin Q₁ models. The Tobin Q used the Book value of total assets less book value of equity, and market value of equity divided by total assets as suggested by Doidge, Karolyi and Stulz (2001) while the TobinQ₁ used the ratio of market capitalization to the book value of equity. The results are presented and discussed below.

**Tobin Q – Corporate Governance Model**
The Tobin Q panel regression results examine how our selected corporate governance and control variables impact on companies’ value. The general hypothesis of this model is that corporate governance mechanisms are not statistically significant in influence companies’ value in Nigeria. The results obtained are presented in Table 4.3.

Table 4.3: TobinQ panel regression results

<table>
<thead>
<tr>
<th>Expected</th>
<th>TobinQ</th>
<th>TobinQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Fixed Effect)</td>
<td>(Random Effect)</td>
</tr>
<tr>
<td>C</td>
<td>12599.59</td>
<td>4600.218</td>
</tr>
<tr>
<td></td>
<td>(2.852777)</td>
<td>(1.934748)</td>
</tr>
<tr>
<td></td>
<td>[0.0079]</td>
<td>[0.0611]**</td>
</tr>
<tr>
<td>DIRHOD</td>
<td>+</td>
<td>-794.2298</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1.190912)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.2433]</td>
</tr>
<tr>
<td>BSZ</td>
<td>+</td>
<td>-21.09142</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.347772)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.7305]</td>
</tr>
<tr>
<td>FBD</td>
<td>+</td>
<td>188.667</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.127023)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.269]</td>
</tr>
<tr>
<td>BOIND</td>
<td>+</td>
<td>-27.19115</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.046628)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.9631]</td>
</tr>
<tr>
<td>OWNC</td>
<td>+</td>
<td>-154.7669</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.24011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.8119]</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>-1591.656</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-2.913211)</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>[0.0068]</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td>0.4385</td>
</tr>
<tr>
<td>Adj-R-Squared</td>
<td></td>
<td>0.2060</td>
</tr>
<tr>
<td>F-Statistic</td>
<td></td>
<td>1.887(0.0797)**</td>
</tr>
<tr>
<td>Hausman Test (Chi-Sq)</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>N(n)Unbalanced Observations</td>
<td></td>
<td>42(7)</td>
</tr>
</tbody>
</table>

Source: Author (2015)

Note: (1) Parentheses ( ) are t-statistic while bracket [ ] are p-values
   (2) * 1%, ** 5%, ***10% level of significance

In testing for the cause-effect relationship between the dependent and independent variables in the TobinQ-corporate governance model, the two widely used panel data regression estimation techniques (fixed effect and random effect) were adopted.

**Tobin Q₁ – Corporate Governance Model**
While Tobin Q is the major dependent variable for this study, we also attempted to see if these same corporate governance and our control variables can be useful in understanding the behavior of Tobin Q of our sampled companies. The firm’s value (Tobin Q) panel data regression results obtained is presented in Table 4.4.

Table 4.4: TobinQ panel regression results

<table>
<thead>
<tr>
<th>Expected Sign</th>
<th>TobinQ (Fixed Effect)</th>
<th>TobinQ (Random Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>4403.561 (2.792002)</td>
<td>1591.933 (1.874869)</td>
</tr>
<tr>
<td></td>
<td>[0.0092]***</td>
<td>[0.0692]***</td>
</tr>
<tr>
<td>DIRHOD</td>
<td>+</td>
<td>-261.7084 (-1.098883)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.2809]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-86.98237 (-0.509461)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.6136]</td>
</tr>
<tr>
<td>BSZ</td>
<td>+</td>
<td>-7.656474 (-0.353523)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.00202)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.0531]***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.7263]</td>
</tr>
<tr>
<td>FBD</td>
<td>+</td>
<td>65.84795 (1.101487)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.559961)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.5791]</td>
</tr>
<tr>
<td>BOIND</td>
<td>+</td>
<td>-10.33796 (-0.049643)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.855946)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.3978]</td>
</tr>
<tr>
<td>OWNC</td>
<td>+</td>
<td>-55.13926 (-0.239548)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.939473)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.3539]</td>
</tr>
<tr>
<td>Log SIZE</td>
<td>+</td>
<td>-556.1017 (-2.850213)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-2.081569)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.0448]**</td>
</tr>
</tbody>
</table>

R-Squared: 0.419
Adj-R-Squared: 0.179
F-Statistic: 1.74(0.107)
Hausman Test (Chi-Sq): 12.004 (0.062)***
N(n) Unbalanced Observations: 42(7)

Source: Author (2015)

Note: (1) Parentheses ( ) are t-statistic while bracket [ ] are p-values
(2) * 1%, ** 5%, ***10% level of significance

In Table 4.4, we presented the two panel data estimation techniques results (fixed effect and random effect) for Tobin Q. A cursory look at the F-statistics, R-squared and adjusted R-squared values for both the fixed and random effect model clearly shows that corporate governance and our control variables provide a similar results with the Tobin Q model, we therefore based our results interpretation on the TobinQ panel regression.
In Table 4.3, we presented the two panel data estimation techniques results (fixed effect and random effect). The results revealed difference in their coefficient magnitudes, signs and the number of insignificant variables. In estimating the fixed effect panel regression method we follow the assumption of no correlation between the error term and explanatory variables in the panel model while in the case of random effect we assume that the error term and explanatory variables are correlated. In selecting from the two panel regression estimation techniques, the Hausman test was conducted and the test is based on the null hypotheses that the random effect model is preferred to fixed effect model. A look at the p-value of the Hausman test (0.04) shows that we should reject the null hypotheses and accept the alternative hypotheses at 5% level of significance. This means that we should adopt the fixed effect panel regression results in drawing our recommendation. This also implies that the fixed effect results would be more appealing statistically when compared to the random effect.

Following the above, we will therefore discuss the fixed effect results from Table 4.3. In Table 4.3, we observed that from the fixed effect results. The R-squared and adjusted R-squared values were (0.4388) and (0.206). This indicates that all the independent variables and cross-sectional dummy of each company jointly explain about 20% of the systematic variations in TobinQ of our sampled companies over the six-year period (2008-2013). This means that any model that includes cross-sectional dummy variables to our selected corporate governance and control variables would be able to explain about 20% of what happens to Tobin Q. The above average R-squared value is realistic as it clearly shows modeling the heterogeneity effect of each company can help in better understanding the behaviour of earnings per share (EPS). The F-statistics (1.88) and its p-value (0.079) show that the EPS panel fixed regression model is generally significant and well specified. The F-Statistic also shows that the overall TobinQ panel fixed regression model is significant at 5% levels.

In addition to the above, the specific finding from each explanatory variable from the fixed effect panel regression models are provided as followings:

**Directors shareholding (DIRHOD),** based on the coefficient of -794.22 and p-value of 0.24 was found to have a negatively impact on TobinQ and this was not statistically significant at 5% and 10% levels. This result, therefore, suggests that we should accept hypothesis four (H₄), which suggests Managerial shareholding has no significant impact on firm value of listed petroleum firms in Nigeria. This negate the findings of Morck, Shleifer and Vishny (1988) Using piecewise linear regressions to estimate the relationship between Tobin’s Q and the shareholdings of the board of directors for 371 Fortune 500 firms in 1980 found a positive relation between ownership and Tobin’s Q in the 0% to 5% board ownership range which was dominated by the convergence of interest effect of management; while there was a negative and less pronounced relation in the 5% to 25% range in which the entrenchment effect overpasses the convergence of interest The justification for our findings is based on the argument that in emerging market like Nigeria, directors’ holdings has a nonlinear relationship with firm’s value.. Our argument can be related to the findings of Lins, (2003), Wei, Xie and Zhang, (2005) previously cited largely focused on the relationship between managerial shareholding, financial policies and firm value in developed economies, but debate on whether such a relationship has universal relevance in firms within emerging markets is not yet resolved. All of these studies found that there is a nonlinear relationship between managerial ownership and firm value in a large number of firms
in emerging economies, thus revealing that management and insiders have the ability to engage in expropriation of shareholders’ benefits.

**Board Size (BSZ)**, based on the coefficient -21.091 and p-value of 0.73, appears to have a negative influence on our sampled quoted companies’ TobinQ performance and was statistically insignificant at 10% since its p-value was greater than 0.10. This result, therefore, suggests that we should accept hypothesis one (H1), which stated that Board size has no significant impact on firm value of listed petroleum firms in Nigeria. This support the finding of Wintoki (2007) and Coles, Daniel and Naveen (2008) contended that size is not related to firm value by arguing that size is dependent on each individual firm’s need of advising or monitoring, size, and age.. While the argument of positive relationship was based on premise that the larger the board sizes the better the chances that more quality ideas and better decisions would be made for the benefit of the shareholders. In Nigeria case, we argued from our findings that large board are not significantly useful for better value performance rather they lead to higher directors cost and decrease earnings performance. This means that large board increase cost rather than improving cost efficiency in most Nigeria companies.

**Number of female on the boards (NUWOMEN)**, based on coefficient of 188.67 and p-value of 0.269 also appeared to have had a positive and insignificant influence on our sampled quoted companies’ Firm’s value (Tobin Q). This result, therefore, suggests that we should accept hypothesis three (H3), which suggests that female directors on the boards have no significant influence on firm value performance. This means that the inclusion of women on a company board although had a positive influence but was insignificant in improving value for shareholders. This finding does not conform to the works of Nguyen &Vo (2012), Man & Kong (2011) and Burke (2000) which suggest that the presence of women directors and firm financial performance are significantly and positively related, but supports the findings of Shukeril, Shirl & Shararil (2012) which conclude that there is no significant relationship between board gender diversity and firm value performance. The possible explanation for this is that the mere presence of females on the board does not guarantee higher firm performance without reference to the quality of skills, education, experience and contributions of the females on the board.

**Board Independence (BIND)**, based on the coefficient of -27.191 and p-value of 0.96 was found to have a negatively impact on firm’s value (Tobin Q) and this was not statistically significant at 5% and 10% levels. This result, therefore, suggests that we should Accept hypothesis five (H5), which suggests that board independence is not significantly related to firm value in Nigeria petroleum industry. This negate the findings of Rosenstein and Wyatt (1990) and Byrd and Hickman (1992) that firms with high proportion of outside directors will perform better. It also rejects the findings that better performed firms are dominated by outsiders’ boards of directors (Pfeffer&Salancik 1978; Vafeas, 1999). The justification for our findings is based on the argument that in Nigeria, directors’ compensation is very high and sometimes not properly fix by the remuneration committee. Therefore, more outside directors means more cost and earnings drop drastically. Our argument can be related to the findings of Weisbach (1988); Daily and Dalton (1992); Daily and Ellstrand (1996); Klein (1998); Weir and Laing (2001) and Bhagat and Bolton (2005) who said that no positive significant relationship exists in terms of accounting profits performance and board independence.
Ownership Concentration (OWNC), based on the coefficient of -154.767 and p-value of 0.8119 was found to have a negatively impact on firm’s value (TobinQ) and this was not statistically significant at 5% and 10% levels. This result, therefore, suggests that we should accept hypothesis two (H₂), which suggests Ownership Concentration has no significant impact on firm value of listed petroleum firms in Nigeria. This negate the findings of Shleifer and Vishny (1997) which focused on the agency problem arising from the separation of ownership and control, they argued for the desirability of concentrated ownership because it results in better monitoring of managers, maximization of shareholder value while providing external finance for firms. A high concentration of shares tends to create more pressure on managers to behave in ways that are value-maximizing, and in support of this argument, Morck, Shleifer and Vishny (1988), Gorton and Schmid (1996) and Shleifer and Vishny (1997) suggested that at low levels of ownership concentration is associated with an increase in firm value, but that beyond a certain level of concentration the relationship might be negative.

Firm Size (LOGSIZE=0.0068) which was measured using the log of total asset had a negative but significant impact on firm’s value (Tobin Q). This means that large quoted companies in Nigeria do not necessarily generate high value than smaller companies in our sample. This clearly shows that size though a significant factor but is not the only strategy for competitive advantage in delivering better firm’s value (Tobin Q) results to shareholders in Nigeria. Our finding on firm size, is consistent with the findings of Hudaib & Haniffa (2006), Alzharani, Ahmad & Aljaaidi (2011) and Choi, Han & Lee (2012) but negate the findings of Aljifri & Moustafa (2007) that there is no positive relationship between firm size and firm performance. But though there are gains from increased size of firms, those gains can be lost if the firm is not creative and responsive enough to stay competitive and sustain such results.

**SUMMARY OF FINDINGS**

In this study, we investigated the relationship between corporate governance and firm value of Nigeria quoted petroleum companies. This study used seven quoted petroleum companies in Nigeria that have consistently published their audited annual financial reports between 2008 to 2013 and to ensure adequate observation for statistical testing, we adopted a panel multiple regression analysis to identify how the possible firm’s specific corporate governance attributes influence firms value in the selected Nigerian quoted petroleum companies. To this end, we conducted descriptive statistics, correlation matrix and panel regression analysis. In drawing our conclusion we used the random effect panel regression based on the hausman test, we observed that Directors shareholding had an insignificant and negative influence on the value of quoted petroleum companies in Nigeria. Board Size was had a positive and significant influence on the value of petroleum listed companies in Nigeria. In the case of Board gender, we discovered that large number of female in the board had a positive but insignificant impa ct on firm value of listed petroleum companies in Nigeria. Board Independence (BIND) was also found to be positively impacting on firm value but its impact was statistically insignificant. We also observed that ownership concentration which a strong issue in corporate governance had a negative but insignificant influence on firm value of petroleum quoted companies in Nigeria. In the case of our control variables, The Log of total assets (LOGSIZE) which proxies firm size had negative and significant impacts on firm value. This study therefore makes the following conclusions.
CONCLUSION

This academic project has examined the relationship between some measures of corporate governance and firm value using evidence from seven sampled petroleum listed companies in Nigeria over the period of 2008 to 2013. The measures of corporate governance used in the study are: board independence, board size, number of women on the boards of directors, director’s shareholding and ownership concentration. Firm size was used as a control variable. The study used two measures of firm values Tobinq and Tobinq1; while most other past studies have the ratios of market capitalization to book value of equity (Tobinq1) in this study will also use (Tobinq) book value of total assets less book value of equity, and market value of equity divided by total assets as suggested by Doidge, Karolyi and Stulz (2001). From the study we can concluded and inferred that large board have the tendency to increase firm value significantly among the sampled petroleum listed companies in Nigeria while board independence, board gender, directors shareholding and ownership concentration had insignificant influence on firm value, we also observed that large petroleum listed companies in Nigeria are more likely to witness loss in firm value than small ones. Finally we conclude that predicting firm value of petroleum companies in Nigeria with corporate governance variables may not yield any reliable statistical conclusion due to the fact that corporate governance is only a small subset of the problems most petroleum companies faces in Nigeria.
RECOMMENDATIONS

Finally, we recommended that for corporate governance to improve the firm value of Nigerian quoted petroleum companies which is the key interest of shareholders’. These companies should adopt a more cost reduction corporate governance system that also allow for more independent professional board members, optimal board size, integrate more women in the boards and allocate shares to only directors that have interest that are conflicting with shareholders interest and also operate the business in a manner that would prevent internal diseconomies of scale (too large):

(a) **Improvement in board independence**: the insignificant negative influence of board independence on firm value of our sampled petroleum listed companies in Nigeria can be attributed to maintain more independent directors. Therefore we recommend that cost efficiency of using more outside directors should be the major focus for ensuring better shareholders values. We also recommend that board independence should be truly enhanced by appointing professional outside directors who are truly independent of the management and the activities of the firm, as this is the only way that the board can bring meaningful impact to bear on their monitoring role of management with purposeful objectivity. It will also help in providing the needed diversity on the board that guarantees board enrichment in expertise and experience, it should however guide against over-heterogeneity that might hinder co-ordination on the board.

(b) **Adoption of an optimal board size**: the significant positive influence of board size on firm value, clearly shows that petroleum listed companies in Nigeria with very small board size are likely to witness concentration of power and may also lack diversity of ideas. We therefore recommend an optimal board size of eight (8) based on our descriptive statistics results to petroleum listed companies in Nigeria. This support the argument that spending on large board is a major decreasing factor to earnings and firm value. While Large boards clearly have both the positives and the negatives which call for the adoption of optimal board size by firms. Petroleum listed companies in Nigeria should strive to increase their board size but should at the same time avoid board size beyond which an additional board member will make the additional cost of the extra board member to be greater than the additional benefit of the board member; this is the optimal board size. Too large boards will mean higher costs in communication, co-ordination, remuneration for the directors and decrease in firm value.

(c) **Promote board gender mainstreaming**: the positive but insignificant influence of board gender on firm value of petroleum listed companies clearly shows that knowing how to systematically increase women in the board of companies has the capacity to increase firm value. We therefore recommend that to revert the insignificant positive influence of board gender on firm value, that SEC and NSE should develop codes of best practices that foster board gender diversity, but this should be done in such a way that there is guaranteed meaningful gender diversity on the boards so that females are not elected to the boards just as symbols on the boards or as tokenism and legitimacy since the presence of female directors on corporate boards does not, in itself, affect performance; females should be on the board only if they are qualified and have something to offer.

(d) **Directors Shareholding (DIRHOD)**, the negative influence of directors shareholding on firm value of petroleum listed companies in Nigeria provide some insight into the fact that
directors with shares are likely to engage in activities that destroy shareholders’ benefits but meet their personal interest. While this may not be significant for our sampled companies, we recommend that regulatory agencies in Nigeria should place more attention on companies with large inside directors’ ownership as this form a strong incentive for abuse of shareholders resources.

(e) Ownership Concentration (OWNC): the negative influence of major shareholding concentration on firm value of petroleum listed companies in Nigeria provide also suggest that companies with more concentrated block shareholders are likely witness a situation where the block shareholders purse activities that meet their interest rather than the interest of the entire shareholders. This means that petroleum listed companies in Nigeria with large institutional or individual block shareholding are likely to witness abuse of control power and damage shareholder values. While this may not be significant for our sampled companies, we recommend that regulatory agencies in Nigeria should place more attention on companies with large block ownership concentration as this form a strong incentive for abuse of shareholders resources. We recommend that relatively moderate foreign institutional shareholding concentration should be encourage, attempt must be made by regulators to prevent individual block shareholding concentration as this form a potent means for defrauding minority shareholders.

REFERENCES


