INTERNATIONAL JOURNAL OF SOCIAL Sciences and Information Technology
ISSN 2412-0294 www.ijssit.com

http://www.ijssit.com

DETERMINANTS OF FINANCIAL PERFORMANCE OF PETROLEUM COMPANIES OPERATING IN KISUMU COUNTY, KENYA

[1*] **Rogers Cheruiyot Chirchir**
roselinearwa@gmail.com

[2**] **Wallace Atambo Nyakundi**
atambowa@yahoo.com

[3***] **Vitalis Mogwambo Abuga**
mogwambov@yahoo.com

[1*] *Master of Science in Finance, Jomo Kenyatta University of Agriculture and Technology*
[2**] *Lecturer, Jomo Kenyatta University of Agriculture and Technology*
[3***] *Lecturer, Jaramogi Oginga Odinga University of Science and Technology*

Abstract: *Petroleum companies like many other commercial establishments are expected to generate profit through effective and efficient utilization of resources to create sound asset portfolio and ensure the maximization of shareholders' wealth. The companies make profit from the spread between price charged on petroleum products and other services provided to the motor industry. These differentials ought to compensate adequately for the investors contribution and the service provider but it is unclear from the empirical studies on the main cause of fluctuating performance of firms in the energy sector. The study focused on the effect of price regulation, corporate governance, firm's strategic direction and risk management on the financial performance of petroleum companies in Kisumu county Kenya. The study used descriptive survey research design. The target population comprised of 76 managers from the petroleum firms. Census sampling technique was adopted. Descriptive statistics and inferential statistics were used to establish the relationship between the variables in this study. The findings revealed that price regulation has a strong effect at 4.466 mean weight magnitude strength, firm's risk management strategy had a strong effect at 4.521 mean weight magnitude while the firm's strategic direction had a moderate effect on the financial performance at 3.814 mean weight magnitude while corporate governance was rated least at 2.928 mean weight magnitude on the financial performance of petroleum companies. The determinants as predictor variables had a strong association with financial performance of petroleum companies ($R = 0.916^a$), further the variables could explain up to 83.8% of the variation in financial performance and this is indicated by R Square ($R^2 = /0.838$) the model used could be relied on by its users up to 83.7% (adjusted $R^2 = .837$) and this result was statistically significant. The study recommends that firms should maximize use of these determinants to improve on their financial performance.*

Keywords: *Risk Management, Strategic Direction, Corporate Governance, Price Regulation*

1. Introduction

Petroleum products form a very important part of any country's economy around the world. Different petroleum products are used to accomplish various activities in the economy. The petroleum products have a huge macro and microeconomic effect on the economies of most countries (Kojima, Mathews and Sexmith, 2010). With the critical role that petroleum products play in enhancing economic development, there is need to ensure that there is efficient and effective flow of the products through the entire supply chain.

The discovery of oil and gas in Kenya in 2012 by Tullow Oil provide a great opportunity to Kenya to reposition itself as an economic hub. However, the discovery comes with a number of challenges ranging from lack of

capacity, political activism, and weak revenue collecting system, corruption, negative environmental concerns amongst others. Oil exploration in Kenya began in 1950s before Kenya's independence (Energy Information Agency report, 2013). The petroleum industry in Kenya is broadly divided into three segments namely: upstream, midstream and downstream. The upstream segment primarily involves the process of exploration development and production of crude oil and natural gas. The midstream segment involves the process around storage, refining and transportation of the crude oil into consumable oil and gas products. There is only one refinery in Kenya today which is Kenya Petroleum Refineries Limited in Mombasa. The downstream segment involves the process by which refined products are made available to the customers through supply and distribution for example at industries and petrol stations. There is a fairly well developed network of transport pipelines storage and retail outlets in Keya today with a multiplicity of players. The current study focused on the petrol stations involved in the supply and distribution of oil products in Kisumu county Kenya network.

2. Statement of the Problem

The key institutions regulating the oil and gas sector are currently the Ministry of Energy, National Oil Corporation of Kenya Limited and the Energy Regulatory Commission. Petroleum companies like many other commercial establishments are expected to generate profit through effective and efficient utilization of resources to create sound asset portfolio and ensure the maximization of shareholders' wealth. The companies make profit from the spread between price charged on petroleum products and other services provided to the motor industry. These differentials ought to compensate adequately for the investors contribution and the service provider as well, if determinants in both the micro and macro levels are used as a yard sticks in determining financial performance. The company's financial performance therefore, could be seen in terms of the absolute profits, rate of return, earnings per share, market price per share, the quality of asset portfolio, and the level of liquidity. There are numerous studies that have been done in Kenya on performance in various sectors (Awino et al., 2012; Kathama, 2012; Muriuki, 2010; Bulle, 2012; Mukokho, 2010; Riungu, 2008; Arasa et al., 2011; Ong'ayo, 2012 and Odungo, 2012 among others). Despite the huge empirical studies on the petroleum industry it is unclear on the reasons for the time to time collapse, mergers or emergency of totally new firms in the petroleum sector. It is on this basis that the study focused on strategic direction, risk management, corporate governance and price regulations as determinants of performance of the companies in the petroleum industry.

3. Objectives of the Study

The main objective of the study was to assess the determinants of financial performance of petroleum companies operating in Kisumu County Kenya. The study was guided by the following specific objectives;

i. To establish the effect of price regulation on the financial performance of petroleum companies in Kisumu County Kenya

ii. To find out the effect of corporate Governance on the financial performance of petroleum companies in Kisumu County Kenya

iii. To assess the effect of firm's strategic direction on the financial performance of petroleum companies in Kisumu County Kenya

iv. To determine the effect of risk management on the financial performance of petroleum companies in Kisumu County Kenya

4. Empirical Literature

Corporate Governance and Financial Performance of Petroleum Companies

There are many ways of defining corporate governance, ranging from narrow definitions that focus on companies and their shareholders, to broader definitions that incorporate the accountability of companies to many other groups of people, or stakeholders'. The Organization for Economic Co-operation and Development (OECD) in 1999 defined corporate governance as the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs.

Pandey (2005) opines that good corporate governance requires companies to adopt practices and policies which does not compromise performance, accountability, effective management control by the board of directors, constitution of board committee as part of professionally qualified, non-executive and independent directors on the board, the adequate timely disclosure of information and the prompt discharge of statutory duties. Chris (2006) sees key elements of good corporate governance principles as also include honesty, trust and integrity, openness, performance orientation, responsibility and accountability, mutual respect and commitment to the organization.

Directors and management develop a model of governance that aligns the values of the corporate participants and then evaluate this model periodically for its effectiveness. In particular, senior executives should conduct themselves honestly and ethically especially concerning actual or apparent conflict of interest and disclosure in financial report. Therefore, according to the view of the agency theorists, an efficient market is considered a solution to mitigate the agency problem, which includes an efficient market for corporate control, management labour and corporate information (Clarke, 2004). Various governance mechanisms have been discussed by agency theorists in relation to protecting the shareholder interests, minimizing agency costs and ensure alignment of the agent-principal relationship (Davis, Schoorman & Donaldson, 1997).

Oil Price Regulations and Financial Performance of Petroleum Companies

There have been up and down movements in petroleum products prices, from the historically low, to the unprecedentedly high, affecting the fortunes of countries for which earnings from oil constitute a significant source of their foreign reserves. The history of oil prices can be divided roughly into three different periods: a calm beginning when oil supply was totally adequate for all demand needs, a middle period when political events and market power shaped the price path, and the present period where the effect of politics is decreasing and the price is affected by more fundamental factors in supply and demand. A number of macroeconomic fundamentals have been empirically validated to be driven by oil price changes and one such variable of interest is exchange rate (Park and Ratti, 2008; and Le and Chang 2011). This assertion of probable correlation between oil price movement and exchange rate may not be unconnected to the fact that, oil prices are quoted in US dollars and the US dollar exchange rate is the primary channel through which changes in oil prices are transmitted to the real economy and financial markets (Reboredo, 2012). This transmission mechanism however, differs from country to country depending on whether the country is an oil-exporter or oil-importer. In an oil exporting country for example, a rise in world oil prices improves the trade balance, leading to a higher current account surplus, improved net foreign asset position and then the appreciation of exchange rate. On the other hand however, an increase in the world oil prices is expected to worsen the trade balance of net oil-importing countries, leading to a higher current account deficit and a deteriorating net foreign asset position (Abdelaziz et al., 2008). Further, increases in the oil price will lead to an increase in the relative price of

commodities in an oil-exporting country relative to that of an oil-importing country. This leads to an increase in the real exchange rate of the oil-exporter (Chaudhuri and Daniel, 1998) although the magnitude of such an impact on exchange rates depends on the distribution of oil imports across oil-importing countries and on portfolio preferences of both oil-importing and oil-exporting countries (Huang and Guo, 2007).

Past studies have though revealed changes in oil prices as significant for explaining fluctuations in exchange rate, but the results have been largely mixed across data set, samples and methodology. Brahmasrene (2014), Oriavwote and Eriomo (2012), Bal and Rath (2015), Osuji (2015) and Bouoiyour et al. (2015) studies revealed a significant causal relationship between exchange rate and changes in oil price, the studies are however, different on the degree and direction of causality of the variables studied. Beckmann and Czudaj (2013) particularly, the empirical results obtained from their Markov-switching vector error correction model shows that the time varying causality patterns mainly runs from nominal exchange rates to nominal oil prices. Characterizing the oil price to exchange rate relationship for different time scales in an attempt to disentangle the possible existence of contagion and interdependence during the global financial crisis, Reboredo and Rivera- Castroet (2013) employed a wavelet multi-resolution analysis approach to shows that oil prices and exchange rates were not dependent in the pre-crisis period, but after the onset of the crisis. Studies by Tiwari et al., (2013), Uddin et al., (2013) and Yang et al. (2017) employed wavelet coherence framework to study the co-movement between the crude oil price and the exchange rate markets and they consistently finds that the degree of co-movement between the crude oil price and the exchange rates deviates over time. While Aloui et al., (2013), Fowowe (2014) and Brayek et al., (2015) explored GARCH based modelling approach in their respective analysis of exchange rate and oil price changes consistently indicated evidence of significance interdependence between exchange rate and oil price changes.

Roberodo (2012) study used two measures of dependence: correlations and copulas to shows that there is no extreme market dependence between oil prices and exchange rates. Hussain et al (2016) applied a detrended cross-correlation approach (DCCA) to investigate the co-movements of the oil price and exchange rate in 12 Asian countries. The study empirical results support the co-movements of oil prices and exchange rate. Further, Jawadi et al., (2016) investigated the dynamics of oil price volatility by examining interactions between the oil market and the US dollar/euro exchange rate. Its findings revealed a negative relationship between the US dollar/euro and oil returns, indicating that a US$ appreciation decreases oil price. Secondly, it notes the presence of a volatility spillover from the US exchange market to the oil market. On whether exchange rate respond asymmetrically to changes in oil prices, Berument et al., (2014), Ahmad and Hernandez (2013) and Lizardo and Mollick (2010) are among the few notable studies that have suggested the likelihood of exchange rate responding differently to positive and negative oil price changes. Lizardo and Mollick (2010) particularly, finds that positive changes in real oil price leads to a significant depreciation of exchange rate of net oil exporter currencies, such as Canada, Mexico, and Russia, while the currencies of oil importers, such as Japan, depreciate relative to the USD when the real oil price goes up. Chen (2016) investigates the impacts of oil price shocks on the bilateral exchange rates of the U.S. dollar against currencies in 16 OECD countries. Their empirical findings indicate that the responses of dollar exchange rates to oil price. Despite the huge past empirical literature on oil price changes, little information is known relating to oil price fluctuations and financial performance of petroleum companies. Therefore this study focused on the determinants of financial performance of the petroleum companies in Kisumu county Kenya, where oil price fluctuations is considered as one of the explanatory variables.

Osoro (2015) indicated that in many developing countries, governments have engaged in the control of prices of petroleum products. This was mainly prevalent in the period preceding mid-2008 when many governments seriously considered different alternatives for reforms in pricing in the face of rising subsidies. The budgetary pressure to carry on with reform shortly lessened after the price collapse in late 2008, but those governments that had done little were caught by rising prices again soon thereafter. Escalating oil prices in the world market which ultimately impart prices in the domestic market have led to appeals to governments all over the world to take steps towards ensuring consumer protection. Some of the steps taken by various governments that have provided „economic buffers" to the poor include conferring price subsidies, increasing the minimum wage, decreasing taxes, releasing oil from strategic reserves among others (Bowersor et al., 2010). The transmission of prices from the world market to the domestic market differs across countries much as petroleum product prices and international crude oil are generally invariable across regions. For petroleum products, disparities in government pricing policies constitute much of the differences in end user prices apart from price differences resulting from varied quality of fuel and transportation costs.

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, (Wanjiku, 2011). Kenya is a net importer of petroleum. Petroleum price regulation commenced in Kenya in December 2010. This was through an addition to the 2006's Energy Act via a subsidiary legislation where the Energy Regulation Commission (ERC) was granted authority to regulate petroleum prices in Kenya through the establishment of a formula for issuance of retail and wholesale maximum petroleum product prices in Kenya. The main idea was to provide an incentive to the firm's to cut costs and improve productive efficiency above the levels set by the regulator when calculating the cap. Noteworthy is that price regulations set by the ministry mainly affects white fuel oils which petrol, kerosene and diesel. They do not affect the following products in the oil industry; fuel oil, liquefied petroleum gas (LPG), lubricants, special fluids, jet fuel and export sales. The prices of these products are determined by market dynamics which include; demand and supply forces, intensity of competition, movement in international oil price quotations and efficiency of the supply chain, (Ministry of Energy, 2012). The liberalization of the oil sector happened in 1994. Prior to this, the sector had faced various challenges including increase shoddy storage sites and 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 against the backdrop of surging petroleum prices from 2003. This policy was meant to be a mechanism to abate price increases and to reduce the likelihood for firms to collude in price gouging, (Kwame, 2014).

Firm's Strategic Direction and Financial Performance of Petroleum Companies

It is conceptualized that firms that have effectively embraced strategic planning, records better performance as compared to those that have not. Hofer and Schendel (1978), Henderson (1979), Greenley (1986), Miller and Cardinal (1994) argue that firms record improved performance once they effectively embrace strategic planning. Carrying out the various steps in the strategic planning process is expected to facilitate the realization of organizational effectiveness. By defining a company's purpose and goals, strategic planning provides direction to the organization and enhances coordination and control of organization activities. A company's strategy provides a central purpose and direction to the activities of the organization and to the people who work in it. Kotter (1996) argues that the primary goal of strategic planning is to guide the organization in setting out its strategic intent and priorities and refocus itself towards realizing the same. Porter (1980), Greenley

(1986), Miller and Cardinal (1994), Hax and Majluf (1996) and Grant (1998) argue that an objective analysis of external and internal environment facilitates the establishment of the firm-environment fit and improved decision-making.

Strategic planning is a deliberate process to envision the future and develop plans for interacting with the competitive environment to achieve that future (Pearce & Robinson, 1995). Strategic planning is an organization's process of defining its direction, and making decisions on allocating its resources to pursue this strategy. According to Byars (2001) a strategic plan is used to describe the steps taken by an organization in achieving its objectives and mission. In addition to this, Starkey (2004) points out that the mission is the first step of the strategic plan that defines the long-term vision of the organization. Therefore, strategic direction is the process of directing and controlling the organization action that leads into achievement of the goal which may involve different degrees of changes hence they must set the activities and process to be followed across all levels, (Serfontein, 2009).

Research by Alexander, (2015) advanced that strategic direction has significantly contributed to organizational performance by generating relevant information in a bid to reduce uncertainty while creating a better understanding of the important environment within which organizations operate. Further, researchers revealed that strategic planning as an essential tool which generates greater understanding in the process of planning initiation as an area of interest and importance to both practitioners and theorist (Barney, 2009; Bryson, Berry & Yang, 2010). Strategic direction is a variable that influence organizational processes, business environments and performances of businesses while investigating planning in businesses (French, Kelly & Harrison 2014). Kathama (2012) investigated the relationship between strategic planning practices and performance of state corporations in Kenya. The study found that state corporations adopted a number of strategic planning practices that had a positive impact on performance of corporations but the impact was not significant at 5% level of confidence. The study therefore failed to establish a significant effect of strategic planning on firm performance though the model was fit at the same level of confidence. This may suggest that some of the practices could have shown significant impact had the researcher modelled the strategic planning practices individually rather than lump all the practices together into one variable while running the regression model. Strategic direction is anchored on strategic planning, this makes it suitable as an explanatory variable in this study.

Mazzarol and Rebound (2009) notes that, organizational performance can be measured as achieving sustainable growth over time using such indicators as annual turnover, the number of employees, size of assets and equity in the balance sheet, market share and profitability. However, Bolo, Muturia and Oeba (2010) observes that firm performance refers to how well or badly a firm is performing both financially and non-financially thus exclusive use of financial achievements or indicators as the sole yardstick to determine organizational performance would be biased because organizations desire to achieve broad objectives. Kaplan and Norton (2008) suggest that, use of a balanced scorecard for measuring company performance that tracks the achievement of both financial objectives and strategic objectives is critical. There are numerous studies that have been done in Kenya on performance in various sectors (Awino et al., 2012; Kathama, 2012; Muriuki, 2010; Bulle, 2012; Mukokho, 2010; Riungu, 2008; Arasa et al., 2011; Ong'ayo, 2012 and Odungo, 2012 among others). The petroleum industry has been largely neglected as far as studies on strategic management, operations management and specifically on the determinants of financial performance of petroleum companies are concerned.

Firm's Risk Management and Financial Performance of Petroleum Companies

It is an undeniable fact that risk management increases the value of firms and may reduce financial distress. The health and safety of employees poses great risk to the oil and Gas industry. Interruptions in oil production caused by fires and accidents easily lead to significant economic losses, and potential hazards to humans and the environment (Ahlang, 2005). Wilson and Shlyakter (1997) defined the concept of risk and its origins in uncertainty. They identified a number of different types of uncertainty and as part of a review of a number of risk calculation methods, they considered the theory of error and concluded that such error is valuable input to any probabilistic risk analysis. Risk is the likelihood of specific consequence happening. Risk management is a term applied to logical and systematic method of establishing the context, identifying, analyzing, treating, monitoring and communicating risks associated with any activity, function or process in a way that will enable organizations to minimize losses and maximize opportunities. Risk management is as such about identifying opportunities as avoiding or mitigating losses. The aim of risk management is to obtain understanding by all parties and agreement around what the risks really are and how they will be managed. It is also intended to improve performance through early risk detection, mitigation and product life cycle management.

Sawczuk (1996) stressed that no matter how small or simple a project is, something can go wrong and therefore risk awareness is vital to all stakeholders to ensure the reduction of possible risk. The most promising contribution to risk management is the extension of implicit contracts from employment, sales and financing (Cornell and Shapiro1987). Since corporate risk management practices may lead to a reduction in expected costs, company value rises Klimczak (2005). This indicates that stakeholder theory provides a new insight into possible reason for risk management. Agency theory examines the firm to include separation of ownership and control. In corporate risk management in the oil and gas industry, agency issues have been shown to influence managerial attitudes towards risk taking (Smith and Stulz 1985).The finance literature describes risk management as being concerned with identifying and managing a firm's exposure to finance risk where financial risk is defined as the variability in cash flows and market values caused by unpredictable changes in commodity prices, interest rates and exchange rates (Democlan, 1997).There is however connection between risk management and corporate governance. Corporate governance is often described as the set of rules, structures and procedures by which investors assure themselves of getting a return on their investment and ensures that managers do not misuse the investor's fund (Shleifer and Vishny 1997; Kaen 2003).

According to Rodrigue, (2012), supply chain refers to a process that focuses upon a product and extends over to the different actors, activities and resources required for making it available at the place of consumption. The process includes a set of logistics and transport chains linking activities from basic extraction of raw materials to final consumption of the end product. This chain has a number of financial risks which must be managed. Rodrigue (2012) further asserts that, it may not be possible for the entire supply chain to be managed by a single actor and therefore it remains a functionally integrated entity. The flow of products at the supply chain level are organizational in nature, implying that they reflect a sequence of tasks required to make a product available, including where and how they are undertaken. According to Chopra, Sunil and Meindl, (2001) any supply chain is characterized with a set of unique market demands and operating challenges which form the set of risks which the firms must work towards minimizing to reduce the chances of financial vulnerability of the companies in this sector.

Threat is a potential danger, which is harmful to an information system, whether intentional or accidental. The risk concerns the likelihood that a threat will take advantage of vulnerability while exposure is the instance when losses are exposed due to a threat. Assets risk concept involves the business resources attributed to the

system, including hardware, software, personnel, documentation and data. Control risk concept involves mechanisms in place to reduce, mitigate, or transfer risk. The other risk concepts are countermeasures that relate to controls developed through risk analysis to reduce vulnerabilities. Safeguards risk concept relate to controls that provide some protection to assets. The mitigation risk concept is an effort to select and implement controls with the purpose to reduce risk to acceptable levels (Fernades *et al*., 2009).

The Petroleum Supply Chain (PSC) is a complex assortment of infrastructures and processes whose mainstream begins with exploration of crude oil and finalizes with the delivery of petroleum products to the consumers. The petroleum sector is highly automated and optimized, so disruptions can rapidly escalate to industry wide or nationwide crisis. Oil companies aware of these risks; have put significant effort in risk management. There are however no direct method to identify possible uncertainties, risks and mitigation strategies for a particular situation (Fernandes *et al.,* 2009).

5. Conceptual Framework

The conceptual framework depicts the relationship between the variables in this study. The relationship is illustrated below.

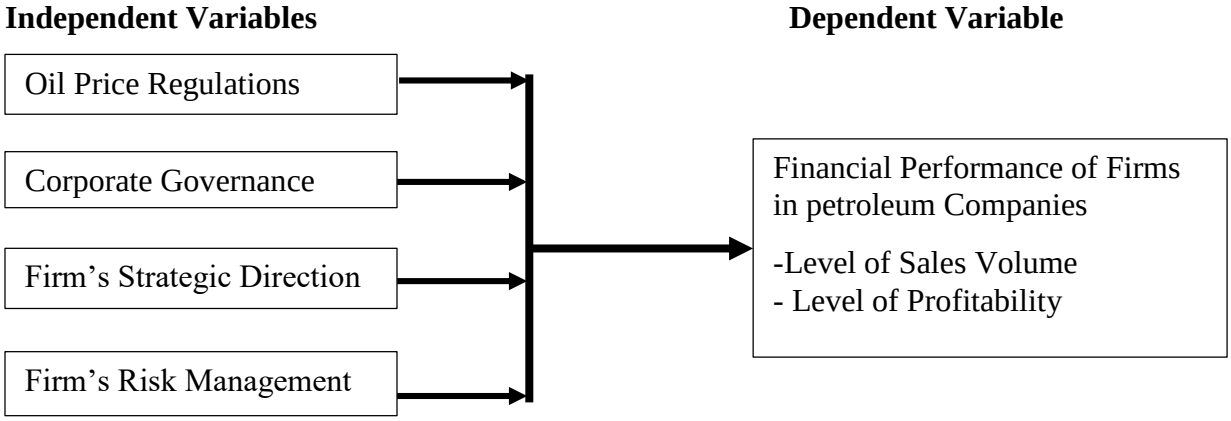

Figure 1: Conceptual Framework

6. Research Methodology

The study used descriptive survey research design. The study unit of analysis was the petroleum firms. The target population comprised of 76 managers from the petroleum firms. Census sampling technique was adopted. Both primary and secondary data were used. Descriptive statistics and inferential statistics were used to establish the relationship between the variables in this study. The descriptive analysis involved the use of percentages, frequencies, means and standard deviations while inferential statistics involved the use of regression analysis and correlation analysis and the results will be tested at 95% confidence level. In the regression model the variable Y is usually defined as: $Y= \beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+ \beta_4 X_4 + \varepsilon$

Where: Y= Financial performance**;** X_1= Price Regulation; X_2= Corporate Governance; X_3= Firm's Strategic Direction and X_4 = Firm's Risk Management

β_0, β_1 ,β_2 ,β_3, and β_4 are regression coefficients.

7. Petroleum Products and Services on Financial Performance

The study established the effect of petroleum company's products and services on the financial performance of these companies in Kisumu County, Kenya. The response rate on the indicators relating to petroleum

company's products and services is presented as in table1 below. The scale weights were as: 5= very strong effect, 4.0 = strong effect, 3.0 moderate effect, 2.0 little effect and 1.0 no effect; the Likert scale related to financial performance of the petroleum companies.

Table 1: Petroleum products and Services on Financial Performance

Statement on Petroleum products and Services	Effect Mean Weight
Company petroleum by-products boost revenues	**3.83**
By-products of petroleum sold to other companies yield high returns	**3.986**
The by-products used within the company boosts company revenue	**2.923**
The services are managed by an experienced skilled staff.	**3.313**
The petroleum finished product quality boosts revenue	**3.68**
Work in progress influence financial performance	**3.25**

The information in table 1 reveals that by products of the petroleum companies which are sold to other companies yield high returns and this influence financial performance of these companies as it is rated at 3.986 mean weight indicating moderate effect; further company petroleum by products boosting revenues was rated at 3.83 mean weight indicating a moderate effect. The finished petroleum products also have 3.68 mean weight also indication a moderate effect on the financial performance of these companies. Only the by-products used within the company are identified and rated at 2.923 mean weight indicating that it has little effect on financial performance.

8. Determinants of Financial Performance of Petroleum Companies

The study established the effect of determinants of financial performance of petroleum companies in Kisumu County Kenya. The information obtained from the field was presented as in table 2 below. The scale weights were as: 5= very strong effect, 4.0 = strong effect, 3.0 = moderate effect, 2.0 = little effect and 1.0 no effect; the Likert scale related to financial performance of the petroleum companies.

Table 2: Determinants of Financial Performance

Determinants of Performance	Effect Mean Weight
Price Regulation	**4.466**
Corporate Governance	**2.928**
Firm's Risk Management	**4.521**
Firm's Strategic Direction	**3.814**

Table 2 shows that price regulation has a strong effect on the financial performance of petroleum companies at 4.466 mean weight magnitude strength. The firm's risk management strategy as a determinant has a strong effect at 4.521 mean weight magnitude while the firm's strategic direction had a moderate effect on the financial performance at 3.814 mean weight magnitude while corporate governance was rated least at 2.928 mean weight magnitude by respondents as having little effect on the financial performance of petroleum companies in Kisumu County Kenya.

9. Regression Results

The correlation results for the relationship between determinants and financial performance of Petroleum companies.

Table 3: Correlations of the Variables

		Y	X_1	X_2	X_3	X_4
Pearson Correlation	Y	1.000				
	X_1	.767	1.000			
	X_2	.892	.801	1.000		
	X_3	.875	.789	.955	1.000	
	X_4	.666	.683	.675	.706	1.000

In the regression model the variable Y is usually defined as: $Y= \beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+ \beta_4 X_4 + \varepsilon$

Where: Y= Financial performance**;** X_1= Price Regulation; X_2= Corporate Governance; X_3= Firm's Strategic Direction and X_4 = Firm's Risk Management. The correlation values are high indicating strong association between explanatory variables in this study.

Table 4: Coefficients of the Determinant Factors and Financial Performance

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	.317	.072		4.395	.000		
	X_1	.086	.021	.109	4.151	.000	.321	3.115
	X_2	.289	.037	.420	7.736	.000	.075	13.296
	X_3	.064	.045	.081	1.418	.0157	.067	14.876
	X_4	.286	.025	.538	11.338	.000	.099	10.124

a. Dependent Variable: Financial performance

The model adopted in this study indicated that financial performance is a function of determinants of performance in the sector: price regulations, corporate governance, firm's strategic direction and firm's risk management adopted by the petroleum companies operating in Kisumu County, Kenya.

$Y = f(\beta_0, X_1, X_2, X_3, X_4, \varepsilon)$ ..... (9.1)

$Y= \beta_0+ \beta_1 X_1+\beta_2 X_2+\beta_3 X_3+ \beta_4 X_4 + \varepsilon$..... (9.2)

Substituting the coefficients in the model the results change to equation 4.3 below

$Y= 0.317+ 0.086 X_1+0.289 X_2+0.064 X_3+ 0.286 X_4$..... (9.3)

The unit change in price regulation of petroleum products or service causes a change in financial performance by 0.086 in financial performance. For the corporate governance a unit change in application of corporate governance principles causes 0.289 unit change in financial performance. The firm's strategic direction a unit change causes 0.064 unit change in financial performance of petroleum firms operating in Kisumu County, Kenya. Further the firm's risk management as a determinant its unit change causes an increase in financial performance by 0.286 units in the same direction. The coefficients indicate the nature of association of the variable in the model. Further t-test on the degree of significance of the variables was applied. This aimed at testing for the degree of significance of regression coefficients b_0, b_1, b_2, b_3, b_4 and b_5 relating to independent

variables towards financial performance of petroleum companies operating in Kisumu county Kenya. For the constant $b_0 = 0.317$; $T_0 = 4.395$, the *p* values ($p < 0.05$) reject H_0 and conclude that $b_0 = 0.317$ was significantly different from zero. For Price Regulation (X_1) its $b_1 = 0.086$; $T_1 = 4.151$; ($p < 0.05$): the study concludes that b_1 is significantly different from zero; and is statistically significant as a determinant of financial performance. For corporate governance (X_2) its $b_2 = 0.289$; $T_2 = 7.736$, ($p < 0.05$): the study concluded that b_2 is significantly different from zero; therefore its effect as a determinant of financial performance of petroleum companies is statistically significant. For firm's strategic direction (X_3) its $b_3 = -0.064$; $T_3 = 1.418$, ($p < 0.05$): the study concluded that b_3 is significantly different from zero;, therefore its effect as a determinant of financial performance is statistically significant. Further, for firm's risk management (X_4) its $b_4 = -0.286$; $T_4 = 11.338$, ($p < 0.05$): the study concluded that b_4 is significantly different from zero;, therefore its effect as a determinant of financial performance is statistically significant.

Table 5: Model Summary

				Change Statistics	
Model	R	R Square	Adjusted R Square	F Change	Sig. F Change
1	.916[a]	.838	.837	755.054	.000

a. Predictors: (Constant), Price Regulations, Corporate Governance, Firm's Strategic Direction, Firm's Risk Management
b. Dependent Variable: Financial performance

The information in table 5 show that determinants as predictor variables have a strong association with financial performance of petroleum companies ($R = 0.916^a$), further the predictor variables can explain up to 83.8% of the variation in financial performance and this is indicated by R Square ($R^2 = /0.838$) the model used in this study can be relied on by its users up to 83.7% (adjusted $R^2 = .837$) and his result is statistically significant.

10. Conclusion

From the results of this study it is concluded that price regulations, corporate governance, firm's strategic direction, firm's risk management as determinants of financial performance of petroleum firms has statistically significant positive effect and therefore firms should utilize them to improve on their financial performance.

References

Adetayo, E. D. (2011). Guide to Business Research and Thesis Writing. Ibadan: Rasmed publications limited Ibadan, Nigeria.

Angelier, J. (1991). The Determinants of Oil Prices, Energy Studies Review: Vol. 3: Issue. 3, Article 1.

Aress, A. (2011). Rising fuel prices, can it be controlled? "The Accountant" Journal of Institute of Certified Accountants of Kenya, June-July issue page 18-23.

Arrow, Kenneth J. (1985). „The Potentials and Limits of the Market in Resource Allocation", in Feiwel, G.R. (ed.), Issues in Contemporary Microeconomics and Welfare, London, The Macmillan Press, 107-124.

Bronfenbrenner, M. (1947). "Price Control under Imperfect Competition", The American Economic Review, Vol. 37, No. 1 (Mar., 1947), pp. 107-120.

Cadbury, A. (1992). Report of the committee on the Financial Aspects of Corporate Governance. London: Gee Publishing.

Clarke, T. (2004). The stakeholder corporation: A business philosophy for the Information age. In Theories of Corporate Governance the Philosophical Foundations of Corporate Governance (189-202). London: Pout Ledge.

Energy Regulatory Commission website: http://www.erc.go.ke accessed on 18th August 2016.

Ikiara, M (2010). Should Kenya revert back to price controls? Kenya Institute for Public Research and Analysis (KIPPRA) monthly bulletin, October, 2010 Issue. Nairobi

Johannsen, K.S. (2003). 'Regulatory Independence in Theory and Practice - A Survey of Independent Energy Regulators in Eight European Countries". AKF, Denmark.

Hermalin, K. F. (2005). Additions to corporate boards: The effect of gender. Journal of Corporate Finance, 11,85-90.

Meckling, M. J. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. InL. Putterman, The Economic Nature of the Firm. Cambridge University Press.

Oduor. J (2010). The Revolution of Petroleum Prices in Kenya. Daily Nation 15th October, 2010.