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# Relationship between Corporate Governance Quality and Financial Performance of Manufacturing Firms Listed at the Nairobi Securities Exchange

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## Abstract

There has been renewed interest in the relationship between corporate governance and financial performance of modern corporations. This study, therefore, sought to investigate the relationship between corporate governance quality and financial performance of manufacturing firms listed at the Nairobi Securities Exchange. The study examined the relationship between board independence, board size, chief executive officer duality, frequency of board meetings, and a comprehensive corporate governance index and financial performance. The study adopted longitudinal research design. Data for independent variables were collected from published corporate governance reports while data for control variables were collected from the financial reports. The data was analyzed using descriptive statistics, correlation analysis and multiple regression analysis. The study found that corporate governance quality is significantly related with firm performance. Specifically, the study found that that board size and a comprehensive corporate governance index computed by Cytonn Investments had a positive and significant relationship with financial performance. The study recommends that it is important for manufacturing companies to increase the quality of their boards of directors. This is because high quality boards could help in enhancing the financial performance. The study recommends that the manufacturing firms should fully comply with the code of corporate governance practices for issuers of securities for companies listed at the Nairobi Securities Exchange.

**Keywords:** *board independence, board size, CEO duality, board meetings, corporate governance index, financial performance, manufacturing firms, Kenya.*

## **1.0 INTRODUCTION**

Corporate governance is an important concept which relates to a set of rules through which the management of an organization is directed, evaluated and controlled to achieve the overall objective and goals of an organization (Adegbemi, Donald & Ismail, 2012). Therefore, corporate governance provides the structure so that the goals and missions of a firm are put in place and the measures of achieving them are accomplished. According to Shuk (2013), governance must render effective motivations for directors to pursue goals and missions that resonate with a firm as well as its shareholders' interests in order to enhance financial performance. A firm is said to have high quality corporate governance if it is managed with diligence, transparency, responsibility and accountability geared towards maximizing shareholders' wealth to ultimately promote financial growth (Adegbemi, Donald & Ismail, 2012)..

There has been renewed interest in the association among corporate governance and performance of modern corporations (Love & Rachinsky, 2017). This is particularly due to the collapse of a number of high-profile companies such as Nakumatt chain of supermarkets and Imperial Bank of Kenya among other notable companies some of which are listed and others not listed in the Kenyan securities market (Love & Rachinsky, 2017)..

Unsatisfactory performance of corporations and the witnessed corporate scandals around the world has made many organizations to focus more on corporate governance. This focus has been to enhance efforts directed at improving the overall organizational performance. As stated by Mayer (2017), corporate governance encompasses what can be considered to be legitimate lines of transparency and accountability. Corporate governance, therefore, helps in defining the kind of association that exists between financial performance and corporate governance. Therefore, the growing emphasis of firm governance to improve financial performance reflects its importance to the company survival (Ho, 2015).

In a rejoinder, Demsetz and Villalonga (2011) say that the importance of corporate governance for the firm survival cannot be overemphasized; this is because good corporate governance enhances investor confidence which ultimately promotes financial growth (Brown & Caylor, 2014). According to Coombes and Watson (2012), investors are more likely to put their money in organizations with effective corporate governance practices. Hence, it can be argued that good corporate governance leads to better firm performance. Also, corporate governance is considered as having significant implications for the growth prospects of a company, because best qualities in corporate governance improves the overall company financial performance (Spanos, 2015).

Due to the relationship that exists among corporate governance and performance, the various stakeholders have a duty to ensure that companies are well run (Love & Rachinsky, 2017). This is possible if proper corporate governance is put in place. Stakeholders must exert influence in all areas of the health of a given company in order to enhance performance. Kirkpatrick (2012) asserts that the evidenced financial crises among many companies globally can be to a large extent attributed to the weaknesses and failures in realigning corporate governance practice to the strategies that could promote financial performance.

Despite the vast literature on the link between corporate governance quality and financial performance of companies, there appears to be a few studies done on the selected manufacturing firms within Kenya. Considering the nature of the operations of manufacturing companies as well as their target groups which are predominantly in the formal and informal sectors, most manufacturing companies are subjected to high danger in as much as they tend to adhere to corporate governance quality. Therefore, the existence of corporate governance quality to minimize the risk profiles of these firms and enhancing their financial status as well as their survival is a necessity (Love & Rachinsky, 2017). This study, therefore, aims at assessing the association among corporate governance quality and the financial performance of listed manufacturing firms in Kenya. This is to add the perspective of the manufacturing sector to the corporate governance debate.

A study by Erkens, Hung and Matos (2010) viewed corporate governance as a way of embracing investors' desires so as to assure them of a fair return on their investment. It is, therefore, factual that corporate governance is all about the association among internal governance qualities of corporations' perception of the scope of corporate accountability (Walker, 2010). On the other hand, financial performance can be defined as the reflection of the way in which the resources of a company are used in the form which enables it to achieve its objectives, missions, and goals (Chandler, 2010). This definition is also supported by Varshney, Kaul and Vasal (2013) in their study on effect of good corporate governance mechanisms on financial performance. Therefore, corporate governance quality is assumed to increase firm performance of a firm.

According to Hashim and Devi (2012), corporate governance plays an integral role in the company's quest to attaining increased financial performance. Therefore, it is prudent that application of corporate governance is able to provide guidelines during analysis, formulation and implementation of performance strategies and will lead to better firm performance. On the contrary, poor implementation may create information sharing costs, misinformation, unaccountability, conflicts between CEO and other board members which could then lead to inefficiency of directors and consequently slowing down decision making process and execution processes (Hashim and Devi, 2012).. These could ultimately result to deterioration in firm performance.

According to Coombes and Watson (2012), there is no general agreement in literature on financial performance measures in studies that have focused on corporate governance. However, many past studies have applied accounts indicators such as ROE and ROA and market related indicators like Tobin's Q (Heentigala & Armstrong, 2011). Other studies have also used return on investment, operating profit margin, earnings per share, current ratio, debt to asset ratio, debt to equity ratio, and equity to asset ratio (Love & Rachinsky, 2017), asset turnover ratio, operating expense ratio, pre-tax operating income (POI) ratios, depreciation expense ratio and interest expense ratio among others as indicators for financial performance (Ammann, Oesch & Schmid, 2011). However, the study at hand utilized return on asset and return on equity as measures for financial performance. The choice for the measures is driven by the fact that most past studies have found a positive statistical significant relationship between them and the corporate governance.



### 1.1 Statement of the problem

Although there exists a growing literature linking corporate governance and financial performance there is, equally, presence of differing results (Korac-Kakabadse, Kakabadse & Kouzmin, 2011). A study by Ammann, Oesch and Schmid (2011) established that corporate governance practices are significantly and positively related to firm performance. Balasubramanian, Black and Khanna (2010) found positive association among corporate governance and firm performance. Erkens, Hung and Matos (2010) revealed that firms having many autonomous directors faced bad returns and performance while Love and Rachinsky (2017) found that there was negative association among corporate governance and firm performance. In Kenya, Kimosop (2011) established that frequency of board meetings, board size, shares held by insiders, and board composition positively influence firm's performance while Ongore and Owoko (2011) also revealed that corporate governance practices have a positive association with financial performance.

From the empirical studies, it is probable that association among corporate governance and financial performance is not universally agreed in Kenya especially in manufacturing firms. As established in the empirical studies from Kenya, a positive association among corporate governance and firm performance was demonstrated. It is, therefore, prudent for this study to determine if the same is applied to the manufacturing companies in Kenya. Again, many manufacturing companies such as Mumias Sugar Company and Eveready East Africa Company have always faced financial hardships which have led to lay-off of many staffs. This to some extent has been attributed to the nature of corporate governance quality embraced by these firms which have adversely affected their performance (Erkens *et al.*, 2010).

Additionally, this study, therefore, used size of board, independence of board, duality of CEO, and board meetings as measures of corporate governance quality. In light of these gaps, this study sought to assess the relationship between corporate governance quality and financial performance of listed manufacturing firms in Kenya in order to bridge the identified knowledge gaps.

### 1.2 Objectives of the study

- i. To examine the relationship between board independence and financial performance of listed manufacturing firms in Kenya
- ii. To examine the relationship between board size and financial performance of listed manufacturing firms in Kenya
- iii. To examine the relationship between CEO duality and financial performance of listed manufacturing firms in Kenya
- iv. To examine the relationship between frequency of board meetings and financial performance of listed manufacturing firms in Kenya
- v. To examine the relationship between corporate governance index and financial performance of listed manufacturing firms in Kenya.

### 1.3 Conceptual Framework

The framework aimed at showing the relationship between independent and dependent variables. As presented in Figure1, the independent variable in this study was corporate governance quality as indicated by proportion of independent directors, the board size, indicated by the director numbers on the board, CEO duality, measured by a dummy variable taking the (value of 1 if the CEO was also the chair of the board, and 0 otherwise). The other measure of corporate governance quality was the board meetings measured by number of board meetings. Cytonn's Investment comprehensive corporate governance index was also used. The financial performance is the dependent variable. Two measures were used for the dependent variable. One, the return on equity, ROE, defined as net income (profit after tax)divided by shareholders' equity at the end of the year, and two, the return on assets, ROA, defined as profit before tax divided by the total assets at the end of the year.

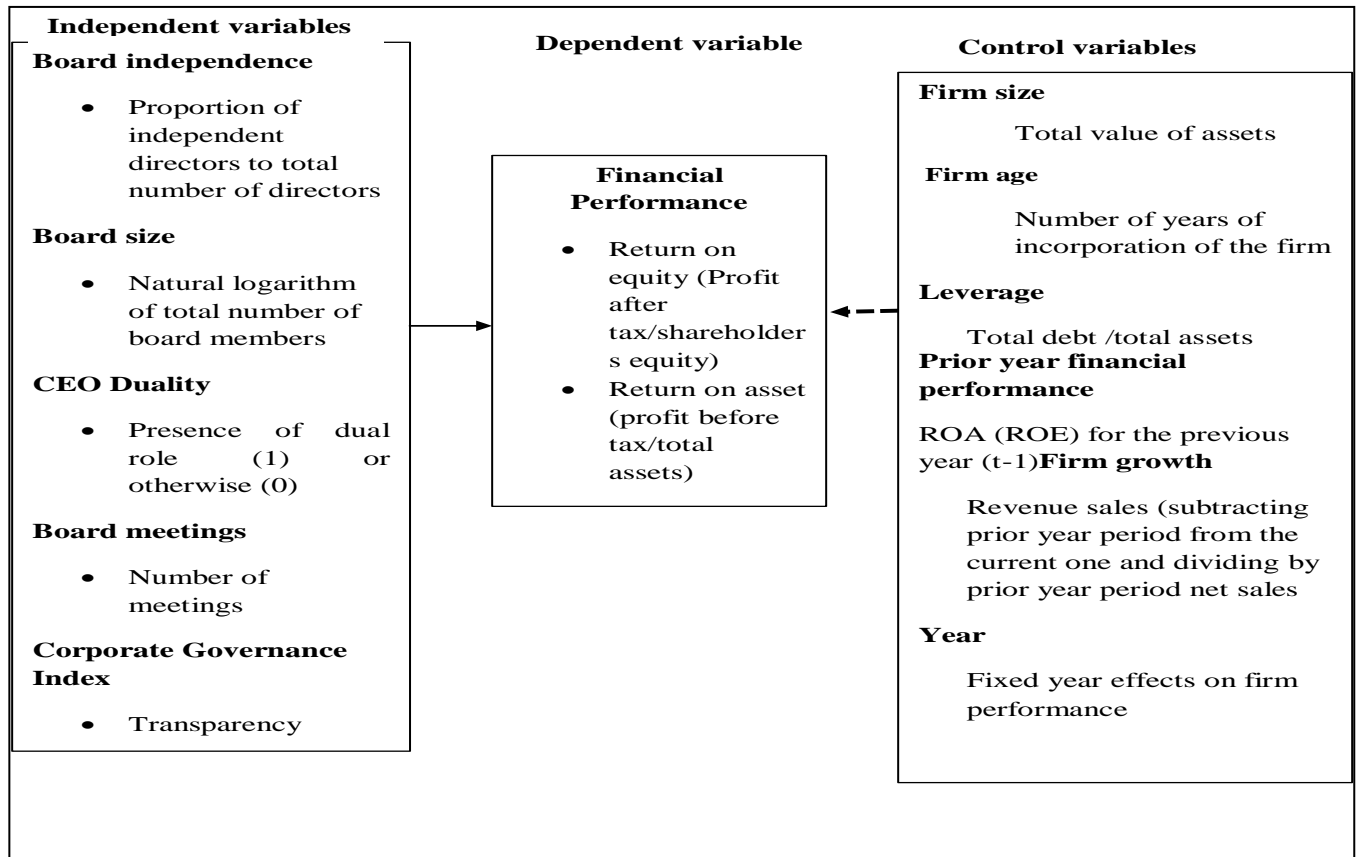


Figure 1: Conceptual Framework

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical Framework**

#### **2.1.1 Agency Theory**

Agency theory was authored by Alchian and Demsetz (1972) and furthered by Jensen and Meckling (1976). According to agency theory, information available may enable managers to act in a manner that can help them obtain more knowledge and skills thereby increasing firm's financial performance. This theory proposes that CEO and chairman functions should be carried out by separate persons so that optimum performance can be attained (Davis, Schoorman & Donaldson, 1997). Here, positivism is utilized where agents are regulated by rules initiated by principals with intention of boosting shareholders' confidence in the operation of the company. Hence, a more individualistic approach is employed in this theory (Clarke, 2004). Therefore, agency theory can generally be employed to determine the relationship between CEO duality and firm performance. However, in case of separation, the theory can be embraced to align the objectives and goals of a given company with that of the owners in order to enhance organizational performance.

The weaknesses of agency theory in trying to explain corporate governance mechanisms are noted by Professor Brudney (1985) when he argues against the notion that assumes that private bargaining or contracts adequately regulates the behavior of managers. Van Essen (2011) criticized the theory by looking at the function of ownership by considering various informal and formal structures. He found that firm ownership matter in as far as strategies, objectives, and performance is concerned; he argues that there exist a relationship between the ownership concentration, strategies and performance and all these are pegged on owner identities. Aguilera, Filatotchev, Gospel and Jackson (2008) also termed the perspective of agency theory as closed system. Their open system perspectives thus see corporate governance in terms of effectiveness and efficiency in achieving goals.

This theory argues that managers must be held accountable especially in their mandates. Therefore, managers must embrace good corporate governance in order to improve financial performance. Therefore, the agency theory advocates that the role of corporate governance is to minimize the chances of managers behaving in a way contrary to the shareholder's interest so as to enhance financial performance (Padilla, 2000). Agency theory suggests that corporate governance practices should be well formulated, implemented and monitored or rather evaluated to facilitate more effective and efficient control of the board of directors in order to improve performance. The study, therefore, assumes that there is a positive relationship between corporate governance quality and firm performance, that is, a high corporate governance quality could lead to improved financial performance.

### **2.1.2 Stewardship Theory**

Stewardship theory covers the lack of presence of trust in agency theory with respect to ethical behavioral principles geared at boosting firm performance (Clarke, 2004). This theory holds that organizations are entities that do have effect on the welfare of individuals or groups that effect or are affected by the attainment of firm's objectives, missions and goals (Donaldson & Preston, 1995). The theory suggests that managers are only satisfied and also motivated when organizational success is attained through improved financial performance.

Agyris (1973) argues that the theory recognizes the importance of corporate governance quality that empowers managers by providing optimum contribution that is anchored on trustworthiness among the managers. According to the theory, maximization of wealth can be attributed to embracing board independence as well as leaner board of directors in order to improve performance. Daily and Dalton (2003) argued that in order to protect their dignity board of directors are destined to run the firm so as to maximize financial performance. In this sense, it is believed that the firm's performance can directly impact perceptions of the individual performance of the board of directors which could then enhance stakeholder confidence.

Indeed, Fama (1980) infer that directors attempts to manage their reputation in order to be seen as effective stewards, whilst, Shleifer and Vishny (1997) good reputation for the managers is based carrying out their mandates as required by the company owners. Moreover, stewardship theory recommends unification role of corporate governance so as to reduce agency costs and consequently helps in safeguarding the shareholders' interests which in turn demonstrate presence of good financial performance. Further, stewardship theorists argue that leaner board sizes increases participation and cohesiveness thus improves firm performance whereas larger board sizes inhibit the board's ability to come to a compromise on vital decisions which could then lead to a decline in the performance (Muth & Donaldson, 1998).

Key (1999) in criticizing the theory indicates that it is not clear how outside interests should be determined exogenously as per the stewardship theory can be achieved. In a rejoinder, Argenti (1993) argues against stewardship theory and believes that firms that attempts to be everything to everyone or to be beneficial to various stakeholders are competitively disadvantaged and also unmanageable. Handy (1991) also criticize stewardship theory's concept and gets concerned how the theory can help CEO make decisions. This is because various groups cannot have common purposes. Others could require a firm to grow, others would want a given to maintain its current size while others may need a takeover and still a good number may want a firm to fail. The objective of the company may then be jeopardized management's adoption of "multi-fiduciary policies hence his dissatisfaction with the stewardship theory.

It is, therefore, clear that stewardship theory explains corporate governance quality as measured by leaner board size and independence of the board which could thus lead to higher firm performance. The fact that the theory stipulates for leaner and a board composed of independent members, the researcher, therefore, believes the applicability of this theory in the study, will lead to an existence of positive relationship between corporate governance quality and firm performance.



### 3.0 Research Methodology

The study adopted a longitudinal research design. The target population of the study was all the 63 listed companies at Nairobi Securities Exchange, (NSE) Kenya. The study used secondary data. The corporate governance index data was found from Cytonn Corporate Governance Index Report – 2017. The data collected was analyzed using Social Packages Statistical Sciences (SPSS) version 21. The study used descriptive statistics, Pearson moment correlation, and multiple regression analyses to examine the association among dependent (explanatory) and independent (predictor) variables.

### 4.0 Data Analysis and Presentation

#### 4.1 Sample Distribution

The results for sample distribution on age and growth are presented in Table 1.

**Table 1: Sample Distribution**

Variables	Minimum	Maximum	Median	Mean	Std. Deviation
Age	39	131.00	81.71	91.50	32.06
Growth	-0.94	5.74	0.22	0.00	1.10

Age was measured by number of years since incorporation of the firm while firm growth was measured by change in sales

The results in Table 1 show that the oldest firm had an operation period of 131 years while the youngest company was aged 39 years. The standard deviation of the age was about 32 years suggesting that new listing of manufacturing firms is at a very low rate at the NSE. It was found that on average the firms had growth of 0% an indication that majority of the companies were not experiencing substantial growth. This is not surprising given that the average age of the sample firms is about 92 years.

#### 4.2 Descriptive Statistics

The study obtained data on Board independence, Board size, Frequency of board meetings, ROE, ROA, Firm size, and leverage. The descriptive statistics for the manufacturing companies at the NSE for a period of eight years (2010-2017) are shown in Table2.

**Table 2: Descriptive statistics (N=56)**

Variable	Minimum	Maximum	Mean	Median	Std. Deviation
Proportion independent	0.33	0.80	0.56	0.58	0.16
Board size	5	13	9.36	9.00	2.21
Number of meetings	4	8	4.63	4.00	1.07
CGI	10.40	93.75	62.34	64.60	17.47

ROE	-12.60	0.81	0.20	0.20	1.77
ROA	-1.35	0.65	0.16	0.15	0.37
Age	39	131.00	81.71	91.50	32.06
Leverage	0.00	0.89	0.16	0.09	0.21
Growth	-0.94	5.74	0.22	0.00	1.10

Proportion independent is the Proportion of independent directors to total number of directors; Board size is the Natural logarithm of total number of board members; Frequency of board meetings is the Total number of board meetings during the year; CGI (Corporate governance index) is the average of the total of 2017 current score and 2016 previous score; ROE is the Net income (profit after tax) divided by shareholders equity; ROA is the Profit before tax divided by total assets; Leverage is the Total debt divided by total assets; Age is the Number of years since incorporation; Growth is the Change in sales

The results in Table 2 show that the average percentage of proportion independence for the study sample was 56 % with a standard deviation of 16% and varying from a minimum proportion independence range of 33% to a maximum proportion independence of 80%. The results also show that the average board size for the study sample was 9.36 and the median was 9.0 with a standard deviation of 2.21 and minimum board members for the companies were 5 while maximum total number of board members stood at 13.

Further, the study established that frequency of board meetings had a mean of 4.63 and median of 4.00 with a standard deviation of 1.07. Frequency of board meeting was found to have a minimum of 4 yearly meetings for some companies while others had up to a maximum of 8 meetings annually.

The study found that corporate governance index had a mean value of 62.34 with minimum and maximum values of 10.40 and 93.75 respectively. In regard to CEO Duality, the variable was dropped due to the fact that all companies were found not to have CEO Duality (presence of CEO Duality was represented by 0) hence the '0' results could not be computed.

Again the study found that the mean and median for ROE was 0.20 each with a standard deviation of 1.77. Regarding ROA, the study shows that the variable had a mean value of 0.16 and a median of 0.15 with a standard deviation of 0.37. However, ROA was found to be at its lowest in some companies as indicated by a minimum of -1.35 while better performing manufacturing companies had their highest ROA standing at 0.65.

In regard to leverage, the study found that out of the 56 observations made, the variable had a mean value of 0.16 and a median of 0.09 with a standard deviation of 0.21. The minimum leverage was as low as 0.00 with a maximum leverage of 0.89 for some manufacturing companies that demonstrated good financial performance.

### 4.3 Pearson Correlation Analysis

Pearson's correlation was used to establish the correlation between the variables. The results are shown in Table 3. The significance levels was tested at p-value < 0.01, p-value <0.05 and p-value <0.1.

**Table 3: Pearson Correlation Analysis**

	Board meetings	Board size	Proportion independent	ROE	ROA	LEVERAGE	Age	GROW TH	CGI
Board meetings	1	0.178 (-0.19)	0.064 (-0.642)	0.169 (-0.212)	0.22 (-0.103)	<b>0.390***</b> (.003)	<b>0.367***</b> (-0.005)	0.205 (0.133)	<b>0.253*</b> (0.073)
Board size		1	0.155 (-0.255)	-0.112 (-0.412)	<b>-0.248*</b> (0.065)	<b>0.531***</b> (0.000)	0.143 (-0.294)	0.209 (-0.126)	0.194 (0.173)
Proportion independent			1	-0.012 (-0.930)	0.187 (-0.168)	0.186 (-0.170)	-0.148 (-0.276)	-0.062 (-0.654)	0.103 (0.472)
ROE				1	<b>.722***</b> (0.000)	<b>-0.425***</b> (-0.001)	<b>0.255*</b> (-0.058)	0.143 (-0.299)	<b>0.246*</b> (0.082)
ROA					1	<b>-0.298**</b> (-0.026)	<b>0.367***</b> (-0.005)	0.137 (-0.320)	0.188 (0.186)
LEVERAGE						1	-0.013 (-0.926)	0.150 (-0.275)	-0.095 (0.509)
Age							1	0.131 (-0.339)	-0.062 (0.666)
GROWTH								1	0.047 (0.744)
CGI									1

\*\*\*. Correlation is significant at the 0.01 level (2-tailed)

\*\*. Correlation is significant at the 0.05 level (2-tailed)

\*. Correlation is significant at the level of 0.10 (2-tailed)

\*\*. Correlation is significant at the 0.05 level (2-tailed)

\*. Correlation is significant at the level of 0.10 (2-tailed)

Proportion independence is the proportion of independent directors to total number of directors; board size is natural logarithm of total number of board members; board meetings is the total number of board meetings during the year; ROA is profit before tax divided by total assets; leverage is the total debt divided by total assets; firm age is the number of years since incorporation; growth is the change in sales; Year is a dummy variable and prior year ROA is ROA for the previous year. CGI is the average of the total of 2017 current score and 2016 previous score

The results in Table 3 indicate that only board size and corporate governance index had significant relationship with financial performance. Board size was negatively and significantly correlated with return on asset ( $r = -0.248$ ,  $p$ -value = 0.065) at the 10% level. Corporate

governance was also found to be positively and significantly related with return on equity ( $r = 0.246$ ,  $p$ -value = 0.082) at 10% level.

In summary, the correlation results indicate that board size and corporate governance index had significant correlation with financial performance while board meetings and proportion independence had insignificant association with financial performance of manufacturing firms.

#### 4.4 Regression analysis

The variables were regressed to determine the association among the corporate governance and financial performance controlling for other firm variables. The results are presented in Table 4.

##### 4.4.1 Regression for ROE

The results in Table 4 shows the multiple regression results for return on equity for the manufacturing firms listed at the NSE.

**Table 4: Regression for ROE**

Dependent variable = ROE			
Variables	Coefficient	t-value	p-value
Constant	-3.493	-1.076	0.288
Board meetings	0.201	1.266	0.213
Board size	0.283*	1.987	0.054
Proportion of independence	-0.113	-0.934	0.356
Leverage	-0.696***	-4.649	0.000
Firm age	-0.128	-0.929	0.358
Year	-0.089	-0.708	0.483
Growth	0.176	1.460	0.152
Prior year roe	0.460***	2.926	0.006
Adjusted R-squared		0.458	
F-statistic (p-value)		6.061 (0.000)	

\*\*\*, \*\*, and \* represents significance at 1%, 5%, and 10% level respectively; proportion independence is the proportion of independent directors to total number of directors; board size is natural logarithm of total number of board members; board meetings is the total number of board meetings during the year; ROA is profit before tax divided by total assets; leverage is the total debt divided by total assets; firm age is the number of years since incorporation; growth is the change in sales; Year is a dummy variable and prior year ROA is ROA for the previous year.

As presented in Table 4 the results showed that the model was good fit as explained by an adjusted R square of 45.8% (about 46%) of the variation in return on equity. The ANOVA results showed that the significance of the F statistics (6.061) is 0.000<sup>b</sup> and it is less than 0.01 which means that the model is significantly reliable.

Regarding independent variables, the study found that none of the corporate governance measures was significantly associated with ROE except board size. “Board size” was positively and significantly related with ROE ( $\beta = 0.283$ ,  $p$ -value = 0.054) at the 10% level. This implies

that the larger the board sizes the higher the financial performance. Therefore, an increase in the size of the board could lead to an increase in the financial performance measured as return on equity (ROE) by 28%.

Concerning control variables, the study found that only leverage and prior year financial performance was significantly associated with ROE. Leverage was negatively and significantly related with ROE ( $\beta = -0.696$ ,  $p < 0.0001$ ) at 1% level. Therefore, this implies that firms with high leverage have lower financial performance. Prior year financial performance was also found to be positively and significantly related with ROE ( $\beta = 0.460$ ,  $p\text{-value} = 0.006$ ) at the 1% level.

#### 4.4.2 Regression for ROA

The results in Table 5 show the multiple regression results for return on asset for the manufacturing firms listed at the NSE.

**Table 5: Regression for ROA**

Dependent variable =ROA			
Variable	Coefficient	t-value	p-value
Constant	-0.619	-1.059	0.296
Board meetings	0.133	0.941	0.352
Boardsize	-0.077	-0.547	0.587
Proportion of independent directors	0.057	0.488	0.628
Leverage	<b>-0.246*</b>	<b>-1.744</b>	<b>0.089</b>
Firm age	0.166	1.280	0.208
Year	-0.142	-1.201	0.237
Growth	<b>0.486***</b>	<b>3.353</b>	<b>0.002</b>
Prior year ROA	0.108	0.949	0.348
N		56	
Adjusted R-squared		0.519	
F-statistic (p-value)		7.465(0.000)	

\*\*\*, \*\*, and \* represents significance at 1%, 5%, and 10% level respectively; proportion independence is the “proportion of independent directors to total number of directors; board size is natural logarithm of total number of board members; board meetings is the total number of board meetings during the year; ROA is profit before tax divided by total assets; leverage is the total debt divided by total assets; firm age is the number of years since incorporation; growth is the change in sales; Year is a dummy variable and prior year ROA is ROA for the previous year.

The results in Table 5 show that the explanation of the model based on the adjusted R square was about 52% of the variation in return on asset. The ANOVA results showed that the model is significant at 1% level (F-statistic =7.465, p-value = 0.000). Therefore, the model is significantly reliable. These results show that none of the corporate governance measures had a significant relationship with firm performance measured as return on assets.



Regarding control variables, leverage had a significantly negative relationship with ROA ( $\beta = -0.246$ ,  $p\text{-value} = 0.089$ ) at the 10% level. Therefore, firms with high leverage are associated with lower financial performance. However, firm growth a significantly positive ( $\beta = 0.486$ ,  $p\text{-value} = 0.002$ ) association with firm performance at 1% level. Therefore, firms with higher growth opportunities are more likely to have better financial performance than those that do not have.

#### 4.5 Simple Regression for Corporate Governance Index

To further examine the association between corporate governance and firm performance, the regressions for ROA and ROE were repeated but this time with a comprehensive “corporate governance index. Results for this estimation are shown in Table 6.

**Table 6: Regression for Corporate Governance Index**

Variable	Dependent variable = ROA			Dependent variable = ROE		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
Constant	-0.014	-0.80	0.936	-0.205	-1.311	0.197
CGI	0.211	1.501	0.140	<b>0.261**</b>	<b>2.045</b>	<b>0.047</b>
Leverage	<b>0.244*</b>	<b>1.683</b>	<b>0.099</b>	<b>-0.009</b>	-0.071	0.943
Firm age	-0.060	-0.400	0.691	0.176	1.299	0.201
Year	-0.145	-1.031	0.308	-0.181	1.415	0.164
Growth	0.091	0.631	0.531	<b>0.386***</b>	<b>2.949</b>	<b>0.005</b>
Prior year ROA/ROE	0.168	1.174	0.247	0.145	1.116	0.271
N		51			51	
Adjusted R-squared		0.033			0.199	
F-statistic (p-value)		1.283(0.285)			3.069 (0.013)	

\*\*\*, \*\*, and \* represents significance at 1%, 5%, and 10% level respectively; CGI = corporate governance index is the average of the total of 2017 current score and 2016 previous score; ROA is profit before tax divided by total assets; ROE is Net income (profit after tax) divided by shareholders equity; leverage is the total debt divided by total assets; firm age is the number of years since incorporation; growth is the change in sales; Year is a dummy variable and prior year ROA is ROA for the previous year.

The results in Table 6 reveal that the explanation of the model for return on asset was about 3% of the variation in return on asset. The ANOVA results indicate that the significance of the F statistics (1.283) is 0.285. Therefore, the model is significantly reliable. Leverage was found to be positively and significantly related with return on asset ( $\beta = 0.244$ ,  $p\text{-value} = 0.099$ ) at the 10% level.

Further, the model explained about 19% of the variation in return on equity. The significance of F statistics (3.069) is 0.013, an indication that the model significantly reliable. The regression established that corporate governance index was positively and significantly related with ROE ( $\beta = 0.261$ ,  $p\text{-value} = 0.047$ ) at the 5% level. Further growth was found to be positively and significantly related with return on equity ( $\beta = 0.386$ ,  $p\text{-value} = 0.005$ ) at the 1% level.

The regression results showed that board size was significantly associated with firm performance. The findings resonates with another study carried out by Abor and Biekpe (2007) who found that corporate governance structures such as board size influences financial performance of SMEs in Ghana. However, the findings contradict Mashayekhi and Bazaz (2008) who revealed that board size had a negative association with financial performance.

Further the study found that a comprehensive corporate governance index was positively and significantly related with firm performance. The findings are consistent with a study by Brown and Caylor (2004) that revealed that corporate governance indices did have significant positive association with the financial performance of studied firms. However, the findings are inconsistent with a study by Esman (2013) that established that corporate governance index had negative association with firm performance.

## **5.0 CONCLUSIONS**

The study concludes that corporate governance quality had significant relationship with firm performance. Size of board as independent variable was statistically and significantly related to ROE. This means that the larger the board size the higher the financial performance.

The study concludes that quality of corporate governance is positively and significantly related with financial performance of the sample manufacturing firms. This means that an increase in corporate governance quality could lead to an improvement in the financial performance of manufacturing firms.

In summary, the overall results show that the adherence with the Kenya corporate governance regulations 2015 would benefit both firms and investors. The continued efforts by the regulators and securities exchange are in the right direction.

## **6.0 RECOMMENDATIONS**

The study recommends that emphasis be put on ensuring compliance of all firms to the corporate governance regulations and strengthening the quality of the boards of directors.

The study also suggests that further research should be carried out with an intention of assessing other governance factors that relates with financial performance apart from corporate governance measures.

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