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EXCHANGE**

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**EFFECT OF BOARD COMPOSITION ON PERFORMANCE OF FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE**

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**ABSTRACT**

*Due to various scandals and failures of some big firms such as Commerce Bank, Enron, Adelphia and World Com, there has been reviewed interest on board composition attributes that have effect on firm outcomes. This thesis attempted to assess the effect of board composition on firms performance, specifically a case of Kenyan listed companies. The specific objectives of the study were to establish the effect of non-executive directors on performance of firms listed in Nairobi Securities Exchange and to assess the effect of directors' nationality on performance of firms listed in Nairobi Securities Exchange. Firm performance was measured using Return on Equity ratio. The study adopted both descriptive and explanatory research designs. 45 firms listed between 2007 and 2013 in the Nairobi Securities Exchange were considered in the study hence census design was adopted. Secondary data was used to capture the performance of quoted companies for the last seven (7) consecutive years, that is, 2007 to 2013 filed at Capital Markets Authority. Both descriptive and inferential statistics were used. The study hypotheses were tested using pooled data from the 45 listed firms in Nairobi Securities Exchange between 2007 and 2013. The study found a statistically significant positive effect of board composition attributes in form of non-executive directors and directors nationality on firm performance. The study results further indicated that the resource dependence theory acts as an interlinkage model between board composition attributes specifically non-executive directors and directors nationality, and firm performance. Therefore, the practical contribution of this study has been to highlight the strategic composition of boards and dynamic consideration of the organizational context and needs for board linkages for management practice. The study recommends that future researchers to measure the benefits accrued from directors' advice and counsel, legitimacy and channels of communication, support and resources and also assess whether the non-executive directors understand and act on these benefits.*

**Key Words;** Non-Executive Directors, Directors Nationality and Firm Performance

## Background

Organizational performance is the ultimate dependent variable of interest for researchers concerned with strategic management. This broad construct is essential in allowing researchers and managers to evaluate firms over time and compare them to rivals. Organizational performance is the most important criterion in evaluating organizations, their actions, and environments. This importance is reflected in the pervasive use of organizational performance as a dependent variable (March & Sutton, 1997).

Research in a variety of disciplines and drawing on a variety of theoretical perspectives has suggested that good performance provides a variety of benefits and opportunities for organizations that not only decrease the need to consider engaging in unethical, illegitimate, or illegal activities, but also provide strong disincentives for doing so (Harris & Bromiley, 2007; Karpoff *et al.*, 2009). Researchers have argued that a firm can suffer numerous negative consequences if it is caught engaging in illegal activities, including damaged firm performance, loss of access to important resources, and severely tarnished reputations for both the firm and its managers (Karpoff *et al.*, 2009; Wiesenfeld *et al.*, 2008). Recent history further illustrates the complexity of this issue. Many of the firms involved in corporate scandals, such as Arthur Andersen, Enron, World Com, Tyco, and several leading investment banks, were generally viewed as prominent and/or high-performing companies until their scandals were uncovered.

The importance of board composition is typically studied from the perspective of corporate governance, which is the integrated set of internal and external controls that harmonizes manager (agent) and shareholder (principal) conflicts of interest resulting from the separation of ownership and control (Williamson, 1984). Without

governance controls, managers are more likely to deviate from the interest of shareholders. The board, however, with its legal authority to hire, fire, and compensate top management teams, can set the premises of managerial decision-making, monitor managerial behavior, and safeguard invested capital (Fama & Jensen, 1983). In this view, the board of directors is an instrument through which shareholders can exert influence on the behaviour of managers to ensure that a firm is operated in their interests. Therefore, the board which has more independent directors enhances firm performance effectively (Ma & Tian, 2009).

The resource dependency theory based research has depicted that boards prove to be the resource of the organization and they help improve the character and repute of the organization to the investors in the outside world and provide guidance in policy making and advice to the management (Carpenter & Westphal, 2001). Therefore, as more directors are added to the board size, the diversity and strength of the links increase to the external environment. This helps take better decisions on the basis of the board expertise and experience. There is also ample evidence that board diversity improves functioning of the board (Brennan, 2006; Baranchuk & Dybvig, 2009). The board diversity is also supported by resource dependence theory where its proponents are of the view that by adding directors from outside the organization will help secure critical links from the external environment regarding much sought after skills, legitimacy and business contacts (Goodstein *et al.*, 1994; Rose, 2007). Stiles (2001) specifically suggests that board diversity might boost access to critical resources, which would suggest that diversity, insofar as it relates to gender and nationality, can have a positive impact on performance.

Hillman and Dalziel (2003) categorize the sources of benefits such as directors human capital (for example, expertise, skills, knowledge and

reputation) and relational capital (resources through a network of relationship) that represent a rich and growing research stream which provide evidence of board of director linkage benefits (for example, advice and counsel, legitimacy and channels of communication). Therefore, this study seeks to contribute to the understanding of board composition and firm performance in connection to the resource dependence theory.

### **Statement of the Problem**

The wave of corporate scandals has led to the question as to what composition of board is best able to monitor management (Mizuchi, 2004). Enron, WorldCom and HIH management were all involved in questionable accounting practices which were undetected by their respective boards (Lawrence, 2004; Solomon, 2007). Regulatory corporate governance reports and codes; for example, Sarbanes-Oxley Act 2002 in United States; Cadbury Report 1992, Higgs Report 2003 and Smith Report 2003 in the United Kingdom; CLERP 9 and Ramsay Report 2001 in Australia advocate many boardroom reforms. The Higgs Committee recommended the independence of outside directors be tested (Kirkbride & Letza, 2005) therefore necessitating the study.

Narrative reviews describe board composition-performance links as “vexing”, “contradictory”, “mixed” and “inconsistent” (Finkelstein & Hambrick, 1996; Johnson *et al.*, 1996). In a recent meta-analysis, Dalton *et al.* (1998) found no evidence of substantive relationships between board composition and financial performance. Connelly and Limpaphayom (2004) found that board composition has a positive relation with profitability and a negative relation with the risk-taking behaviour of life insurance firms in Thailand. The studies show inclusive findings and thus further empirical studies need to be done.

Review of studies on board composition beyond independence has revealed a growing literature demonstrating that the demographic, human capital and social capital characteristics of directors have important effects on firm outcomes. At the same time, these studies highlight the need to extend this research (Johnson *et al.*, 2013). Hence, this study sought to investigate the effect of board composition on performance of firms listed in Kenya in attempt to provide more empirical data in the local arena.

### **Research Objectives**

The general objective of this study was to assess the effect of board composition on performance of firms listed in Nairobi Securities Exchange. The specific objectives of the study were:-

- To establish the effect of non-executive directors on performance of firms listed in Nairobi Securities Exchange.
- To assess the effect of directors nationality on performance of firms listed in Nairobi Securities Exchange.

### **Literature Review**

#### **Theoretical Foundation**

##### **Financial Analysis - Firm Performance Model**

Financial analysis is a method of analyzing performance of a firm within a certain period. Some strategists consider these financial methods as more accurate because it uses figures and mathematical calculations. Figures don't cheat, they say. But critics also point to the weaknesses of financial methods as using past data that may have been overtaken by events. Strategic management looks into the future but accounts only for what has already been spent. Mistakes will have been made (Yabs, 2010). Financial analysis gives managers good strategic information that can assist strategists make decisions. They are used by managers to compare different periods of performance by the

same firm. It is also used by lenders to decide who to lend money (Yabs, 2010).

Financial analysis refers to financial methods used to analyze the true status of the firm based in the results of its operations. The information given by financial methods sometimes require interpretation to some managers within the firm. This information provides managers with the opportunity to compare current performance with the past. It also allows them to benchmark their performance with other firms within the same industry. The most commonly used ratios are: Liquidity Ratios; Leverage Ratios or Gearing Ratios; Asset Turnover Ratios; Dividend Policy Ratios and Profitability Ratios (Yabs, 2010).

**Profitability ratios** are ratios that show the profitability of the firm and its capability to generate funds through profits. The most important ratio here is Return on Equity represented mathematically as follows:-

$$\text{Return on Equity Ratio} = \frac{\text{Net Income}}{\text{Shareholder Equity}}$$

### **Resource Dependence Theory - Board Composition Model**

Resource dependence theorists view a firm as an open system, dependent on external organizations and environmental contingencies (Pfeffer & Salancik, 1978). Proponents of this perspective see corporate boards as a means to manage external dependency (Pfeffer & Salancik, 1978), reduce environmental uncertainty (Pfeffer, 1972), and reduce transaction costs associated with environmental interdependency (Williamson, 1984) by linking the organization with its external environment. The primary role of boards from a resource dependence perspective, therefore, is to serve as resource providers. Four types of resources are provided by boards: (1) advice and counsel, (2) legitimacy, (3) channels for communicating information between the firm and

external organizations, and (4) assistance in obtaining resources or commitments from important elements outside the firm (Hillman *et al.*, 2000). Research in this tradition has shown boards to be important sources of advice and counsel to management (Westphal, 1999) and to enhance the reputation and legitimacy of the firm (Daily & Schwenk, 1996). Similarly, director interlocks have been found to play an important role in disseminating information across firms (Useem, 1984) and in securing preferential access to critical resources (Mizruchi and Stearns, 1994).

A general tenet of resource dependence theory is that corporate boards will reflect the environment of the firm (Hillman *et al.*, 2000) and that corporate directors will be chosen to maximize the provision of important resources to the firm. In contrast to agency theorists, resource dependence theorists argue that boards are vehicles for coopting important external organizations. An implication of resource dependence theory, then, is that each director may bring different linkages and resources to a board. Underlying patterns of board composition will be more finely grained than the traditional insider/outsider distinction common in agency theory. Researchers thus theorize that composition reflects a matching of the dependencies an organization faces to the resource acquisition potential of its board members (Hillman *et al.*, 2000).

### **Effect of Non-Executive Directors on Firm Performance**

Non-executive directors refer to independent directors (Shah *et al.*, 2011). At least one third of independent directors are preferred in board for effective working of board and for unbiased monitoring. Independent boards compose of members who are not executives of a company, nor shareholders, nor blood relatives or in law of the family (Gallo, 2005). It is composed of members

who have no ties to the firm in any way, therefore there is no minimum chance of having a conflict of interest because independent directors have no material interests in a company.

There is an apparent presumption that boards with significant outside directors (non-executive directors) will make different and perhaps better decisions than boards dominated by insiders (executive directors). Fama and Jensen (1983) suggest that non-executive directors can play an important role in the effective resolution of agency problems and their presence on the board can lead to more effective decision-making. However, the results of empirical studies are mixed. Dehaene *et al.* (2001) find that the percentage of outside directors is positively related to the performance of Belgian firms. Rosenstein and Wyatt (1990) find a positive stock price reaction at the announcement of the appointment of an additional outside director, implying that the proportion of outside directors affects shareholders' wealth. Bhojraj and Sengupta (2003) and Ashbaugh-Skaife *et al.* (2006) also find that firms with greater proportion of independent outside directors on the board are assigned higher bond and credit ratings respectively.

Furthermore, O' Sullivan (2000) examined a sample of 402 UK quoted companies and suggested that non-executive directors encouraged more intensive audits as a complement to their own monitoring role while the reduction in agency costs was expected. However, there is also a fair amount of studies that tend not to support this positive perspective. Some of them report a negative and statistically significant relationship with Tobin's Q (Agrawal & Knoeber, 1996; Yermack, 1996) while others find no significant relationship between accounting performance measures and the proportion of non-executive directors (Weir *et al.*, 2002; Haniffa & Hudaib, 2006). Furthermore, based on a large survey of firms with non-executive directors in the Netherlands, Hooghiemstra and van

Manen (2004) concluded that stakeholders are not generally satisfied with the way non-executives operate. Haniffa *et al.* (2006) summarized a number of views expressed in the literature which may justify this non-positive relationship, such as that high proportion of non-executive directors may engulf the company in excessive monitoring, be harmful to companies as they may stifle strategic actions, lack real independence, and lack the business knowledge to be truly effective (Demb & Neubauer, 1992; Goodstein *et al.*, 1994).

Four main approaches to measuring board independence have been identified: inside, outside, affiliated, and independent/interdependent directors (Daily *et al.*, 1997). The essence of these measurements is to capture the extent a board operates independently of the firm and its management, specifically the CEO. The insider/outsider distinction refers to whether a board member is an employee of the firm. The affiliated operation goes beyond employment, and considers other factors that might affect a director's independence, such as family relationship, and supplier, customer and consultant. While such affiliation is believed to affect independence, it may be highly effective in resource dependence and counseling functions. The independent/interdependent distinction (Daily, 1995) differentiates directors who are already on the board when the current CEO is appointed. Board members who are on the board before the CEO arrives are considered independent, and those appointed by the CEO, interdependent, even that director may be a total outsider. Because it is impractical to differentiate independent and interdependent board member, studies measure board independence by the ratio of board members who are not insiders, nor affiliated, to the total number of board members (Dalton *et al.*, 1998). It should be noted that while board members who are outsiders and non-affiliated to the management may facilitate the control function, it may hinder

effective communication in the boardroom. In the absence of commonly accepted measures for “dominance”, “two thirds” is used as a rough gauge, for example, a board is considered to be dominated by insiders if they take up two thirds (or more) of the board director positions.

### **Effect of Directors Nationality on Firm Performance**

Less attention has been given to the racial aspects of board demographics, a fact that has been attributed to low levels of such diversity in the boardroom (van der Walt & Ingley, 2003). The few studies in this area generally argue that like gender, diversity brings different cognitive perspectives and affects group dynamics and decision making, which in turn impacts firm-level outcomes. The notion that racial diversity impacts decision making has received some support, while the impact of these directors on performance has been inconclusive. For example, studies found that multinational and ethnically diverse boards are positively related to decisions such as cross-national acquisitions (Staples, 2008) and corporate social responsibility (Post *et al.*, 2011). However, Oxelheim and Randoy (2003) found that foreign-born directors are associated with higher value for a sample of Scandinavian firms, while Carter, D’Souza *et al.* (2010) find no systematic evidence that ethnically diverse boards affect financial performance of major U.S. firms. Thus, board research on race and ethnicity is parallel to that on gender - implications for firm performance are mixed, but there is evidence that board processes are affected by board diversity, and more proximal outcomes and nuanced measures may offer valuable insights.

### **Firm Performance**

Within the strategy field, the focus of attention on the performance construct has been almost entirely on financial measures of performance (Rowe *et al.*,

1995). Conceptually, it has been viewed as the comparison of the value created by a firm with the value owners expected to receive from the firm (Alchian & Demsetz, 1972). Venkatraman and Ramanujam (1986) noted that a narrow definition of performance center on the use of simple outcome-based financial indicators that are assumed to reflect the fulfillment of the economic goals of the firm. They argued that the narrow performance construct of financial performance had dominated the strategic management literature, and proposed a broader performance construct of business performance that would include both financial and operational (new products, product quality, market share) indicators. In addition, they proposed a construct of “organizational effectiveness” which would consist of business performance plus account for the accomplishment of the superordinate goals held by multiple stakeholders.

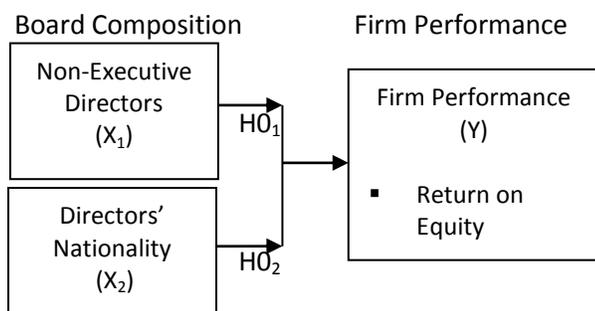
Organizational performance encompasses three specific areas of firm outcomes: (1) financial performance (profits, return on assets, return on investment); (2) market performance (sales, market share); and (3) shareholder return (total shareholder return, economic value added). Organizational effectiveness is broader and captures organizational performance plus the plethora of internal performance outcomes normally associated with more efficient or effective operations and other external measures that relate to considerations that are broader than those simply associated with economic valuation (either by shareholders, managers or customers), such as reputation (Richard *et al.*, 2008).

Although the multi-dimensionality of performance is recognized in accounting (Callen, 1991) and finance (Henri, 2004) and discussed theoretically in the management literature (Venkatraman & Ramanujam, 1986), empirically the lack of consistency in the measurement of organizational

performance in management research has revealed a surprising lack of researchers “walking the walk”. Organizations are heterogeneous in their resources and capabilities and how and where they choose to use them (Barney, 1991). At the most basic level, small and large firms are likely to perform in quite different manners. Although linked by competition, these firms have very different resources and strategies. Evidence suggests that large organizations use both financial and nonfinancial performance measures but favor financial measures (Malina & Selto, 2004). Very small firms also use both financial and non-financial variables to measure their performance.

Within the strategy, economics and finance literatures market value based measures are the preferred instrument for characterizing organizational performance. The greatest strength of these measures is that they are forward looking, in theory representing the discounted present value of future cash flows (Fisher & McGowan, 1983). They also incorporate intangible assets more effectively than accounting data (Lev, 2001), something of clear relevance to those interested in resource based and knowledge based views of the firm. However, the connection between market measures to the actual performance of the firm depends on how much of the rent generated from its activities flows to shareholders and the informational efficiency of the market. The usual justification of these measures is that firms are instruments of shareholders.

### Conceptual Framework



Independent Variables      Dependent Variable  
*Source: Researcher, 2015*

**Figure 1: Conceptual Framework**

### RESEARCH METHODOLOGY

To achieve the objectives of the study, both descriptive and explanatory research designs were adopted. This research employed descriptive research design since the research was quantitative in nature as evidenced by use of numerical values. Descriptive research studies were used to describe phenomena associated with a subject population or to estimate proportions of the population that had certain characteristics (Cooper & Schindler, 2006). On the other hand, explanatory research design was adopted because with explanatory (causal) hypotheses, there was an implication that the existence of a change in one variable caused a change in the other variable.

The population of the study consisted of firms listed in the Nairobi Securities Exchange (NSE) between 2007 and 2013. The number of firms considered were forty-five (45) which operated in various sectors of the Kenyan economy. The study therefore adopted a census design because it provided a true measure of the population which meant that there were no sampling errors. The pertinent data of the study was obtained from secondary sources. These included the Nairobi Securities Exchange (NSE) annual publications, the NSE Handbooks (2007-2013) and the firms’ annual reports.

Since the variables were selected from various companies between 2007 and 2013, the type of data for this study that was considered was pooled. Two approaches to analyze pooled data were used and included classical linear regression model and panel data regression model. For the classical linear regression model to be used, all firms’ data had to

be considered as homogeneous. F-Test (ANOVA) was employed to determine which method must be utilized to analyze pooled data. Analysis of Variance (ANOVA) is a single factor, fixed-effects model that compares the effects of one treatment or factor on a continuous independent variable.

### PRESENTATION AND INTERPRETATION

Data analysis involved application of descriptive, bivariate and multivariate analyses with the aid of Statistical Package for Social Sciences (SPSS 17.0).

#### Dependent variable

Dependent variable in this study was firm performance and was measured using Return on Equity. ROE indicates how effective the

#### Descriptive Analysis of Variables

**Table 1: Descriptive Statistics of Dependent and Independent Variables**

Variable	N	Min.	Max.	Mean	Std. Dev.	Skewness Statistic	S/E	Kurtosis Statistic	S/E
ROE	167	0	0	.15	.105	.009	.188	-.041	.374
Nonexecutive	167	1	1	.70	.091	-.060	.188	-.951	.374
Nationality	167	0	1	.31	.190	-.503	.188	-.983	.374

Source: Survey Data, 2015

Table 1 above showed the descriptive statistics for the study variables. The numbers represent average rates across the entire period of survey. The average firm performance was 15% implying that ROE for companies listed in NSE were low and therefore the management were not effective in converting the reinvested money into profits.

As evidenced in Table 1 above, the mean proportion of non-executive directors is approximately 0.7% of the total number of directors on the board and a standard deviation of 0.091 indicating that every board in a public company has non-executive directors who offer exceptional level of high-quality advice and counsel to the CEO (Lorsch & MacIver, 1989). Foreign-born directors who sit in local

management team in a company is converting the reinvested money into profits. The higher the company's ROE, the more the money a company is able to generate for the same shilling amount spent.

ROE = Net income (Profit after tax) divided by Shareholders' equity

Where : The profit before tax is as listed in the company's annual financial report.

Shareholders equity = Total assets minus Total liabilities (CBK 2001-2013).

#### Independent Variables

The considered independent variables for Board Composition were; Non-Executive Directors and Nationality.

companies' boards and who bring in the expertise and exposure from the West averages 0.31% of the total number of board members with a standard deviation of 0.190 thus showing that foreign-born directors are associated with higher value for financial performance (Randoy, 2003).

The normality of the variables were examined using kurtosis and skewness. Kurtosis is an indicator used in distribution analysis as a sign of flattening or peakedness of a distribution. According to Kline (2011), the univariate normality of the variables can be assumed if the skewness statistic is within the interval (-3.0, 3.0). Therefore, Non-executive directors and nationality had values less than 3

making their distributions platykurtic or flatter than a normal distribution with wider peaks.

Skewness is an indicator used in distribution analysis as a sign of asymmetry and deviation from normal distribution. Kline (2011) specifies that the univariate normality of the variables can be

assumed if the kurtosis statistic is lying in the interval (-10.0, 10.0). Therefore, Non-executive directors and nationality showed left skewness as their values were less than 0 and concentration was on the right of the mean with extreme values to the left.

### Correlation Analysis

**Table 2: Correlations Coefficient**

Correlation	Non	Nationality	ROE
t-Statistic	Exec.		
Probability			
Non Executives	0.0082		
	-		
	-		
Nationality	-0.0038	0.0358	
	-2.9254	-	
	0.0039	-	
ROE	0.0018	0.0039	0.0109
	2.5057	2.6229	-
	0.0132	0.0095	-

Source: Survey Data, 2015

In this study, a t-statistic correlation was conducted to test the influence among predictor variables as shown in Table 2 above. The covariance analysis finally showed that ROE had a positive correlation with non-executive directors at 2.5057 and nationality at 2.6229 at 95% confidence intervals.

### Multiple Regression Analysis

The model was subjected to linear regression in order to check whether the data could be analysed and give valid results under six assumptions: The variables should be measured at continuous level and are either interval or ratio variables; there

needs to be a linear relationship between the independent and dependent variables by the aid of a scatter plot; there should be no significant outliers. An outlier is an observed data point that has dependent variable value that is very different to the value predicted by the regression equation; Having independence of observations which can easily be checked using the Durbin-Watson statistic; Data needs to show homoscedasticity, which is where the variances along the line of best fit remain similar as you move along the line; and the residuals (errors) of the regression line are approximately normally distributed.

**Table 3: Model Summary**

Model	R	R <sup>2</sup>	Adjust. R <sup>2</sup>	S.E of Estimate	Change Statistics			Durbin-Watson	
					F	df1	df2		
1	.341 <sup>a</sup>	.116	.089	0.1	4.239	3	161	.001	1.616

a. Predictors: (Constant): Non-Executive Directors, Nationality, Dependent Variable: ROE

Source: Survey Data, 2015

Typically, an  $R^2$  that is preferable is that one that explains 80% or more of the variation. Lower than that, predictive agency begins to fall off (Cooper & Schindler, 2006). The Adjusted  $R^2$  of 0.089 in Table 3 above shows that all the predictors taken together have little significant correlation with the

dependent variable. The predictive variable only explains 8.9% of the change in firm performance and the balance 91.1% is explained by other factors not incorporated in the study such as sectoral differences, cyclic and seasonal variations.

**Analysis of Variance (ANOVA)**

**Table 4: Anova<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.126	3	0.042	4.200	.001 <sup>b</sup>
	Residual	1.630	163	0.01		
	Total	1.756	166			

a. Dependent Variable: ROE

b. Predictors: (Constant): Non-Executive Directors, Nationality

c. Source: Survey Data, 2015

To use ANOVA, certain conditions must be met. The samples must be randomly selected from normal populations, and the populations should have equal variances. In addition, the distance from one value to its group's means should be independent of the distances of other values to that mean (independence of error). ANOVA is reasonably robust and minor variations from normality and equal variance are tolerable (Cooper & Schindler, 2006). The  $F$  ratio, the test statistic, determines if the differences are large enough to reject the null hypothesis. In Table 4 above, the test statistic is the  $F$  value of 4.200. Using an  $\alpha$  of 0.05, we have  $F_{0.05;3,163} = 4.200$ . Therefore this shows that the independent variables are statistically

significant and can predict the dependent variable therefore the regression model is a good fit.

**Diagnostic Tests**

The following tests were conducted in the study that had an influence on both dependent and independent variables: Test for significant outliers; test for autocorrelation; test for multicollinearity and test for heteroscedasticity.

**Test for Significant Outliers**

In the study, the data had significant outliers but were cured by converting the data into percentages of the total board size except for ROE. Therefore, the statistics for non-executive directors and nationality were converted into percentages of the total number of directors on the board.

**Test for Autocorrelation**

**Table 5: Test for Autocorrelation**

Variable	Coefficient	Std. Error	t-Statistic	Probability
Percent Non-executive	0.362060	0.155712	2.325192	0.0213
Percent Nationality	0.122559	0.047372	2.587140	0.0106

Source: Survey Data, 2015

Presence of autocorrelation implies the correlation between random error terms of the subsequent time periods, if present; the bias leads to spurious estimates. Hence, Newey-West estimator or HAC test was applied to check for autocorrelation. The results indicate that values for non-executive directors and directors' nationality were 2 thus were found to be better models as suggested by Field (2000) that values less than 1 or greater than 3

pose a problem and closer to 2, the value is the better model.

**Test for Multicollinearity**

The Variable Inflation Factor (VIF) index measures the effect of the other independent variables on a regression coefficient. Large values, usually 10.0 or more, suggest collinearity or multicollinearity (Cooper & Schindler, 2006). The study had a VIF value of 1.812 with a tolerance of 0.552 indicating that multicollinearity was not a problem.

**Test for Heteroscedasticity**

**Table 6: Test for Heteroscedasticity**

Weighted Statistics			
R-squared	0.140304	Mean dependent variable	0.135447
Adjusted R-squared	0.113605	S.D. dependent variable	0.108086
S.E of regression	0.102012	Akaike info criterion	-1.692184
Sum squared residual	1.675440	Schwarz criterion	-1.580161
Log likelihood	147.2974	Hannan-Quinn criterion	-1.646717
F-statistic	5.255098	Durbin-Watson statistic	1.616012
Prob(F-statistic)	0.000169	Weighted mean dep.	0.135235
Wald F-statistic	4.104299	Prob(Wald F-statistic)	0.001555

Source: Survey Data, 2015

The study had presence of heteroscedasticity hence the need of using weights to correct it as shown in the table above.

**Coefficients of Variables**

**Table 7: Coefficients of Variables**

Model	Unstandardized Coefficients <sup>a</sup>		Standardized Coefficients <sup>a</sup>		Sig.	95.0% Confidence Interval for B	
	$\beta$	Std Error	Beta	t		Lower Bound	Upper Bound
(Constant)	-0.19	0.09		-2.113	0.036	-0.367	-0.012
Nonexecutive	0.329	0.098	0.286	3.352	0.001	0.135	0.522
Nationality	0.152	0.044	0.275	3.484	0.001	0.066	0.238

a. Dependent Variable: ROE

Source: Survey Data, 2015

The findings presented in Table 7 above indicate that non-executive directors and nationality were found to be significant at 95% level of confidence. This indicates that non-executive directors and nationality have an influence on firm performance.

## Testing the Hypotheses

**Table 8: Testing the Hypotheses**

$$Y_{it} = \beta_0 + \beta_1 \text{NONEXE}_{it} + \beta_3 \text{NAT}_{it} + \varepsilon_{it}$$

$$= -0.19 + (0.33 \times \text{NONEXE}) + (0.15 \times \text{NAT})$$

Variable	Unstandardized Coefficient <sup>a</sup>	t-Statistics	P-Value
Constant	$\beta_0 = -0.19$	-2.11	0.04
Non-Executive	$\beta_1 = 0.33$	3.35	0.00
Nationality	$\beta_3 = 0.15$	3.48	0.00

a. Dependent Variable: ROE

Source: Survey Data, 2015

Making references about the population in regression, the study looked at whether a significant relationship exists between the company's performance on one hand and each of the independent variables on the other. The hypothesis can be stated as follows under a two tailed test:-

$H_0: \beta_1 = \beta_2 = 0$  (There is no significant relationship between firm performance and the independent variables)

$H_1: \beta_1 = \beta_2 \neq 0$  (There is a significant relationship between firm performance and the independent variables):

Where  $\beta$  is coefficient for proportion of non-executive directors and nationality respectively. In Table 8 above, where  $p$ -value is less than 0.05 (significance level), the study rejects the null hypothesis and if  $p$ -value is  $> 0.05$ , the study fails to reject the null hypothesis. The computed values for non-executive Directors [0.00] and directors nationality [0.00] are below 0.05 and therefore this study rejects the null hypotheses and accepts the alternate hypotheses that state non-executive directors and nationality have a significant effect on firm performance. Non-executive directors has a positive effect on ROE as it increases performance by 33% while directors nationality has a positive effect on ROE as it increases performance by 15%.

### Discussion of Findings

The study established that there was a statistically significant positive effect of non-executive directors on firm performance as shown in Table 8. The result rejects the first null hypothesis which states that there is no significant relationship between non-executive directors and firm performance and accepts the alternate hypothesis. This implies that the non-executive directors have an influence on firms' economic performance. Judge *et al.*, 2003 argued that the relationship between non-executive directors and firms performance is not clear explicitly in case of developed economies. This study has proved otherwise and has shown that non-executive directors are good monitors who add economic value to firms in Kenya. The non-executive directors, in connection to the resource dependence theory, are the primary link of the organization to the external world for provision of vital resources that range from thorough networking and counselling for better management that provides direction and strategy to achieve organizational objectives (Huse, 2007). Therefore, the presence of more independent directors on the board increases the frequency of board meetings and consequently, more meetings permit directors to give more time for strategy formation and performance appraisal thereby enhancing their ability to monitor management (Al-Najjar, 2012).

Directors' nationality had a positive significant effect on firm performance as evidenced in Table 8 therefore rejecting the study null hypothesis two. The finding is consistent with Staples (2008) who found that

multinational and ethnically diverse boards are positively related to decisions such as cross-national acquisitions and corporate social responsibility (Post *et al.*, 2011). Furthermore, in connection to resource dependence theory, diversity boosts access to critical resources that bring to the board different cognitive perspectives which affects group dynamics (relational capital) and decision making, which in turn impacts firm-level outcomes (Stiles, 2001).

## **CONCLUSIONS AND RECOMMENDATIONS**

The study results further confirm that there is significant effect of board composition in terms of non-executive directors and directors nationality on financial firm performance implying that the two board attributes, that is, non-executive directors and directors nationality, add potential economic value to the firms in Kenya.

The study also revealed that the resource dependence theory, which is a theoretical framework for board composition, acts as an interlinkage model between board composition attributes specifically non-executive directors and directors nationality, and financial firm performance.

## **RECOMMENDATIONS**

### **Implications of the Study to Theory**

The focus has been on board composition, firm performance as well as the resource dependence theory. Although the resource dependence theory is applicable in this study, there is need to measure the benefits accrued from directors' advice and counsel, legitimacy and channels of communication, support and resources and also assess whether the non-executive directors understand and act on these benefits. Furthermore, there is need to show conclusive causality between resource dependence rationality and board composition attributes by assessing board members motives or cognitions.

### **Implications of the Study to Policy and Practice**

From a policy perspective, it is believed that the findings of this study can be helpful for provision of additional insight to the regulators in their quest to harmonize the corporate governance practices in Kenya with international best practices. The practical contribution of this study has been to highlight the strategic composition of boards and dynamic consideration of the organizational context and needs for board linkages for management practice. It is contemplated that purposeful selection of board members who can help manage environmental dependencies is valuable to firms in Kenya.

### **Recommendations for Research**

Future research studies on the actual mechanisms and benefits such as advice and counsel, legitimacy, channels of communication brought by non-executive directors would be a fruitful extension of this study.

Future focus should also be on non-financial aspects of performance such as customer satisfaction, employee satisfaction, investor confidence in order to get a holistic performance rather than restricting to financial accounting measures of performance which are based on accounting principles and assumptions as this will provide evidence for future success through overall stakeholder satisfaction.

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