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Effect of Firm Characteristics on the Financial Performance of Energy and Petroleum Firms Listed In the Nairobi Securities Exchange, Kenya

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Abstract: *This study sought to examine the effect of firms characteristics namely board size, liquidity, firm size, age and leverage on the financial performance. Financial performance is measured by ROA. Descriptive research design was used to find out the effects of firm characteristics on performance of the firm. The study was carried out for all petroleum and energy firms listed at the NSE as from 2010 to 2017. It was evidenced in the study that leverage and liquidity were statistically significant correlated with financial performance. The remaining variables were not significantly correlated. The coefficients for firm size, board size and leverage were positively related to firm financial performance while firm age and liquidity were negatively related to firm financial performance. The study had limitation in terms of scope because it only concentrated on energy and petroleum firms listed in NSE. The study focused only on five characteristics namely, age, size, leverage, liquidity and board size in establishing performance of the firms at NSE. The study only concentrated on a specific sector of the economy i.e. energy and petroleum. The study recommends the use of proportionate debt financing in relation to total capital financing is profitable, therefore the firms should use debt financing up to a point where any extra debt financing causes net cost to the firms. The firms should also increase their asset base so as to influence competitive power.*

Key words: *Board size, liquidity, firm size, age and leverage on the financial performance*

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I. Background of the study

Numerous researches have been conducted to investigate the effect of various firm characteristics on financial performance of firms operating in different industries. Most of the researchers have concentrated on only a few if not one firm characteristic and have used others as control variables even though results of their findings show that the "other firm characteristic" actually have a significant effect on financial performance [23]. It is beneficial to grasp the effects of firm characteristics on firm performance like profitability or returns on investment, returns on assets or returns on equity. Financial performance may be impacted by operating decisions whenever company's resources are used effectively to increase the profitability of the firm. Use of debt is one type of decisions that a company might make to increase its assets in order to generate more profits [14]. Much as the managers of these corporations attempt to influence performance at their functional levels be it either in marketing, finance or operations; there still remains a gap in understanding the combined effects of these firm–level characteristics in a more holistic view [12].

[10] based on accountancy and finance, industrial economics and strategic management approaches used firm characteristics for example firm leverage, market power, size and liquidity in an attempt to investigate their effect on firm performance. The study was anchored on the agency theory, capital structure theory and pecking order theory. [12] noted that managers, directors and owners of any firm have different interests as indicated in agency theory. According to [4] for firms to escape from agency conflicts, ownership and management functions should be separated at any given time in order to avoid residual losses.

II. Firm Characteristics

Most firm characteristics are interconnected to firm's financial performance. Non-financial characteristics and financial characteristics like size of the firm, leverage, firm age and liquidity [29] normally influence organizational growth positively or negatively. The firms' data is normally used to measure the firms' characteristics and performance [9].

Age indicates length of years of operations since the firm was incorporated [26]. Age is being computed by using the duration in years the firm has been operating. Older firms have established themselves in the environment and as such, they are active in market as compared to new firms in the market. Firm size can

be measured in terms of asset base, number of employees, sales volumes, and capital investments values. Big firms enjoy economies of scale that accrue due to their size and enhance their financial performance as compared to small firms [25].

Liquidity is all about the company being able to pay its current liabilities when they fall due. [5] indicated in their research that, absolute liquidity ratio is the most accurate compared to current ratio. Preferred equity and debt financing is normally used by firms to finance their operations, this is known as Financial leverage [21]. Some firms use over three quarter debt thus becoming highly levered. It also results to high financial costs like interest expenses which negatively affects share prices at long run [8].

III. Financial Performance

Financial performance refers to how a firm uses its assets to generate revenue. Different stakeholders have interest in the firm's health at any given time; this is done through measuring financial performance [26]. Their research paper argued that financial performance is historical (lag indicators) rather than being futuristic (lead indicators). Additionally, it is subjective since it is influenced by the choice of accounting policies adopted, it only provides a summary of firm's information and it is also differs from one accounting period to another.

Measuring financial performance is beneficial as it serves as a motivation mechanism, serve as key objectives for business strategies and is tool for financial management. The data used to measure financial position and financial performance is normally extracted from annual financial reports like cash flows statements and balance sheets. Some of the measures of financial performance are; Cash flow based measures, stock based measures and accounting based measures [26]. Various ratios are used to measure profitability, liquidity and solvency. Measures of profitability are employed which include; gross profit margin, return on equity/assets and earnings before Interest and tax [22].

IV. Energy and Petroleum Industry in Kenya

Kenya in 2015 spent a total of Kshs.333.1 billion in importation of petroleum products by various Oil and Petroleum companies [13]. Being able to have reliable, safe, quality, competitive priced and steady supply of energy is fundamental for achievement of the Kenya Vision 2030 and thus energy security remains a national priority. The Kenyan Energy and Petroleum industry has been given a lot of consideration due to the fact that it is one of the key segment of the economy. The main sources of energy in Kenya are electricity, petroleum and wood fuel. The sources are accounting for 9%, 22% and 69% of the total consumable energy respectively [19]. Large portion of energy products consumed in Kenya is imported. With the discovery of some crude oil it is foreseen that in the near future Kenya will be a primary producer of crude oil. The current increase of annual demand for electricity in Kenya is 13.5%. All these are as a result of the rapid expansion of economic, population and industrial growth rate. The demand is expected to reach 15 GW in year 2030. Energy is vital for socio-economic development and improvement of life of the residents [19].

Petroleum is a vital source of energy and has for a considerably long period of time formed about 80% of Kenya's requirements of energy for commercial use. The liberalization of the oil sector happened in 1994. Prior to this, the sector had faced various challenges: increase shoddy storage sites, sale of inferior petroleum products which predisposed the population to safety and health risks in regard to the environment, market dominance by a small number of companies, business people engaging in underhand dealings meant to evade tax by diverting products meant for the export market into the domestic market, among others. General growth and enhancement in service level and quality is what resulted with the regulation of the sector. This was also during the of surging petroleum prices. This policy was meant to be a mechanism to abate price increases and to reduce the likelihood for firms to collude in price hiking. The price of petroleum products is regulated by the Energy regulatory Commission (ERC) that set the prices for various petroleum products. Globally Oil and Gas sectors has experienced price fall attributed to sharp growth in Non-Organization of the Petroleum Exporting Companies (OPEC) oil suppliers, sluggish oil demand brought about by 2008-9 financial crisis and subsequent global recession [15]

The petroleum sector has many players involved in importation, transportation and marketing of energy and petroleum products namely; KenolKobil, GABCO, Total Kenya, Oil Libya, National Oil Corporation of Kenya (NOCK), Chevron and Shell. At Nairobi Securities Exchange (NSE) only four Energy and Petroleum companies have been listed and they include: KenGen, Total Kenya, KPLC and KenolKobil [19]. [20] identified energy sector as one of the infrastructural pillars supporting long-term development. Economic, Social and political growth is based on the business and trade strategies employed by energy and petroleum industry. This is to create a nationwide competitive high quality life by 2030 [19].

V. Research Problem

Energy and petroleum industry requires massive financing in all the energy consumption stages. This is the major reason why understanding how different firm characteristics effects financial performance of the firms in this industry is very important. Financial performance is the most vital factor in determining financial strength, earnings capacity and assessing potential growth of any firm [28]. Some of firms' characteristics that affect financial performance are firm size, age, leverage, size of the board and liquidity. Firm size is all about vertical integration, already incurred costs and firm profitability in general [17]. Leverage enhanced earnings for the firm. Age leads to efficiency in operations. Over time, firms discover their competitive strength and learn how to do things better. This brings about specialization which has got positive results on financial performance [3]. Current asset ratios provide insight into a firm's health, the ability for the firm to pay its current liabilities. Firms with high liquid ratios are in a better position of meeting short-term obligations [7].

Since 1903 energy and petroleum, business has attracted many participants. Increase in independent transportation and marketing petroleum companies in Kenya came as a result of liberalization of the industry in the year. In order to have financial and operations advantage, energy and petroleum companies have channeled their strategies and mode of operations to mergers and acquisitions. Recently, all assets of Chevron in Kenya Oil Company Limited were acquired by Total Kenya. Raytec Metals Corporation in September 2009 merged with Lion Petroleum Inc. Kenya Oil Company Limited (Kenol) which was in existence for many years merged with Kobil to form Kenol/Kobil Ltd. In 2000, Kenol acquired Galana Oil, petrol and oil vendor (PWC, 2010). Despite all the mergers and acquisitions only four companies' remains listed in NSE: Total Kenya, KenolKobil, KPLC and KenGen.

The field of petroleum industry in Kenya has been widely studied. For example [6] researched on challenges facing implementation of strategies for petroleum firms in Kenya. The study found that the major challenges were technology, resource allocation, job responsibilities, prioritization, organization structure, values and resistance to change. There had been no research yet on the effects of firm characteristics and how they affect financial performance of firms in the energy sector. Rise in competition experienced in the energy and petroleum industry in Kenya that has contributed to increase in acquisitions and mergers for the firms to have financial and operations advantage. This research desired to fill the empirical gap identified above. This is done by answering the following research question; how do firm characteristics affect the financial performance of petroleum firms listed at the Nairobi security exchange?

Research Objective

To determining the relationship between firm characteristics; age, liquidity, leverage, size and board size and financial performance of petroleum firms quoted in Nairobi Security Exchange.

Empirical Literature Review

[18] conducted a study to examine Pakistan's insurance companies' Profitability and their effects. Data for all insurance firms were collected. Profitability was determined by ROA. The independent variables used for the research were; size of the firm, volume of capital and loss ratio the firm. The finding of the study was that loss and leverage ratios normally give negative results in terms of profit reporting by insurance companies in Pakistan. The study also founded that there existed a significant and positive relationship between size of the firm and profitability. However, there didn't exist a relationship between firm age and profitability of the firm.

[2] conducted a research to examine the relationship that exist among the following firm characteristics; claim experience, leverage of insurance company, liquidity of the organization, premium growth of insurance industry, age and diversification. The variables were to be analyzed in regards to performance of insurance companies. Financial performance was obtained in terms of audited financial reports for 2008-2012 for seventeen registered insurance firms. Data was analyzed by use of SPSS. There were positive and strong Pearson correlation coefficients.

[11] did a study on the financial performance of firms listed in the agricultural sector at the NSE. The selected characteristics used were board size, age of the firm, size of the firm, leverage and, liquidity on firm financial performance. Financial performance was measured using returns on assets. The study's population of the study was seven agricultural firms listed at the NSE from the year 2007 to 2012. The findings of the study were that liquidity and board size are statistically significant while firm size, leverage and firm age were not. The study founded out that a positive relation between firm sizes; leverage, firm age, and liquidity to firm financial performance exist. The study also noted a negative relationship between board sizes to firm financial performance of the firm.

[24] examined the relationship in firm size and financial performance of commercial banks in Kenya. Its population was 43 banks for the year between 1998-2012 and used correlational design. Secondary data used was extracted from Central Bank of Kenya. The researcher measured firm size by number of employees, net assets, total deposits and total loans. Return on assets was used to measure financial performance. Analysis of

data was by the use of correlation and regression methods. The research found there was no significant relationship that existed between number of employees and financial performance for commercial banks. The research also concluded that there was a significant relationship existing between total assets, total loans and bank deposits and financial performance.

[21] did a study in Japan. The study was to examine factors affecting financial performance of energy and electricity companies. The study covered 46 companies for a period running from 2001-2010 and collected the data from S & P Capital IQ. The independent variables used for the study were location, ownership, age and size. Profitability was measured using return on equity, share prices and return on sales. The study concluded that, size of the firms' leads to economies of scale advantages thus assist in lowering operational costs. It also concluded that the higher the debt finances, the higher the interests payment thus affecting financial performance. Lastly, firms with high liquidity ratios enjoy profits in a short run.

[1] researched on impact of leverage, Liquidity and Firm Size of non-financial companies. Yearly data covering the entire research period was extracted from the NSE hand books. The study used data for five year period (2009 -2013) to examine the effect of firm size, liquidity and leverage. Day's accounts receivables and accounts payables on Returns on Assets and on Return on Equity on financial performance of listed non-financial firms. Regression coefficients were interpreted using the E-views software output. Results show that liquidity and firm size influence the both financial and non financial firms in their performance. Secondly, factors such as amount of debt, the risks associated with indebtedness, interest rates and debt equity combination and the management of accounts receivables and accounts payables could affect the financial performance of firms.

VI. Research Methodology

Design is normally a blue print through which research sails smoothly. It makes the research to be efficient in terms of resources, effort and at the same time reaping out maximum information possible. This study used descriptive research design. The population of this study consisted of all listed energy and petroleum firms at the NSE. Census population was used by the study consisting of all the four listed Energy and petroleum firms at the NSE.

Data was sourced from annual reports i.e. audited financial statements at Nairobi security exchange website and library. Collected data enabled the researcher to compute the relevant ratios like ROA and current ratio among others. Information for firm age and number of board of directors was sourced from the notes provided in the financial reports. As for the year of incorporation, the research made use of websites to check for each of the individual energy and petroleum firms. The period of study covered the years 2010 to 2017 for all energy and petroleum firms listed at the NSE.

Descriptive statistics for example means and standard deviations among others was used. Multi-variate regression analysis was done to the variables of the study firm age, size, liquidity, leverage and board size. Correlational analysis was employed in the research. It was meant to determine the direction and effect of firm characteristics on firm financial performance of energy and petroleum firms listed in NSE. Further the researcher analyzed the data using multi-variate for example ANOVA, R squared, and beta coefficients for the model to explain the changes in the dependent variable, which is ROA.
The regression equation is as illustrated below;

$Y= \beta_0+ \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4+ \mu$; ROA = f (Firm Size, Leverage, Firm Age, Liquidity)
Y is the ROA as the measure of firm performance computed as ROA = Net Income/Total Assets
X_1 is Firm Size = Natural Log of Assets.
X_2 is Firm Leverage computed as Firm Leverage =Total Debt/ Total Assets
X_3 is Firm Age = Number of years in operation.
X_4 is Liquidity computed as Liquidity =Total Current Assets/ Total Current Liabilities
X_5 is Board Size = Number of board members.
B_i (0, 1, 2, 3, & 4) are the beta coefficients for the respective independent variables
μ is the error term in the model

Descriptive statistics

These statistics represent the relationships between firm characteristics i.e. firm age, firm size, firm leverage, liquidity and performance of petroleum firms registered with the NSE i.e. Total Kenya Limited, KenolKobil Limited, KenGen Company Limited and Kenya Power and Lightning Company. The data is extracted from the company's financial statements that cover a period of 8 years, ranging from 2010 to 2017.

Table 1: Descriptive statistics based on firm age

Firm	Minimum	Maximum	Mean	Std. Deviation
Total Kenya	3.094	4.143	3.096	0.109
KenolKobil	3.951	4.078	4.016	0.117
KPLC	4.489	4.564	4.527	0.070
KenGen	4.043	4.159	4.102	0.107
Average	3.894	4.236	3.935	0.101

Table 1 shows that the mean proportion of firm age based on the natural logarithm of years in operations is 3.935. KenolKobil, KPLC and KenGen have natural logarithm of years in operations greater than average while Total Kenya has age proportion below average. KPLC is the oldest company with the highest mean age proportion of 4.527 while Total Kenya is the youngest company with the lowest age proportion of 3.096.

Table 2: Descriptive statistics based on firm size

Company	Minimum	Maximum	Mean	Std. Deviation
Total Kenya	24.137	24.412	24.273	**0.234**
KenolKobil	23.578	24.551	24.039	**0.764**
KPLC	24.254	26.419	25.661	**1.901**
KenGen	25.690	26.656	26.171	**1.065**
Average	24.415	25.510	25.036	**0.991**

Table 2 shows that the mean proportion of firm size based on the natural logarithm of total assets is 25.036. KPLC and KenGen have proportion of firm size greater than average while Total Kenya and KenoKobil have size proportion below average. KenGen is the largest firm with the highest mean size proportion of 26.171 while KenolKobil is the smallest firm which has lowest mean size proportion of 24.039.

Table 3: Descriptive statistics based on Debt asset ratio

Firm	Minimum	Maximum	Mean	Std. Deviation
Total Kenya	0.062	1.311	0.164	**0.285**
KenolKobil	0.268	0.547	0.403	**0.269**
KPLC	0.185	0.405	0.291	**0.230**
KenGen	0.368	0.544	0.427	**0.142**
Average	0.221	0.702	0.321	**0.232**

Table 3 shows that the mean proportion of firm leverage based on total debts compared to total assets is 0.321. Ideal ratio should be 0.5 or less .All the firms have mean ratios above 0.5, an indication that not more than half of individuals' firms' assets in the industry are financed by debt. KenolKobil and KenGen have proportion of firm leverage greater than average while Total Kenya and KPLC have leverage proportion below average. KenGen has the highest mean leverage proportion of 0.427 while Total Kenya has the lowest leverage proportion of 0.164.

Table 4 Descriptive statistics based on Current ratio

Firm	Minimum	Maximum	Mean	Std. Deviation
Total Kenya	1.103	1.736	1.407	**0.600**
KenolKobil	0.935	1.440	1.174	**0.526**
KPLC	0.867	0.982	1.081	**0.680**
KenGen	0.951	4.677	1.756	**3.191**
Average	0.964	2.209	1.355	**1.250**

Table 4 shows that the mean proportion of firm liquidity based on current assets compared to current liabilities is 1.355. A liquidity ratio of 1.0 or greater is an indication that the industry is well positioned. All mean ratios are above 1.0, implying that all the firms in the industry are in a position to cover their current or short term liabilities. This means that firm liquidity is a significant component of financial performance of the firm and positive working capital should be maintained. Total Kenya and KenGen have proportion of firm liquidity greater than average while KenolKobil and KPLC have liquidity proportion below average. KenGen has the highest liquidity proportion of 1.756 while KPLC has the lowest liquidity proportion of 1.081.

Table 5: Descriptive statistics based on ROA

Firm	Minimum	Maximum	Mean	Std. Deviation
Total Kenya	-0.006	0.072	0.035	**0.074**
KenolKobil	-0.192	0.116	0.040	**0.262**
KPLC	0.019	0.046	0.031	**0.022**
KenGen	0.008	0.033	0.020	**0.022**
Average	-0.043	0.067	0.032	**0.095**

Table 5 shows that the mean proportion of financial performance calculated in the ratio of Return on Assets (ROA) based on net income compared to total assets is 0.032. The recommended ROA is 0.05. All the four firms have ROA means which are below 0.05. Total Kenya and KenolKobil have ROA of greater than average while KPLC and KenGen have ROA of below average. Kenkobil has the highest financial performance proportion of 0.040 while KenGen has the lowest financial performance measure of 0.020.

Correlation Analysis

Correlation analysis was conducted in establishing the existence of relationship between the variables of the research. Correlation analysis is normally used to measure the strength and direction of relationships between the variables of the research. Normally, for a weak correlation, "r" ranges from ±0.10 to ±0.29; a moderate correlation, "r" ranges from ±0.30 and ±0.49; while in a strong correlation, "r" ranges from ±0.50 and ±0.90. Correlation ranges from -1 to +1.It checks on the strength of the relationship between variables under study (Schumacher & Boland, 2009).

Table 6: Correlation matrix

	1	2	3	4	5	6
ROA	1					
Firm size	.175	1				
Sig. (1-tailed)	.169					
Leverage	.337	-.423	1			
Sig. (1-tailed)	.030	.008				
Firm age	-.005	-.488	-.054	1		
Sig. (1-tailed)	.488	.002	.385			
Liquidity	-.414	-.187	.353	.217	1	
Sig. (1-tailed)	.009	.153	.024	.116		
Board size	-.009	-.267	.181	.040	.299	1
Sig. (1-tailed)	.482	.070	.161	.414	.048	

Table 6 shows a weak but positive association existing among return on assets and firm size (r=0.175, p=0.169), indicating that the relationship is weak and not significant. According to Issa (2013), larger organizations in terms of assets controlled stood higher chances of recording higher financial outcomes as compared to their competitors with fewer assets. There is appositive but moderate association among return on assets and leverage(r=0.337, p=0.030). Firm age had weak but negative relationship with return on assets (r=-0.005, p=0.488); implying that the relationship is weak and not significant. Liquidity had weak but negative significant relationship with return on assets(r=-0414, p=0.009). Table4.6 shows a weak but negative significant relationship between ROA and the board size of firms(r=-0.009, p=0.482).The variables were not correlated since their close relationship was less than 0.8.

Regression analysis

The researcher ran a multi variate linear regression for five variables in relation to data from the year 2010 to 2017 for four listed companies.

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617[a]	.381	.262	**.0427719**
a. Predictors: (Constant), Firm size, Board size, Firm age, Leverage and Liquidity				
b. Dependent Variable: ROA				

Table 7 shows that R^2 is 38.1% meaning that the predictors in the model (firm size, leverage, liquidity, firm age and board size) can only explain the variation of ROA by only 38.1%. The model cannot explain a variation of 61.7% because there are other variables which affect firms ROA not considered in this study.

Table 8 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.029	5	.006	3.201	**.022[b]**
	Residual	.048	26	.002		
	Total	.077	31			

a. Predictors: (Constant), Firm size, Board size, Firm age, Leverage and Liquidity
b. Dependent Variable: ROA

Table 8 shows that the model is valid since the significance is less than 0.05 (F=3.201; p=0.022).

Table 9: Co-efficient & Collinearity tests

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.276	.161		1.7160	.098		
Firm size	.002	.001	.532	-2.468	.020	.513	**1.951**
Leverage	.172	.071	.472	-2.414	.023	.623	**1.605**
Firm age	-3.949	3.472	-.225	-1.137	.266	.610	**1.638**
Liquidity	-.042	.025	-.309	-1.723	.097	.740	**1.351**
Board size	.019	.090	.036	.216	.831	.840	**1.190**

a. Dependent Variable: Y

Predictors: (Constant), Firm size, Firm age, Liquidity, Leverage and Board size

Table 9 shows that the co-efficient of firm size is 0.532 which means that a one unit change in firm size would lead to an increase of ROA by 0.532; leverage had a co-efficient of 0.472 which means one unit variation of leverage normally results to increase of return on assets by 0.472. Firm age had a negative co-efficient with a co-efficient of -0.225 which means that a one unit increase in firm age leads to a decrease of ROA by -0. 225. A similar negative finding was recorded for liquidity which had a co-efficient of -0.309 which means that a one unit increase in liquidity leads to decrease of ROA by – 0.309. And lastly, the co-efficient of board size was 0.036 which means that a one unit increase in board size leads to an increase of ROA by 0.036.

The resulting multi-variate linear regression model is as follows;

Y= 0.532 firm size + 0.472 leverage

However, the other variables are insignificant. Table 9 further shows the findings of multi-Colinearity test for determination of high correlation of variables in the model. Tolerance and variance inflation factor (VIF) values for the predictors were used to check for multi-Co linearity. Table 9 shows that; Tolerance values ranged between 0.513 and 0.840, VIF ranged between 1.351 and 1.951. Since tolerance values were above 0.1 and VIF below 10, and then there was no evidence multicolinearity in the multiple regression models.

VII. Discussion of Findings

Regression analysis reveals a positive association between firm characteristics and firm financial performance. The study shows firm size has a positive relation (r=0.175, p=0.169). The findings are similar to the study done by [2]; r=0.945, p=0.177, that observed that larger insurance firms are more likely to have numerous department managed by line managers, who are more qualified in terms of skills and knowledge. This will significantly lead to the firm performance.

Firm leverage is positively related (r=0.337, p=0.030) to firm performance. The findings are in conformity to a study by [2]; r=0.166, p=0.458, who found out that leverage will normally increase competitions in the market. Insurance firms need to regulate their leverage ratios as it affects degree of financial performance. Firms facing high degree of financial leverage are normally faced with high interest payments.

The study established a negative relationship existing between firm age and firm performance (r=-0.005, p=0.488). The findings are in conformity to a study by [29]; r=-0.035, p=0.734 who observed that, as insurance firms grows older they tend to develop structural inflexibility created by bureaucracy and inertia, which are out dated in the industry. In the early ages, there is positive relationship existing between age and profitability. The study established that liquidity has a negative relationship with firm performance (r=-0.414, p=0.009); the findings of the study are in conformity to the findings of [24]. The research concluded that liquidity status of banking institutions do not correlate with the profitability of the banking companies. Lastly, the study established a positive but insignificant relationship between board size and firm performance (r=-0.009, p=0.482). These findings are in conformity with the findings of [11] who found insignificant relationship. This means that board size does not correlate with the profitability.

VIII. Conclusion of the study

The research considered all the variables which were used to derive financial performance model. All the companies registered positive values implying that all the variables were significant. A correlation was used to analyses all the independent variables of the study and ROA was used to measure performance.The model resulted to 95% level of significant of coefficient. Results from Pearson correlation registered a strong and positive result.Performance as per ROA calculations was 0.276. This implies that liquidity, age, leverage, board size and firm size influences performance financially of petroleum firms registered with NSE. Regression analysis proved firm size and leverage to have significant relationships with firm financial performance. The other variables i.e. firm age; board size and liquidity are insignificant to the study.

IX. Recommendation of the study

The research study recommends that firms should increase their assets. Size is measured by total assets which increases the competitiveness of the firm.The study recommends the use of proportionate debt financing in relation to total capital financing. All the firms are profitable, therefore the firms should use debt financing up to a point where any extra debt financing causes net cost to the firms. The firms should ensure that they keep their working capital positive. Recommended ratio should be 2:1. Finally, large boards are wastage of resources and incurrence of avoidable expenses which fleece the company revenues to support lavish life styles of directors, it's therefore recommended small and efficient board sizes.

X. Limitations of the study

The research study had some few challenges and it is acknowledged that this may have significantly affected the study findings. Scope was a major limitation the study only concentrated on petroleum firms registered with NSE. Most of private energy and petroleum firms in Kenya are not listed in NSE hence the study did not cover them; the research only covered a specific sector of the economy i.e. energy and petroleum. Better findings can beachieved if a bigger numbers of observations are analyzed. The research only focused on five firm characteristics i.e. liquidity, firm age, board size, leverage and firm size in establishing performance of the petroleum firms registered with NSE. There are other firm characteristics which normally affect financial performance i.e. depreciation, ownership structure, investments and locality of the firm.

XI. Suggestions for Further Research

The study covered listed energy and petroleum firms at the NSE from the year 2010 to 2017 were studied. Further research should be done using case studies for a longer period. The duration of the study should also be extended to cover a period of over ten years. It should also take into account the economic environment among other variables due to macroeconomic changes thereon.

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