

The Influence of Change in Corporate Governance on Financial Performance of Privatized Companies in Kenya

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Abstract

This study examined the influence of change in corporate governance structure on financial performance of privatized companies in Kenya for the period 2007-2013. Unlike previous studies, four performance indicators were used and include: Return on Assets (ROA), Tobin's Q, cost efficiency and technical efficiency. The cost and technical efficiency values were computed using the Stochastic Frontier Analysis (SFA). Data was extracted from financial reports of privatized firms, obtained from the Capital Markets Authority (CMA) and the Nairobi Stock Exchange (NSE). A unit root test was conducted to examine stationarity of data while a Hausman test was used to determine whether to use the Fixed Effects (FE) or the Random Effects (RE) regression model. A regression model with a robust standard error option was used to control for heteroscedasticity and contemporaneous correlation which could cause spurious results. The study found that board composition has a positive influence on ROA, Tobin's Q and cost efficiency of privatized companies. The board size has a negative influence on the Tobin's Q while gender has a negative influence on ROA. In view of these findings, this study recommends that corporate boards of privatized companies should be restructured further to enhance financial performance. Consequently, the board size should be reduced to between seven and nine to enhance coordination and faster decision making. The percentage of women directors should be increased to meet the constitutional threshold of at least 30%. However, the appointment of women directors should be based on skills and expertise required by a firm to improve financial performance. The board composition should also be enhanced to enable privatized companies to attract managerial and technical expertise from non-executive directors which is crucial to improving the financial performance.

Keywords: Privatization; Corporate Governance; SOEs; Financial Performance; Kenya.

1. Introduction

The need for corporate governance has been associated with the agency problems that arise due to the separation of management and ownership in the modern corporations leading to inefficiency and loss of corporate value. Corporate governance refers to the manner in which leadership and control in a company is exercised with the aim of increasing efficiency and the firm market value. The government is considered inefficient in managing commercial enterprises due to the wide separation between ownership and control which makes it difficult to monitor managers (Shleifer & Vishny, 1997). Privatization therefore aims to change the governance structure of State Owned Enterprises (SOEs) to transfer the management and control from the government to private investors and corporate boards. Once privatized, firms are required to be listed at the stock exchanges and consequently adopt the codes of best practices in corporate governance. Various codes of good corporate governance practices identify boards as a key governance mechanism and recommend a small board of diverse of skills and have majority of outside and ideally independent directors (OECD, 2004; CMA, 2002). However, the codes are often applied to the local context or translated across diverse firms depending on the institutional requirements which may influence performance in different ways.

Consequently, the influence of corporate boards on firm performance is not fully established as previous studies yield conflicting results. Some authors report a negative relationship between board size and firm performance (Agoraki *et al.*, 2009; Yermack, 1996). However Adams and Mehran (2011) document a positive relationship. Numerous also studies found that the Non Executive Directors (NEDs) influence some financial performance variables positively (Agyei & Owusu, 2014; Fauzi & Locke, 2011; Liang & Li, 1999). Apparently, other studies document negative relationships (Rashid *et al.*, 2010; Shukeri *et al.*, 2012). A number of studies find a negative relationship between gender diversity and financial performance (Ekadah & Mboya, 2009; Mirza *et al.* 2012; Yasser, 2014). In contrast, Campbell and Minguez (2008) document positive and significant relationship between women directors and firm performance.

In Kenya, privatized firms are expected to adopt the CMA codes of best corporate governance practices which require boards to be small in size, diverse in skills and with majority of non executive directors. The position of Chairman and that of the Chief Executive Officer (CEO) should also be separated (CMA, 2002). Although, privatization has been adopted as a key fiscal policy by the government, there is no empirical evidence on the influence of corporate governance on financial performance of privatized companies. Ekadah and Mboya (2009) examined the effects of gender diversity in corporate boards on performance of commercial banks while Miring'u

and Muoria (2011) focused on the relationship between corporate governance and performance of SOEs. Letting *et al.* (2012) examined the relationship between corporate boards and performance of listed companies while Lekaram (2014) focused on manufacturing firms listed at the NSE. These studies also leave knowledge gaps they largely use accounting based ratios to measure performance. These indicators do not capture efficiency and market value of corporate entities which are key objectives of privatization.

The interest of policy makers which motivates this study is to know whether the changes in corporate governance influences financial performance of privatized firms. The study is therefore important to the government and the CMA for policy implications and also to the shareholders for insights it offers over the management of their investments. This study is different from previous studies as it focuses on privatized companies and uses a combination of four financial performance indicators which include: ROA, the Tobin's Q, cost and technical efficiency. The cost and the technical efficiency values were generated using the Stochastic Frontier Analysis (SFA) approach which uses input and output approach. The study also uses panel data and employs modern econometric approaches that address potential biases which could be induced by non stationary, heteroscedasticity and contemporaneous correlations in data values. The paper is organized as follows. Section 1 presents the introduction, section 2 literature review, section 3 the methodology while section 4 focuses on results and discussion. Section 5 presents the conclusion and policy recommendations derived from this study.

2. Literature Review

Theories of corporate governance focus on the board of directors as a mechanism to reduce agency problems induced by the wide separation between ownership and control. The agency theory recognizes that in a modern corporation, there is a wide separation between ownership and management, resulting in the conflict of interests between the owners and the agents. The theory developed by Jensen and Meckling (1976) asserts that the wide separation gives the managers a leeway to pursue private interests which may lead to inefficiency, expropriation of corporate cash flows, assets and loss of market value of corporate entities. Agency theory identifies corporate boards as a mechanism to protect shareholders interests and to ensure increase in firm market value. According to Jensen & Meckling (1976) a corporate board can effectively play its role if its size is small, has diverse skills, majority members are outside directors and the position of Chairman and CEO are separate. The role of corporate boards is also specified to include: hiring and monitoring managers, protecting shareholders interests, increasing corporate value and setting strategies in a firm (Fama & Jensen, 1983). Consequently, many countries have developed codes of best governance practices, using the agency theory principles. Agency theory is therefore important to this study as it identifies the ideal corporate governance structures and practices that should be adopted by privatized companies.

The resource based theory focuses on the importance of resources as a critical factor for a firm to have a competitive advantage. The theory is derived from Penrose's (1959) definition of a firm as a set of physical and human resources crucial for its growth and performance. Pfeffer (1972) argues that firms largely co-opt the resources needed to improve performance from the external environment. Barney (1991) defines the resources sought by firms to create a competitive advantage to include technical expertise, managerial skills and information essential in detecting and responding to market opportunities or threats. Privatization is expected to reorganize a firm's governance structure to help firms co-opt the skills, technologies and financial resources needed to improve performance. Using this theoretical framework, corporate boards with a higher proportion of NEDs are expected to influence performance positively by enhancing supervision protecting shareholders interests and bringing additional managerial and technical expertise. They also help firms to expand networks by linking them with suppliers, buyers, public policy makers. Women directors are expected to influence financial performance positively by enhancing diversity and ethical considerations in decision making.

There are a large number of studies examining the influence of corporate governance on financial performance and governance variables widely used include: board size, board composition, CEO duality and gender diversity. In most of the studies, financial performance is measured using ROA and the Tobin's Q ratio. Following this approach, Yermack (1996) examined whether there is a significant relationship between board size and market value measured by Tobin's Q in 452 large U.S corporations between 1984 and 1991. The study found a negative relationship between a large board size and firm value. Firms were also found to be more valuable when the positions of the CEO and the chairman were separated. Liang and Li (1999) examined the relationship between board structure and firm performance in China and found that the NEDs were positively associated with a higher ROA while board size had no significant effects on firm performance.

Using a similar approach, Adams and Mehran (2011) examined the effects of corporate boards on financial performance of banks in US and found that the NEDs had no significant influence on the Tobin's Q, while board size had a positive effect. Rashid *et al.* (2010) focused on the influence of corporate board composition on firm performance in Bangladesh and found that NEDs added no effect on firm financial performance. Chaghadari (2011) also examined the influence of corporate governance on firm performance in Malaysia and found that the CEO duality had a negative impact on firm performance while the NEDs and board size had no

significant influence on performance measured by ROA and ROE. Some more recent studies follow the same approach and focus on firms listed at stock exchanges. Shukeri *et al.* (2012) examined the impact of corporate boards on ROE of listed firms in Malaysia and found that board size has a positive impact on ROE while NEDs had a negative effect. The study also found that managerial ownership, CEO duality and gender diversity had no significant influence on financial performance. In Pakistan Latief *et al.* (2014) analyzed the impact of corporate boards on ROA, ROE of privatized firms and found that that NEDs and board size had no significant impact on firm performance.

Some studies focus more on the influence of women directors on firm performance and the results are also conflicting. Carter *et al.* (2003) examined the effects of board diversity on firm value in on a 1000 publicly traded *Fortune* firms and found a positive relationship between women directors and the Tobin's Q. Shrader *et al.* (1997) found a negative relationships between the women directors and Tobin using data from the Walls Street Journal. However, Campbell and Mínguez (2008) found that proportion of women directors had a positive effect on Tobin's Q in Spain. Carter *et al.* (2010) found no significant influence of gender diversity on the ROA and Tobin's Q in US corporations. In Pakistan, Mirza *et al.* (2012) found that the percentage of women directors was negatively related to ROA and ROE of listed firms. Yasser (2014) also found no significant relationship between gender diversity and firm performance in Pakistan. Terjesen *et al.* (2015) however found that firms with more women directors had a higher Tobin's Q and ROA in a sample of firms drawn from Taiwan, Turkey, US and Britain.

A different line of studies examine the impact of corporate governance on performance using cost and technical efficiency indicators. Bozec and Dia (2007) analyzed the influence of the board on Canadian SOEs and found that board size and NEDs were positively related to technical efficiency only when SOEs are exposed to market discipline. Lin *et al.* (2009) found that state ownership had a negative influence on efficiency while public and employee shareholders had a positive influence on efficiency of listed firms in China. Tanna *et al.* (2009) examined the relationship between corporate governance and the efficiency of banking institutions operating in the UK and found an insignificant relationship between board size and efficiency while board composition had a positive impact on efficiency. A similar study by Agoraki *et al.* (2009) found that board size had a negative effect while board composition had an insignificant impact on cost efficiency in European banks. In Spain, María and Sánchez (2010) found that technical efficiency increased with a diverse board while board size negatively affected cost and profit efficiency. In Nepal, Ravi and Hovey (2013) examined the impact of corporate governance on efficiency of banks and found that a bigger board and a lower proportion of institutional ownership increased efficiency in the commercial banks.

In Kenya, Letting *et al.* (2012) examined the relationship between corporate boards and financial performance of 40 firms listed at the NSE and found no significant effect of board diversity on ROA, ROE and dividend yield of the companies. Miring'u and Muoria (2011) found a positive relationship between board size, NEDs and ROE and of SOEs. Lekaram (2014) found that board size was negatively related to ROA and the Tobin's Q while NEDs were positively related to Tobin's Q of manufacturing firms listed at the NSE. Some studies included women directors in the regression models examining the effects of corporate governance on firm performance. Using this empirical approach, Ekadah and Mboya (2009) found that the proportion of women directors had a negative relationship with financial performance of commercial banks. Muigai (2014) found that the NEDs and gender diversity had a positive effect on performance of commercial banks. Wetukha (2013) found that the NEDs and the board size had a positive influence on ROA of listed firms at the NSE. The percentage of women directors however had a negative affect the performance. Ongoso (2014) found a positive relationship between board size, NEDs and firm performance of firms listed at NSE while the board committee and women directors had no effect on firm performance. It is apparent that most empirical studies use diverse corporate governance and performance variables and generate inconsistent results. It is also evident that none of the authors examining the relationship between corporate boards and firm performance in Kenya focus on privatized companies and uses cost or technical efficiency indicators.

3. Methodology

The unit of analysis in this study is the company and the population consisted of all the 55 publicly listed companies in the NSE. Purposive sampling was used to select the privatized firms. The companies selected were those privatized by sale of shares, listed at the NSE and the in which the GoK had retained some ownership. The study was also was confined to firms where majority of the shares were owned by the state before privatization. This means one in which not less than 50% shares were held by the GoK and hence, fit the definition of SOEs provided in the State Corporations Act (CAP 446). By using the criteria, eight firms were selected and are spread in economic sectors such as communication, manufacturing, financial, commercial, insurance and energy. The data used to compute corporate governance variables was extracted from annual reports of privatized companies for the period 2007-2013. The reports were obtained from the CMA. Corporate governance variables included: board size measured by total number of board members and board composition measured as the percentage of NEDs in

the board. Gender composition was computed as the percentage of women directors on the board. The control variables included in this study comprised of firm, leverage and capital investment.

Financial performance variables used in the regression models are ROA, Tobin's Q, cost efficiency and technical efficiency. The ROA was computed by dividing profit after tax by total assets for each company for each year during the period 2007-13. The values of profit after tax and total assets were extracted from the NSE handbooks for 2008; 2012-13 and 2013-2014. The variables were also compared to those in the annual reports of privatized firms obtained from CMA. Tobin's Q ratio was computed by dividing market capitalization (total shares of a company at end of financial year multiplied by the share price) by the total assets. The number of the total shares and the share prices of the company at the end of the financial year were extracted from NSE handbooks for 2008; 2012-13 and 2013-2014. The cost efficiency and technical efficiency values were computed using the SFA version 4.1c. The input values used were; cost of sales/ materials, total expenses (financial & operating) and total assets while output was measured by total sales.

The data analysis techniques include a combination of descriptive statistics, regression diagnostic tests and regression analysis. As panel data is used in this study, the main concern was non-stationary of data series which may lead to spurious relationships. This study used the Levin, Lin, Chu and (LLC) to examine the stationarity of data while a Hausman test was used to determine whether to use the Fixed Effects (FE) or Random Effects (RE) regression model. The relationship between corporate governance and financial performance was examined using the following four regression models:

$$ROA_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \quad (1)$$

$$Tobin's\ Q_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \alpha_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \quad (2)$$

$$CEFF_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \quad (3)$$

$$TEFF_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \quad (4)$$

The variables and coefficients used in the regression models are measured as follows:

ROA	=	Profit after tax divided by total assets
Tobin's Q	=	Market capitalization (shares at year end multiplied by share price / by total assets
CEFF	=	Cost efficiency scores computed using the SFA technique
TEFF	=	Technical efficiency scores computed using the SFA technique
α	=	Intercept or constant
α_1	=	Coefficients for each of the independent variables: $i=1-6$
i	=	Individual company
t	=	Time (year)
BFSIZE	=	Total number of directors in the corporate board
COMP	=	Percentage of non executive directors in the corporate board
GEND	=	Percentage of women directors in the corporate board
FSIZE	=	Total assets of a company in log form
LEV	=	Total liabilities / total assets
INVE	=	Capital expenditure/ total assets
ε_{it}	=	Error term

4. Results and Discussions

4.1 Descriptive Analysis

The descriptive statistics show that the average board size in privatized companies is 9.98 members which is large compared to an average of 6.07 observed by Fauzi and Locke (2012) in New Zealand and 8.23 reported by Chaghadari (2011) in Malaysia. Ravi and Hovey (2013) also documents a mean size is 7 in Nepalese Banks. The mean percentage of NEDs in privatized firms is 86% which is an indicator that the companies complied with the CMA codes of best governance practices which requires that majority of board members should be non executive. Several studies also find that most firms maintain more than a third of NEDs in corporate boards (Agyei & Owusu, 2014; Chaghadari, 2011; Mirza *et al.* 2012). However, the 18% observed in privatized firms is below the required constitutional requirement of at least 30%. The overall mean of ROA in privatized firms is 5.2% which is lower than an average 6.18% reported by Boubakri and Cosset (1999), 7.17% documented by Sun and Tong (2002) in Malaysia and 6.71 % reported by Rashid *et al.* (2010) in Pakistan. The Tobin's of privatized firms in Kenya is 48% which is lower than 82.9% observed by Mrad and Hallara (2012) in France. The mean cost efficiency of privatized companies is 10% which means that they need to improve cost efficiency by 90%. The technical efficiency in privatized firms is 43% implying that they can improve performance by 57% using the same resources. This level of technical efficiency is low compared to 62.9% documented by Kamaruddin and Abokareh (2012) in Libyan privatized firms in manufacturing sector over the period 2000 to 2008.

Firm size of privatized firms in Kenya expressed as the log of total assets is 17.87 which is higher than an average of 10.23 documented by La Porta *et al.* (1999) in privatized firms in Mexico. Agyei & Owusu (2014) also observed that firm size expressed as the log of total assets of listed manufacturing firms in Ghana was 7.54.

The result suggests that the privatized companies in Kenya are larger in size. This is expected as the government invested heavily in the establishment of the companies which were meant to serve national strategic interests (GoK, 2005). The ratio of total liabilities to total assets is 62% which is lower compared to 66.26% reported by Boubakri and Cosset (1999) in privatized firms drawn from five African countries. However Omran (2004) observed leverage was 19.5% in Egyptian privatized companies. The percentage of investment in privatized firms in Kenya is 6.63% which is lower than the 7.9% reported by Boubakri and Cosset (1999). The rate is also lower than 13% documented by Hennesy and Whited (2005) in U.S corporations.

4.2 Panel Unit Root Test and the Hausman Test

This study used the LLC test whose null hypothesis is that panels contain unit roots normally testing whether the **p** value is greater or less than 0.05. A **p** value less than 0.05 means that a variable has no unit root and it is therefore stationary. Table 1 below is a summary of the LLC unit root test results.

Table 1: The Results of the Unit Root Test

Variable	1(0) Adjusted t	P- value	1(1) Adjusted t	P-value
ROA	-2.9722	0.0015		
Tobin's Q	-6.3857	0.0000		
Cost Efficiency	781.6944	1.0000	98.3920	1.0000
Technical Efficiency	-17.4472	0.0000		
Board size	-3.5133	0.0002		
Board Composition	-4.9976	0.0000		
Gender	-0.0445	0.5178	-2.3497	0.0094
Firm size	1.0494	0.8530	-5.3204	0.0000
Leverage	-2.4433	0.0073		
Investment	-3.8166	0.0001		

The results shows that ROA, Tobin's Q, technical efficiency, board size, board composition, leverage, investment were stationary in their first level form as the p-values are less than the critical value of 0.05. The cost efficiency, firm size and gender were not stationary in their first level form and hence the variables were subjected to a second level difference under which gender composition achieved stationary. The differenced values were used was used in the regression model. The cost efficiency did not achieve stationary and could not be differenced further as the LLC unit root test requires a minimum of 6 panels. The p-value of cost efficiency also remained constant which means the series is not mean-reverting. The cost efficiency variable was therefore used in the regression models in its original form. The unit root tests show no co-relationship among differenced values and hence the co-integration test was not necessary.

Table 2 below presents the Hausman test for the regression models examining the influence of corporate governance on performance of privatized firms.

Table 2: The Results of the Hausman Test

Variable	Hausman test result	Suitable model
ROA	Prob> χ^2 = 0.0461	FE
Tobin's Q	Prob> χ^2 = 0.0019	FE
Cost Efficiency	Prob> χ^2 = 0.8488	RE
Technical Efficiency	Prob> χ^2 = 0.2157	RE

The Hausman test results show that FE regression model was suitable to use for ROA and the Tobin's Q since the p-value was significant while the RE model was suitable while using cost efficiency and technical efficiency since the p-value was insignificant.

4.3 The Influence of Corporate Governance on Financial Performance

Table 3 below presents the results of regression models examining the relationship between corporate governance and financial performance. The Table has four panels as four regression tests were done using ROA, the Tobin's Q, cost efficiency and technical efficiency as performance indicators. Panel A presents the regression results of the influence of corporate governance on the ROA, Panel B on the Tobin's Q, Panel C on the cost efficiency and Panel D on technical efficiency. The results include the coefficients of individual variables, robust standard error estimates; the coefficient of determination, R²; F-statistics and t-statistics.

Table 3: The Influence of Corporate Governance on Financial Performance

Panel A: The influence of Corporate Governance on ROA				
ROA	Coef.	Robust Std. Err.	t	Prob.
Board size	-.0033	.0040	-0.84	0.431
Board composition	.1537***	.0308	4.99	0.002
Gender	-.09373*	.0466	-2.01	0.084
Leverage	-.2490*	.1145	-2.17	0.066
Investment	.1500	.1508	1.00	0.353
Firm size	-.0155	.0125	-1.24	0.256
constant	.3915	.2690	1.46	0.189
R² = 0.4164		F = 17.21	Prob > F = 0.0007	
Panel B : The influence of Corporate Governance on the Tobin's Q				
Tobin's Q	Coef	Robust Std. Err.	t	Prob.
Board composition(lag1)	.9929**	.3332	2.98	0.021
Board size (lag2)	-.0787*	.0402	-1.96	0.091
Gender (lag1)	.7950	.7538	1.05	0.327
leverage	-1.8941	1.1084	-1.71	0.131
investment(lag1)	.7355	1.8056	0.41	0.696
constant	.1.3689	.7733	1.77	0.120
R² = 0.3024		F = 81.67	Prob > F = 0.0000	
Panel C: The influence of Corporate Governance on the Cost Efficiency				
CEFF	Coef.	Robust Std. Err.	z	Prob.
Board size(lag2)	.0001	.0003	0.52	0.600
Board composition	.0073**	.0031	2.39	0.017
Gender(lag1)	.0024	.0072	0.33	0.743
Leverage	.0046	.0036	1.27	0.204
Investment	.0096	.0083	1.15	0.250
constant	.09177	.0073	12.52	0.300
R² = 0.1238		χ² = 26.39	Prob > χ² = 0.0001	
Panel D: The influence of Corporate Governance on the Technical Efficiency				
TEFF	Coef.	Robust Std. Err.	z	Prob.
Board composition	.0406*	.02215	1.83	0.067
Board size (lag2)	.0020	.0014	1.38	0.168
Gender (lag1)	.0113	.0148	0.76	0.448
Firm size (lag1)	.0354***	.0043	8.33	0.000
Leverage	.0048	.0220	0.22	0.826
Investment	.0316**	.0142	2.23	0.026
constant	-.2764*	.1492	-1.85	0.064
R² = 0.8740		χ² = 447.64	Prob > χ² = 0.0000	

The asterisks *, ** and *** represent significance level at 10%, 5% and 1% respectively.

4.3.1 The Influence of Corporate Governance on ROA of Privatized Companies

Panel A, of Table 3 presents the results of the regression model examining the influence of corporate governance on between ROA of privatized companies. An FE regression model with a robust standard error option was used to control heteroscedasticity and contemporaneous correlation which could impact on ROA. The model is instantaneous as none of the variables was lagged. The computed F statistic is 17.21 which is significant at 1%. This means that the relationship between ROA and corporate governance is significant, although coefficients of some individual variables were insignificant. The coefficient of determination R² is 0.4164. This is an indicator that the regression model explains 41.64% of the variance ROA. The remaining variation of 58.36% is unexplained and attributed to other factors not included in the model.

The *t*-tests of individual coefficients show that board size has an insignificant influence on ROA. This contrasts the agency theory which views large boards as harmful to performance due to problems in coordination, flexibility and communication. Board size in privatized firms has a mean of 10 members which is considered large as several studies recommend seven to eight members for a board to function effectively (Lipton & Lorsch, 1992;

Yermack, 1996). The results are however similar to other studies which found no significant relationship between board size and ROA (Liang & Li, 1999; Chaghadari, 2011). The insignificant results suggest that size of the board alone may not clearly bring out the influence of corporate board on ROA. It may also imply that any benefits of monitoring associated with corporate boards may be cancelled out by increased agency problems and costs attributed to a large board size.

The NEDs have a positive significant influence on ROA at 1% level. The results are consistent with the resource based theory, which asserts that NEDs help firms to bring in additional financial, managerial and technical expertise and experience crucial to firm performance. The mean percentage of NEDs in privatized firms is 86% which is an indicator of the board's independence in decision making. From the agency theory perspective, NEDs may have influenced performance positively by monitoring managers and protecting the interest of the shareholders. These results are similar to those of other studies which found that NEDs influence ROA positively (Agyei & Owusu, 2014; Fauzi & Locke, 2011; Liang & Li, 1999). The percentage of women directors has negative and significant relationship with ROA at 10% level. This implies that the higher the percentage of women directors, the lower the ROA of privatized companies. The findings are similar to other studies which found that female directors lowered ROA (Fauzi & Locke, 2012; Mirza *et al.*, 2012). This could arise if the appointment aimed to fulfill the constitutional requirement of at least 30% is done without due consideration of skills and expertise required by a firm to improve financial performance.

Among the control variables, firm size has an insignificant effect on ROA. This contrast the widely held view that large firms can exploit economies of scale to hire more skilled managers, adopt new technologies, which could influence performance positively (Himmelberg *et al.*, 1999). The insignificant results could imply that the benefits of the large size of privatized firms may be cancelled out by the inherent managerial problems which may increase monitoring costs. Surprisingly, leverage has a negative relationship with ROA at 10% level of significance. The findings suggest that the lending institutions were not effective in monitoring of managers. This is possible as most privatized companies operate in different sectors which would lender banks and other credit institutions technically ineffective in monitoring their activities. It might also be an indicator that managers were borrowing and investing in non profitable projects. The capital investment has an insignificant influence on ROA which may be attributed to the low investment observed in privatized firms. The average investment in privatized firms is 6.63% compared 13% reported by Hennessey and Whited (2005) in U.S. The smaller size of investment may therefore be insufficient to modernize technology which could influence performance.

4.3.2 The Influence of Corporate Governance on the Tobin's Q of Privatized Companies

Panel B of table 3 above presents the regression results of the influence of corporate governance on Tobin's Q of privatized firms. An FE regression model was used and controls for fixed firm characteristics which could influence the Tobin's Q. A robust standard error option was included to control heteroscedasticity and contemporaneous correlation in data values. The firm size was eliminated from the regression model due to suspected problem of multi collinearity. Leverage may be correlated to firm size, measured by total assets, as it reflects the portion of a firm's assets financed with debt. The model was significant when the board size, board composition, gender and investment variables were lagged. This means that the past values of the variables influenced the market value of privatized firms. The computed F value is 81.67 which is significant at 1%. The results imply that the joint effect of governance variables on the Tobin's Q is significant. The R² is 0.3024 which means that 30.24 % of the variance in the Tobin's Q is explained by the regression model. The remaining 69.76% is attributed to other factors not included in the model.

Among the individual variables, board size has a negative influence on the Tobin's Q at 10% level of significance. These results are consistent to other empirical studies which found a negative relationship between large board size and the Tobin's Q (Yermack, 1996; Haniffa & Hudaib, 2006). The negative relationship could result from the market perception of higher compensation cost and incentives associated with large boards. The average board size of privatized firms is 10 members compared to the recommended sizes of 7-8 in some studies (Yermack, 1996; Lipton, & Lorsch, 1992). From the agency theory perspective, the negative perception could be attributed to the increase of agency problems caused by a large board size which may lead to increased costs and difficulties in communication and coordination.

The board composition has a positive influence on the Tobin's Q at 5% level of significance. A positive relationship suggests that the market was reacting positively to the appointment of outside directors as an indicator of greater board independence in decision making. This is also consistent to agency theory which suggests that NEDs monitor the opportunistic behavior of managers, thereby maximizing shareholder wealth. The outside directors are also likely to enhance financial reporting and other legal measures to prevent corporate fraud and protect the interests of shareholders. From the RBT perspectives NEDs are associated with securing critical resources crucial strategic networks, professional and expertise which could enhance firm value. These results are similar findings to those of Carter *et al.*, (2003) who found a positive relationship between NEDs and firm value. Surprisingly, some recent studies document a negative relationship between NEDs and firm value (Fauzi & Locke, 2012; Rashid *et al.*, 2010).

The gender composition has an insignificant effect on the Tobin's Q which negates the perception that women directors bring in additional skills and ethical considerations which may enhance investor's opinion. Some studies also document positive relationship between women directors and the Tobin's Q (Campbell & Mínguez, 2008; Carter, *et al.*, 2010; Shrader, *et al.*, 1997). The insignificant results however may be attributed to the small number of women directors in corporate boards as they constitute 18.03% of the total board size. This percentage may be too small to influence decision making in corporate boards. The number of women directors may also be insufficient to bringing additional skills and ethical considerations which could influence the share price and consequently the market value. Leverage as a control variable has an insignificant impact on the Tobin's Q. This contradicts the agency theory which views debts as a managerial monitoring tool (Jensen & Meckling, 1976). The result suggests that banks were passive in corporate governance of privatized firms. It may also imply that any benefits associated with banks monitoring was offset by increased costs of borrowing from the money markets following privatization. Capital investment has an insignificant impact on Tobin's Q which could be attributed to the low capital expenditures-to-asset ratio in privatized firms which is 6.63% compared 13% reported in U.S corporations by Henessy and Whited (2005).

4.3.3 The Influence of Corporate Governance on Cost Efficiency of Privatized Companies

Panel C of table 3 presents the regression results of the influence of corporate governance on cost efficiency of privatized firms. An RE model with a robust standard error option was used to control firm characteristics assumed to be random that could cause heteroscedasticity and contemporaneous correlation in data. Firm size was eliminated from the regression model due to suspected problem of multi collineality. Firm size measured by total assets may be correlated to investment and leverage as their ratios include firm size (total assets) as the denominator. The model was significant when board size and gender were lagged implying that past values of board size and gender composition could influence the cost efficiency of privatized firms. The χ^2 value computed is 26.39 and is significant at 1% level. The results indicate that the joint effect of the governance variables on cost inefficiency is significant, although the coefficients of some individual variables were insignificant. The R^2 is 0.1238 which means that the regression model explains only 12.38 % of the variance in the cost efficiency and the remaining variation of 87.62% may be attributed to other factors.

Among the individual variables, board size has an insignificant influence on cost efficiency which contrast other empirical studies which document a negative relationship between large board size and cost efficiency (Agoraki *et al.*, 2009). The insignificant results may be attributed increased costs associated with remuneration of large boards, which could cancel benefits arising from a large board. Some authors also indicate that efficiency is also largely influence by competition, skilled workforce and technological capacity in transforming inputs at minimum costs into maximum profits (Leibenstein, 1966; Sifunjo *et al.*, 2014). It can be argued therefore that board size alone may not be a significant driver of cost efficiency without consideration of managerial and technical inputs and other factors which could reduce the costs.

The NEDs have a positive relationship with cost efficiency at 5% level of significance. The results support the agency theory which asserts that NEDs monitor the private interests of managers, thereby minimizing agency costs and maximizing shareholder wealth. These results are also consistent to the resource based theory which indicates that that NEDs bring valuable knowledge to firms for efficient use of resources, in addition to enhancing independence in decision making process. The findings support previous empirical studies which document significant and positive relationship between NEDs and cost efficiency (Tanna *et al.*, 2009; Agoraki *et al.* 2009). Women directors have an insignificant relationship to cost efficiency which is inconsistent to studies that found that female directors lowered firm performance (Fauzi & Locke, 2012; Mirza *et al.*, 2012). An insignificant relationship may however be attributed to the small percentage of women directors in corporate boards. It may also imply that women directors may not have the necessary technical skill to reduce costs.

The leverage as a control variable has a positive but insignificant influence on cost efficiency. From the agency theory view, an insignificant impact suggests that the banks were not effective in reducing operational and financial costs in privatized companies. This finding could be attributed to the undefined roles of creditors in codes of good governance practices which make them take a passive role in corporate governance. It may also imply that the lending institutions may not have capacity to reduce financial and operational costs as they are not involved in decision making and day today management in corporate entities. Capital investment has positive and insignificant impact cost efficiency. The widely held view is that acquisition of additional plants and machinery reduce operational costs. The results are inconsistent studies that found significant relationship between capital investment and firm performance (Haniffa & Hudaib, 2006). The insignificant results could be ascribed to the low level of investment found in privatized firms.

4.3.4 The Influence of Corporate Governance on Technical Efficiency of Privatized Companies.

Panel D of table 3 presents the regression results of the relationship between technical efficiency and corporate governance of privatized firms. The Hausman test shows that the suitable regression model to use is RE. The model controls firm unique characteristics which may be random and could impact on the results. A robust standard error option was included in the model to controls for heteroscedasticity and contemporaneous correlation which

could influence the technical efficiency. The χ^2 value was 447.64 and is significant at 1% level. The results imply that the joint effect of the corporate governance variables on technical efficiency is significant, although coefficient of some governance variables was insignificant. The R^2 is 0.8740 which means that the regression model explains 87.40% % of the variance in the technical efficiency while the remaining variance is unexplained.

The t -tests on the individual coefficients indicate that board size has an insignificant effect on technical efficiency. They results are consistent with those of Tanna, *et al.* (2009) who document insignificant relationship between board size and cost efficiency. From an agency theoretical view, the insignificant results may be attributed increased costs associated with large boards, which may cancel the benefits of a large board. It may also imply that technical efficiency is largely influenced by other factors other than the size of boards. Some authors indicate that efficiency of a firm influenced by competition, incentives and pressure on the managers to reduce costs, skilled workforce and technological capacity in transforming inputs at minimum costs into maximum profits (Leibenstein, 1966; Sifunjo *et al.*, 2014). It can be argued therefore, that board size alone may not be a significant driver of cost efficiency without consideration of managerial and technical inputs to reduce the costs.

The NEDs have a positive influence on technical efficiency at 10% level of significance. This is consistent with agency theory which associates NEDs with an increase in technical efficiency due to their capacity to monitor managers and bringing additional technical expertise. The findings are consistent to studies which found that boards with majority NEDs have a positive and significant influence on efficiency (Bozec & Dia 2007; Lin *et al.*, 2009; Tanna *et al.*, 2009). The significant results may imply that individuals appointed in corporate boards possess technical skills required to enhance technical efficiency. The proportion of women directors has no significant influence on technical efficiency. The findings are inconsistent to other empirical studies which largely document positive and significant relationship between women directors and firm performance using other performance indicators such as ROA and the Tobin's Q (Campbell & Minguez, 2008; Carter, *et al.*, 2010; Terjesen *et al.*, 2015). The insignificant results may be attributed to the small size of women directors who constitute 18 % of the board composition. This proportion may be too small to impact on the efficiency of privatized firms. It may also mean that women directors may not have the technical expertise required to stimulate technical efficiency.

Leverage as a control variable has an insignificant influence on technical efficiency. This implies that financial institutions may not have the expertise to increase technical efficiency. This was expected as most privatized firms operate in different economic sectors other than the banking. Surprisingly, firm size has a positive and significant relationship with technical efficiency at 1% levels. This suggests that some privatized firms could have used their large size to attract skilled managers and new technologies to increase technical efficiency. This is possible as privatized companies attracted strategic partners with relevant technical and financial skills in the industry. Capital investment has a positive and significant relationship with technical efficiency at 5% levels. Several empirical studies seem to collaborate this finding (Haniffa & Hudaib, 2006). Capital investment is expected have a positive relationship to technical efficiency in due to its potential to influence production capacity of a firm.

5. Conclusions and Recommendations

This study investigated the influence of the change in corporate governance on financial performance of privatized companies in Kenya. The study was necessary for policy implications in Kenya as the government embraced privatization as policy in 1992. The regression results indicate that, corporate governance has a significant influence on corporate financial performance. Among the individual governance variables, board size has a negative and significant influence on the Tobin's Q. Board composition has a positive effect on ROA, Tobin's Q and cost efficiency while gender diversity has a negative influence on ROA. In view of these findings, this study recommends that the board sizes of privatized companies should be reduced preferably to between seven (7) and nine (9) to enhance coordination and faster decision making which could improve the market value. Privatized companies should be encouraged to include at least 30% of women in corporate boards in line with the constitution. However, their appointment should be based on skill and expertise required to improve financial performance. The diversity in board composition should be strengthened to enable privatized companies attract managerial and technical skill needed by a firm to improve decision making and consequently firm financial performance.

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