THE INFLUENCE OF PRIVATIZATION, OWNERSHIP STRUCTURE AND CORPORATE GOVERNANCE ON FINANCIAL PERFORMANCE OF PRIVATIZED COMPANIES IN KENYA

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DECLARATION AND RECOMMENDATION

DECLARATION

This thesis is my original work and has not been submitted to any other university for the award of a degree.

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RECOMMENDATION

This thesis has been submitted for examination with our approval as the University supervisors.

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DEDICATION

This thesis is dedicated to my whole family especially my parents, my beloved husband David, our children Lenny, Joram, Tabitha, Dennis, Prisca, Johnson and grand children Shanice and Shawn, for their love, encouragement, support , patience and prayers during the long period of this study.

ABSTRACT

This study examined the influence of privatization, ownership structure and corporate governance on financial performance of privatized companies in Kenya. The specific objectives were to: examine whether there is a significant difference between the pre- privatized and post - privatized performance and between privatized and other listed companies; examine the influence of ownership structure on financial performance of privatized companies; establish the influence of corporate governance structures on financial performance of privatized companies and finally investigate the joint influence of ownership and corporate governance structures on financial performance of privatized companies. A sample of 8 privatized firms and a control group of 8 other listed companies was used. Performance was measured using ROA, Tobin's Q, cost efficiency and technical efficiency. Data was obtained from prospectuses, financial reports and the NSE hand books. The cost and technical efficiency indicators were computed using the Stochastic Frontier Approach (SFA). Data was analyzed using a combination of descriptive statistics, paired *t*–tests and regression models. To enhance validity of the regression results, a unit root test was used to examine stationarity of data and a Hausman test was carried out to determine whether to use the Fixed Effect (FE) or the Random Effects (RE) regression model. A regression model with a robust standard error option was used to control for heteroskedasticity and contemporaneous correlation which may lead to spurious results. The study found a significant difference between the Tobin's Q, cost efficiency and technical efficiency of privatized and other publicly listed firms. Ownership structure had a significant influence on financial performance of privatized companies. Among individual ownership variables, the government ownership had a significantly positive influence on ROA and the Tobin's Q; but a negative influence on cost efficiency. Institutional shareholders had a significant positive influence on ROA and technical efficiency. Large individual shareholders had a significant positive influence on cost efficiency. Dispersed shareholders had a significant and positive influence on ROA but negative with cost efficiency. The corporate governance structure had a significant influence on financial performance. Among individual corporate structures, the non executive directors had a significant and positive influence on ROA, Tobin's Q and cost efficiency while gender had a significant and negative influence on ROA. This study concluded that ownership and corporate governance structures influence financial performance of privatized companies. In view of these findings it is recommended that the Privatization Commission of

Kenya should reduce government and dispersed ownership to pass more control to private investors. Some government ownership should however be retained in privatized companies to enhance shareholder confidence, protection of investments in a system with a large size of dispersed shareholders. The institutional ownership should be increased to attract managerial and technical expertise crucial to firm performance. The Capital Markets Authority (CMA) of Kenya should enhance diversity in the corporate boards to enable privatized firms attract managerial and technical expertise required by companies to improve financial performance. The Managers of privatized companies should reorganize corporate resources to cut costs and enhance the technical efficiency.

Key Words: Privatization; Ownership Structure; Corporate Governance; Financial Performance.

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LIST OF ABBREVIATIONS AND ACRONYMS

AGM   Annual General Meetings

CEO   Chief Executive Officer

CMA   Capital Markets Authority

DEA   Data Envelopment Analysis

ESTU   Executive Secretariat and Technical Unit

FE   Fixed Effects

GoK   Government of Kenya

IEA   Institute of Economic Affairs

IPO   Initial Public Offer

IPP   Independent Power producer

KCB   Kenya Commercial Bank

KPLC   Kenya Power and Lighting Company

LLC   Levin, Lin, Chu

NEDs   Non-Executive Directors

NSE   Nairobi Stock Exchange

NSSF   National Social Security Fund

OECD   Organization for Economic Co-operation and Development

OLS   Ordinary Least Square Method

PRT   Property Rights Theory

PPP   Public-Private Partnerships

RBT   Resource Based Theory

RE   Random Effects

ROA   Return on Assets

ROE   Return on Equity

SFA   Stochastic Frontier Analysis

SOEs   State Owned Enterprises

CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

The State Owned Enterprises (SOEs) represent a substantial part of the Gross Domestic Product, employment and market capitalization (OECD, 2015). Their financial performance is crucial as they are spread utilities and infrastructure sectors such as energy, transport and telecommunication which serve as inputs to other sectors of the economy (OECD, 2005). However, the performance of SOEs has been inadequate as they have been found to be wasteful and inefficient, resulting in financial losses amounting to as much as 5% to 6% of the country's Gross Domestic Product (GDP) annually (World Bank, 2004). According to Kikeri and Nellis (2002) the losses by SOEs require governments to finance larger fiscal deficits, increase tax revenues and reduce public spending in other sectors. The reasons for the unsatisfactory performance are attributed to state ownership and this is backed by several studies. Shleifer and Vishny (1997) argue that government ownership is inefficient due to the wide separation between ownership and control which makes it difficult to monitor managers. Nellis (2005) indicates that SOEs address multiple and conflicting objectives and are also subject to political interference. It has also been argued that state corporations are sheltered from competition, overstaffed and often set prices of their products below production costs (World Bank, 2004).

Privatization is therefore expected to improve the performance of SOEs by restructuring government ownership to pass more ownership and control to private investors. Consequently, substantial changes in ownership and corporate governance emerge through privatization as a basis for improving efficiency in state corporations. The ultimate success of privatization of SOEs therefore depends on creating an effective ownership and corporate governance structure which could bring in the benefits associated with private ownership. The argument of this study is that privatization may not yield the expected results unless the process establishes an ownership and corporate governance structures to enable privatized companies to acquire skill and resources needed to improve efficiency. The influence of ownership and corporate boards on

firm performance has however not been fully established due to inconsistencies in findings and the gaps in methodological approaches.

In Kenya, the government acknowledges in various policy documents that the SOEs have continuously underperformed, especially in the management of public resources, prompting bailouts, restructuring or debt write-offs by the Treasury (GoK, 2005a; GoK, 2013). The poor performance of state corporations has been attributed to conflicting objectives, managerial and operational inefficiency and political interference (GoK, 1992; 2005a). Their unsatisfactory performance has also been linked to poor utilization of resources, weak management and lack of institutional capacity to attract and retain the skills needed to improve performance (GoK, 2013; Kobia and Mohammed, 2006).

These concerns have made the Kenya government to introduce reforms in ownership and governance structures to enhance the efficiency of state corporations (Gok 1992; Gok, 2005a). The privatization programme was launched in 1992 as a mechanism of improving governance and efficiency of the state corporations (GoK, 1992). The challenge facing policy makers is whether the emerging ownership and governance system following privatization has secured the efficiency associated with private ownership. The empirical evidence in Kenya shows that performance in privatized companies improved (Yaw and Toroitich, 2005; Ochieng and Ahmed, 2014 Makokha, 2013). However, performance is these studies was measured using accounting based Ratios such as ROA and ROE. This implies that the influence of ownership and corporate governance reforms on corporate value and efficiency has not been established. This study is different from previous studies as it integrated profitability, market value, cost and technical efficiency as financial performance indicators in a single study.

1.1.1 Privatization

This subsection discusses the concept of privatization and the methods used to sell the SOEs. Privatization has been defined as the deliberate sale by a government of its ownership or assets in SOEs to private investors (Megginson and Netter, 2001). This definition is narrow as the term has been used to describe a wide range of policy initiatives meant to limit the government's role in the economy by transferring state ownership and management to the private sector to meet the needs of society (Anyang'Nyong'o, 2000). The Privatization Act of Kenya uses the broader

definition as it describes privatization as a transfer of assets of an SOE such as shares, managerial control and functions previously performed by the state to the private investors (GoK, 2005b).

The methods used to privatize SOEs involve sale of shares, sale of assets, management-employee by-out, pre-emptive rights and Public-Private Partnerships (PPPs) (GOK, 2005b). Privatization by share issue   involves selling some or all state ownership in an SOE to the public through a stock exchange (Campbel and White, 1998). Consequently, decisions that affect company management become the responsibility of the shareholders (Ngugi, 2000). It is often followed by listing of the privatized firms on the stock exchanges to enable privatized companies adopt recommended corporate governance practices. Using this privatization method, the Kenya government has privatized several companies such as the Kenya Airways, Uchumi supermarkets, Mumias Sugar company, Housing Finance Corporation, the Kenya Commercial Bank, National Bank of Kenya, the Kenya Electricity Generating Company (Ken Gen, the Kenya Reinsurance Corporation and Safaricom, Kenya Ltd (Gok, 2007) .

An enterprise can also be privatized by sale of its assets or liquidated which involves closure and winding up of an incorporated enterprise in accordance with procedures under the solvency law (Ogola, 2006). According to Megginson and Netter (2001), this approach is applied when a company is financially distressed and the sale of shares may not attract investors. This method was used to privatize corporate entities in Kenya such as Nakuru Chrome Tanning, the Kenya Peanut company, Kenya Horse Studs and Kenatco Transport Ltd. among others (GoK, 2005a). A method that has been used widely in Kenya is the pre-emptive rights under which existing shareholders were given the first option to buy the shares in accordance with pre-existing legal rights (Anyang'Nyongo, 2000). This method was used to privatize 54 companies in Kenya. An enterprise may also be privatized by management – employee buyout which involves the sale of assets or shares to managers and employees of the company as was the case of Ark ltd in Kenya (GoK, 2005a).

Privatization also involves the PPPs under which services hitherto provided by state are given to a private provider for a specified period but the government retains ownership (Megginson and

Netter, 2001). Various forms of PPPs include: management contract, service contract, concession and lease (Ngugi, 2000). The PPP Unit in Kenya has documented infrastructure entities privatized using this method. The companies under the energy sector include: Iberafrica in 1997, the Tsavo/Kipevu Independent Power Producer (IPP) in 2000, Orpower-Olkaria III in 2000 and 2008, the Rabai IPP in 2009 and the KPLC in 2005. The PPPs listed under the transport and communication sector include: the Port of Mombasa Grain Terminal in 1998, JKIA Cargo Terminal in 1998; the Nairobi Urban Toll Road in 2009 and the Kenya- Uganda Railways concession of 2006.

This study adopts the narrow definition of privatization which describes it as the sale of the assets or shares of SOEs to individuals or private investors through public offers. This method is considered applicable to this study as it transfers ownership and control rights to private investors but the government also retains some shareholding. This method is often accompanied by listing of the privatized firms on the stock markets to enable privatized companies adopt recommended corporate governance practices.

1.1.2   Ownership Structure

The ownership structure defines the distribution of ownership rights which enable shareholders to have claims of income from the asset and also empower them to exercise decision making through voting rights (Grossman and Hart, 1988). This description includes the dimensions of size of ownership and the identity of owners. The size defines the rights to profits, extent of liability and influence in decision making in a firm, through voting over key issues. The identity of the shareholder is important as they comprise individuals and institutions whose interests, goals, resources and capabilities to influence managers vary (OECD, 2004).

The sale of state ownership to private investors leads to an emergence of different types of shareholders with different sizes of ownership. A typical privatized firm in Kenya has five types of shareholders who include: the government, foreign institutional shareholders, large individuals, and dispersed owners. The government as an owner is considered ineffective in monitoring managers due to large separation of ownership and control and focus on economic and welfare objectives (Shleifer and Vishny, 1997). Institutional investors comprise of

institutions which invest funds on behalf of their clients and consist of insurance companies, mutual funds, pension funds and banks (OECD, 2010). They are expected to improve firm performance by exercising oversight functions and influence decision making in firms where they invest (Kose and Senbert, 1998; OECD, 2010). They are also considered crucial in provision of resources in the form of access to private capital, networks, managerial and financial expertise to enable firms to exploit unique entrepreneurial opportunities (Hu and Izumida, 2008).

Foreign institutional shareholders are deemed to be effective in monitoring of managers as they are endowed with expertise and technologies to stimulate performance (Chibber and Majumdar, 1999). Large individual shareholders are considered important to a firm as they provide financial resources and are vocal in decision making involving their investment. Dispersed shareholders hold small size of shares and are considered to have no effects on firm performance as they lack capacity and incentives to collectively monitor managers (Jensen and Meckling, 1976). The concept of ownership structure adopted in this study encompasses the size and the identity of the top ten shareholders in an organization.

1.1.3   Corporate Governance

Corporate governance is defined as a set of mechanisms designed to respond to agency problems that arise from the separation of ownership and control in a corporation (Shleifer and Vishny, 1997; La Porta et al., 2000). Corporate boards are considered to be as important governance mechanisms as their role involve monitoring managers, protecting shareholders interests and setting strategies in a firm (Fama and Jensen, 1983). The corporate governance guidelines specify the attributes necessary to make the board effective and include; a small and diverse board with at least a third of the members being non executive and separation of roles for the Chief Executive Officer (CEO) and the chairman of board (CMA, 2002a).

The newly gazetted Code of Corporate Governance Practices (CMA, 2015) in Kenya   includes additional standards for listed companies. The Code recommends the upper age limit of directors to be 70 years and the tenure of independent board members not to exceed a cumulative term of nine years. The Code also provides that the board should have a policy to ensure diversity in terms of   demographics,   academic   qualifications,   technical   expertise,   relevant   industry

knowledge, experience, nationality, age, race and gender. The effective date for compliance with the new codes is 2016 which implies that listed companies shall start reporting on this standard after the set timeframe.

The existing corporate governance guidelines have not specified the optimal size of the board but some empirical studies specify a small board of seven to nine members to function effectively (Lipton and Lorsch, 1992; Yermack, 1996). A smaller board is considered more effective in coordination and in decision making (Yermack, 1996). However, a larger board is considered to be more effective in monitoring and advising managers as organizations exist in complex business environments requiring a large pool of expertise (Pfeffer, 1972). Board size in previous studies has been measured by the total number of directors (Adusei, 2011; Chaghadari, 2011; Yermack, 1996).

Diversity in corporate boards often refers to the percentage of outside directors serving on the board (Adusei, 2011; Chaghadari, 2011). From an agency theory perspective the Non Executive Directors (NEDs) are crucial due to their role in monitoring and preventing conflict of interest between managers and shareholders (CMA, 2002a). According to Fama and Jensen (1983) they are more effective in monitoring managers as they are concerned with maintaining their integrity in the labor market. From a resource based theoretical perspective, the NEDs have access to unique expertise thereby enriching corporate strategies and decision making.

Diversity also involves reflecting the structure of the society, gender balance, ethnicity and diverse professions to enable a firm respond effectively to the dynamic of business environment. From an Agency Theory perspective, women directors bring new perspectives useful in strategy formulation and understanding of certain markets. Srindhi et al. (2011) also argue that boards with more women have greater public disclosure and better oversight of managers. From a Resource Based theoretical stand point, women directors bring in unique expertise, market networks and ethical views crucial in decision making (Letting et al., 2012). The corporate governance guidelines also emphasize separation of the position of the CEO and that of the chairman of the board (CMA, 2002a). According to Jensen and Meckling (1976) separation of the positions ensures that no individual dominates in corporate decision-making. The concept of

corporate governance in this study encompasses mechanisms used in corporate boards to ensure they get returns of their investment and are based on CMA (2002a). The board attributes therefore used in this study include: board size, board composition, gender diversity and the CEO diversity.

1.1.4   Financial Performance

Financial performance has been measured using different indicators. Some authors use accounting-based ratios such as Return on Assets (ROA) and Return on Equity (ROE) (Afeikhena, 2008; Boubakri and Cosset, 1998; Omran, 2004). The ROA measures the percentage of profit that a firm earns from its total assets and therefore measures how efficiently managers use company assets to generate profit. ROE is an indicator of profit raised using shareholder funds (Megginson et al., 1994). The accounting based ratios are however inadequate as they are an indicator of short-term performance. They also evaluate past performance and hence lag the actions that bring about the results (Letting et al., 2012).

Performance is also measured by the Tobin's Q defined as the ratio of the market value to the replacement cost of the firm's physical assets (Carter et al., 2010). Unlike the accounting ratios, the Tobin's Q reflects the investor's opinion and growth prospects of a firm based on past and current performance. Mule et al. (2013) also indicate that the Tobin's Q ratio gauges the investors' confidence in a firm's business prospects and how closely the managers and shareholders' interests are aligned. Consequently, a ratio of less than 1.0 implies that the market value is lower than the assets of the firm and hence it would cost more to replace a firm's assets than its worth. It also reflects a lower investor confidence in a corporate entity.

Some authors measure performance using efficiency indicators such as total sales, the ratio of sales to employees and total asset turnover (Sun and Tong, 2002; Omran, 2004). However, there is an increased trend in measuring efficiency using cost and technical efficiency indicators (Kamaruddin and Abokaresh, 2012; Kinara, 2014; Sifunjo et al., 2014). The concept of cost efficiency was introduced by Leibenstein's (1966) and estimates how close a firm's actual costs are to the costs of a best-practice firm producing the same outputs. Cost inefficiency may therefore arise where managers use more inputs than would a best practice firm or employ an

input mix that does not minimize costs for a given input price (Sifunjo et al., 2014). According to Leibenstein (1966) inefficiency may be attributed to managerial deficiencies, lack of external and internal pressure on managers, lack of competition and inefficient production techniques. The concept of technical efficiency was introduced by Farrell (1957) and measures the effectiveness by which a given set of inputs is used to produce an output. A firm is technically efficient if it is producing the maximum output from the minimum quantity of inputs, such as labor, capital and technology (Sifunjo et al., 2014). The technical efficiency can therefore be applied to gauge productivity loss which may not be captured in the accounting based ratios.

There are several approaches used to compute the efficiency values. The Data Envelopment Analysis (DEA) measures the amounts of inputs used to produce outputs in a decision making unit (Kamaruddin and Abokaresh, 2012; Yusof et al., 2010). The DEA defines the frontier of the most efficient decision making units and measures how far they are from the frontier (Charnes et al., 1978). However, it is considered inadequate in measuring efficiency as it does not take account of the measurement errors. The Stochastic Frontier Analysis (SFA) is considered superior as it decomposes the stochastic term into an inefficiency component and random error (Yusof et al., 2010). The SFA therefore measures deviations from the maximum attainable output in an entity. Using the approach by Yusof et al. (2010), the SFA was used to compute efficiency scores and the selected inputs variables include the cost of materials, total expenses (financial and operating) and total assets while output is measured by total sales.

Financial performance of privatized companies remains a topical issue of great interest to policy makers, financial analysts, corporate managers and scholars. The key areas of concern include: profitability, firm value and efficiency. The concept of financial performance adopted in this study integrates 4(four) performance indicators (ROA, ROE, Tobin's Q, Cost and Technical efficiency) to measure profitability, market value and efficiency of privatized companies.

1.1.5 Privatization of State Owned Enterprises in Kenya

The Kenya Government has pursued several policy initiatives to address the concerns of unsatisfactory financial performance by state corporations. The antecedents of privatization in Kenya are identified as inefficiency, poor corporate governance and failure by SOEs to focus on

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their core objectives (GoK, 2005a). To initiate privatization of SOEs, Sessional Paper No. 1 of 1986 recommended reduction of state ownership in commercial activities and the development of capital markets. This led to the establishment of Capital Markets Authority (CMA) in 1989. Under Legal Notice No. 59 of 1987, the National Bank of Kenya and the Kenya Re-insurance Company were exempted from the State Corporations Act to reduce the role of the state in commercial activities. Despite the reforms, Sessional Paper No. 4 of 1991, decried continued deterioration of the performance of SOEs and called for effective privatization in view of the managerial problems afflicting the parastatals leading to poor return on government investments.

As a result, the GoK issued a Policy Paper on Public Enterprise Reform and Privatization whose objectives were to increase the role of the private sector in the economy, improve efficiency, raise capital for firms, reduce government subsidies to SOEs, spread ownership and develop the capital markets (GoK, 1992). To address the objectives, the GOK established the Parastatal Reform Programme Committee (PRPC) and the Executive Secretariat and Technical Unit (ESTU) to coordinate the privatization of 207 SOEs classified as non-strategic. The non-strategic SOEs were privatized largely through liquidation, pre-emptive rights and sale of shares (GoK, 2005a). The GoK also established the Department of Government Investments and Public Enterprises to coordinate reforms of 33 SOEs classified as strategic which were to be restructured and retained under GoK control. Consequently, the GoK sold 26% of shares in Kenya Airways to Royal Dutch Airlines (KLM) in 1995 and a further 51% through an IPO in 1996 thereby reducing the GoK ownership to 23%.

Some SOEs were restructured in 1997 to pave the way for privatization. The Kenya Reinsurance Company and Safaricom Kenya Ltd were incorporated as limited liability companies while the Kenya Power and Lighting Company (KPLC) was split into generation unit (Ken Gen) and KPLC as the power distributor. The Kenya Posts and Telecommunications Company was split into the Communication Corporation of Kenya, the Postal Corporation and the Telkom Kenya Ltd in 1999. The reforms made it possible to privatize the commercial units while the regulatory functions remained under state control. The CMA also developed several regulations aimed at improving governance of listed firms. The codes of best corporate governance practices for listed firms were issued in 2002. The Foreign Investors Regulations of 2002 allowed acquiring shares

freely subject to a minimum of 25% reserved for local investors (CMA, 2002b). The public offers, listing and disclosures regulations were issued in 2002 and required listed firms to disclose the identity of major shareholders (CMA, 2002c).

The Economic Recovery Strategy Paper (2003-2007) called for a reduced role of the state in the economy and a privatization legal framework. This led to enactment of the Privatization Act and establishment of the Privatization Commission in 2005. Since then, the Ken Gen lPO in 2006 reduced the GoK shares from 100% to 70% while Mumias Sugar Company second offer in 2006 lowered the state ownership from 38.04% to 20%.The Kenya Re-insurance Company lPO in 2007 reducing the GoK shares from 100% to 60% while the Safaricom Kenya Ltd issued an IPO in 2008 reduced GoK ownership from 60% to 35%. Under Vision 2030, the government aims to privatize more SOEs such as hotels, banks and sugar companies (GoK, 2007).

As part of wider corporate governance reforms, the government has gazetted a new Code of Corporate Governance Practices for Issuers of Securities to the Public. The code recommends directors not to be more than 70 of age and the tenure of an independent board member not exceed a cumulative term of nine years. The code also provides that the board shall ensure diversity in terms of demographics, academic qualifications, technical expertise, relevant industry knowledge, experience, nationality, age, race and gender. The new Corporate Governance Code replaces the Guidelines on Corporate Governance and listed companies and becomes effective for compliance in 2016 (CMA, 2015).

1.2   Statement of the Problem

The SOEs are established globally to carry out commercial and social services on behalf of the government for the benefit of the public (OECD 2015; GoK, 2005a). However, there has been concerns of inefficiencies, financial losses, loss of corporate value, poor allocation and utilization of resources as well as poor governance structures in the public sector (Kikeri and Nellis, 2002; GoK, 2005). As a result, some SOEs have become a financial burden to the government necessitating public sector reforms such as restructuring and privatization (GoK, 2005; Kikeri and Nellis, 2002; Nellis, 2005). The inefficiency of SOEs has been attributed to wide separation between ownership and control which makes it difficult to monitor managers.

Privatization therefore aims to improve the efficiency of SOEs by passing ownership and control rights to private investors and corporate boards.

A large number of studies examining the performance of privatized companies compare the pre- and post-performance of privatized companies (Abdullahi, et al., 2012; Afeikhena, 2008; Mwangi, 2013; Makokha, 2013; Naceur et al., 2006; Ochieng and Ahmed, 2014). These comparative studies do not offer unequivocal support that privatization influences operational efficiency as the performance indicators used are ROA and ROE and sales output. These studies also overlook the influence of emerging ownership and corporate boards on financial performance of privatized companies. There is also evidence that ownership structure influences financial performance of corporate entities (Alipour and Amjadi, 2011; Alireza et al., 2011; Mishari et al., 2012; Uwuigbe and Olusanmi, 2012; Ongore et al., 2011; Pervan et al., 2012; Mishari et al., 2012; Trien and Chizema, 2011; Mei, 2013). It is also apparent that corporate governance structure influence financial performance of corporate entities (Aduda et al., 2013; Fauzi and Locke, 2012; Rashid et al., 2010; Shukeri et al., 2012; Wanyama and Olweny, 2013). However, these studies use accounting and market based value indicators such as ROA and the Tobins Q as the performance indicators.

A limited number of studies attempt to investigate the influence of ownership and corporate board structures on corporate financial performance but generate efficiency using the DEA estimator (Bozec and Dıa 2007; Kamaruddin, and Abokaresh, 2012; Zelenyuk and Zheka 2006; Tessa and Ricky 2011). The SFA technique is considered superior in estimating efficiency values as it decomposes the stochastic term into an inefficiency component and random error (Yusof et al., 2010). These studies also leave some knowledge gaps as efficiency is the only performance variable used.

In Kenya, the government launched privatization in 1992 as a mechanism to improve the financial performance of state corporations (GoK, 1992). The empirical evidence in Kenya shows that performance in privatized companies has improved (Yaw and Toroitich, 2005; Ochieng and Ahmed, 2014 Makokha, 2013. However, these studies compare the pre- and post-privatization performance using accounting based ratios such as ROA and ROE. This implies that the influence of ownership and corporate governance reforms on efficiency and corporate

value is not fully established. This study improves on previous research by examining the influence of ownership and corporate governance structures on financial performance by integrating four crucial firm performance indicators which include: ROA, the Tobin's Q, cost and technical efficiency. The cost and technical efficiency indicators were generated using the SFA which is superior to accounting and the DEA approaches of computing efficiency values.

1.3   Objectives of the Study

1.3.1   Main Objective

The broad objective of this study was to determine the influence of privatization, ownership and corporate governance structure on financial performance of privatized companies.

1.3.2   Specific Objectives

The specific objectives were to:
i.   a)   Determine whether there is a significant difference between the pre- and post-privatization performance of privatized companies in Kenya.
        b)   Determine whether there is a significant difference between privatized and other publicly listed companies in Kenya.
ii.   Establish the influence of ownership structure on financial performance of privatized companies in Kenya.
iii.   Determine the influence of corporate governance structure on financial performance of privatized companies in Kenya.
iv.   Establish the influence of joint ownership and corporate governance structures on financial performance of privatized companies in Kenya.

1.4   The Research Hypotheses

HO$_{1a}$: There is no significant difference between the pre- and post-privatization   performance of privatized firms.

HO$_{1b}$: There is no significant difference in financial performance between privatized companies and other publicly listed companies.

HO$_{2}$: Ownership structure has no significant influence on financial performance of privatized companies.

HO₃: Corporate governance structure has no significant influence on financial performance of privatized companies.

HO₄: Ownership and corporate governance structures have no significant influence on financial performance of privatized companies.

1.5   Significance of the Study

Ownership structure and corporate boards are considered to be key governance mechanisms in influencing corporate financial performance (Shleifer and Vishny, 1997; Jensen and Meckling, 1976). Privatization in Kenya was implemented with the specific objectives of reducing state ownership, increasing the role of the private sector in the economy; improving efficiency and enhancing the shareholder value (GoK, 1992; GoK, 2005a). The results of this study are useful to institutions established to privatize companies and enhance corporate governance. This study is useful to the Privatization Commission of Kenya as it demonstrates the extent to which government ownership has been transferred to private investors. It also enables the Commission to ascertain whether privatized companies were attracting skill and technical expertise crucial for firm performance from the private investors. This study is also crucial as it identifies the ownership structure variables contributing significantly to corporate financial performance. This will consequently help the Commission and the government in formulating policies to strengthen variables contributing positively to financial performance and also restructure variables influencing performance negatively.

The results are useful to the CMA as it shows the extent to which the recommended corporate codes of good governance practices have been adopted by privatized companies. The identification of governance structures contributing positively to firm financial performance will enable the CMA to strengthen the governance structures positively and reform those influencing performance negatively. The study is important to the managers of privatized companies as it compares their financial performance with those of other listed companies using four financial performance indicators. The identification of the technical and cost efficiencies is important as it calls the managers to reorganize resources to improve both cost and the technical efficiency. The established Tobin's Q values also require the managers to devise strategies to enhance investor's confidence in privatized companies.

The investment advisors and analysts in the security markets will find the results useful as they can make use of performance indicators to advise their clients on the future prospects and sustainability of investments in both privatized and other listed companies. The study is important to scholars as it provides the most updated and comprehensive evidence of the influence of privatization, ownership and corporate governance on financial performance of privatized companies in Kenya using four performance indicators. The new profitability, efficiency and market value indicators can be used as baseline statistics in future studies. The data base of ownership, corporate boards and performance indicators generated could serve as a reference point for the government, corporate entities academia and investors.

1.6   The Scope of the Study

The study focuses on internal governance mechanisms of a corporate entity which include ownership and corporate governance structures. The privatized firms included in this study were those where all or the majority of the shares were owned by the state before privatization. This means ones in which not less than 50% shareholding was held by the state before privatization. The study was also confined to firms listed at the NSE due to uniformity of reporting systems and comparable financial data. These firms are required to submit their annual reports to NSE and CMA and make disclosures on the ownership and corporate governance. To address objective one, this study used data of three years before and three years after privatization of a company.

1.7   Limitations of the Study

The study aimed to   establish the influence of ownership and corporate governance structures on the performance of privatized companies in Kenya. Although this objective was achieved, there were some limitations which could not be controlled with the empirical approach used. This study used secondary data collected through publicly available sources such as annual reports and NSE handbooks. The validity of the results could be limited by any problems relating to accuracy of data as reported in financial reports. Firms used in this study were those which sold shares through the NSE and consequently, the entire sample size of privatized firms comprised of only 8 (eight) firms for 7 years resulting into 56 firm-year observations. The sample size was

also limited by the soft ware used. Although the study proposed to cover the period 2003–2013, the Stata requires strongly balanced panels and consequently data for the 2003–2006 was eliminated due to some missing values as some firms were not privatized. As a result some variables could not be differenced beyond the second level as Stata requires more than 6 timeframes to difference. The pre- and post- privatization analysis covered a three year window period due to unavailability of reliable pre privatization data beyond that scope.

The study is also based on CMA corporate governance guidelines that were formulated in 2002. These guidelines were replaced by a new set of code of governance guidelines gazetted in 2015. It is evident that new codes include other factors which could influence performance which are not included in this study. These variables include the age of directors, **e**xecutive pay provisions and the tenure of an independent board member. These variables could not be incorporated in this study as the effective of compliance with the new codes is 2016 which is outside the scope of this study. The cost efficiency and technical efficiency indicators may also have limitations as the firms in the sample do not use similar inputs and outputs.

1.8   Definition of Terms

Board size	Percentage of shares held by large individual shareholders
Board composition	The percentage of non-executive directors in corporate boards
Capital investment	Ratio of capital expenditure to the total assets
Cost Efficiency	Percentage of efficiency indicating how far firms are operating from a best practicing firm
Dispersed Ownership	Percentage of shares held by individual shareholders
Efficiency	Measure of success with which an organization uses its resources to produce output
Firm	Used synonymously to mean 'company' or 'corporate entity'
Firm Size	Total assets of a company
Foreign Ownership	Percentage shares owned by a company not established under the laws of East African Community Partner States
Gender Diversity	Percentage of women directors in the corporate board
Government Ownership	Percentage of shares held by government
Institutional Ownership	Percentage shares owned by company incorporated under the laws of East African Community Partner States
Large individual Investors	Percentage of shares held by large individual shareholders listed among the top ten shareholders
Leverage	The ratio of total debts to total assets in a company
Profitability	Return on Assets (Profit after-tax/ total assets)
Privatization	An event which involves sale of government ownership to private investors
Privatized Firms	Companies whose state ownership has been sold to private investors through the NSE
State Owned Enterprises	Corporate entities whose shareholding is owned in majority owned by government
Technical Efficiency	Percentage of efficiency indicating the ability of a firm to obtain maximum output from a given set of input
Tobin's Q	The ratio of a firm's total market value to its total asset value

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter reviews theoretical and empirical literature to provide a deeper understanding of the theories and concepts used in this the study. Section 2.2 identifies and discusses theories applicable to this study. A summary of the theoretical literature is included at the end of the section. Section 2.3 is a review of empirical literature which is presented in four parts. Part 2.3.1 reviews studies on privatization and firm performance. Section 2.3.2 analyzes studies on ownership structure and firm performance. Studies on the influence of corporate governance on firm performance are discussed under section 2.3.3. Section 2.3.4 reviews studies focusing on the influence of the combined ownership and corporate governance structures on firm performance. The purpose of the review was to identify the gaps existing in empirical literature. The inconsistencies and gaps found in the empirical literature are summarized at the end of the section. Section 2.4 presents the conceptual framework of this study.

2.2   Theoretical Literature

Theories that have influenced privatization of SOEs focus on the advantages of private ownership over public ownership. The theories reviewed include: the Property Rights Theory, the Agency Theory and the Resource Based Theory. The Stakeholder and the Stewardship theories considered as extensions of the Agency Theory are also discussed under this subsection.

2.2.1   The Property Rights Theory

The Property Rights Theory provides an understanding of how the property rights and the identity of the owner influence the financial performance of corporate entities. The Theory developed by Coase (1960) and advanced further by Alchian and Demsetz (1973) assert that the size of property rights determines the choices open to decision makers and consequently the economic performance. The theory also stipulates that property rights could be owned privately, by the state, or held in common by the society, and that different holders use the rights distinctively. According to Libecap (1989), the property rights is a bundle of rights which

include the right to earn income, sell or transfer an asset and the right to exclude others from using an asset.

Different theoretical views tend to explore why state ownership is less effective than private ownership. De Allesi (1980) argues that the critical difference between private and public owned firms is that ownership in public properties is non transferable and claims of profits do not accrue to individuals. Libecap (1989) indicates that when there is no clear definition of ownership rights over valuable assets, parties will wastefully compete for them which adversely impacts on economic performance. According to Shapiro and Willig (1990), the main difference between SOEs and private firms lies in the slow information flow in the framework of hierarchical relationships among public officials.

Vickers and Yarrow (1991) also argue that SOEs are not subjected to the market discipline as the private firms as they are not exposed to the threats of bankruptcy or takeover if they do not perform. Shleifer and Vishny (1997) adopt a political view which sees private firms to be efficient as they are less subject to political interference. Consequently, private companies can avoid excessive employment, poor choices of product and location, lack of investments, and ill-defined incentives for managers. According to Boycko et al. (1996) public enterprises are inefficient due to political interference as governments use them to pay back supporters in employment.

The Property Rights Theory has been instrumental in influencing privatization as it identifies the allocation of property rights as instrumental in achieving efficiency and profitability. The theory also amplifies the reasons why SOEs are inefficient. The implication of this theory on corporate governance of privatized companies is that shareholders should have clearly defined property rights to create incentives to monitor managerial behavior to enhance firm efficiency. The private investors in privatized companies are expected to be more effective in monitoring managers as they are focused on making profits from their investments. Consequently privatized companies are expected to employ their human, financial and technical resources more efficiently as private investors demand returns on their investment.

Privatized firms should also increase efficiency as firms are exposed to greater competition, better incentives and more financing opportunities following the withdrawal of government subsidies. Privatization also reduces government's interference on day to-day management of the firm which gives the managers incentives to make decisions which can enhance corporate value. The theory is however inadequate in explaining interrelationships between ownership and financial performance as it does not account for diverse identities of private investors.

2.2.2   The Agency Theory

The Agency Theory emerged from the seminal work of Jensen and Meckling (1976) which views organizations as a set of explicit and implicit contracts with associated rights and thus separation between ownership and control of corporations. The theory presupposes that agents pursue self-seeking interests at the expense of the principal due to their firm specific knowledge and expertise in a company which would benefit them (Eisenhardt, 1989; Jensen and Meckling 1976). According to Fama and Jensen (1983) agency problems are prevalent in public corporations whose ownership and control is widely separated. As a result La Porta et al. (1997) indicates that management may pay themselves excessive salaries or pursue expansionary corporate strategies that will only yield personal benefit of control.

Fama (1989) indicates that managers as agents must be monitored and institutional arrangements made to ensure checks and balances are in place to control self seeking behavior. There are several mechanisms identified under the Agency Theory to protect the principal against expropriation by agents. Jensen and Meckling (1976) suggest that the principal should write complete contracts, laws and regulations that adequately prevent managers from engaging in opportunistic behaviors. However, Williamson (1996) argues that in reality it is difficult and costly to identify all potential opportunistic behaviors and write complete contracts.

The Agency Theory also asserts that the principal can limit the divergences by establishing incentives and incurring monitoring and bonding costs. According to Jensen and Meckling (1976), the principal must incur the agency costs to limit the aberrant activities of the agent. The agency costs have been identified to include monitoring cost, bonding cost and residual losses (Shleifer and Vishny, 1997; Tosi and Gomez-Mejia, 1989). However, Minitz (2005) argues that

agency problems between the shareholders and the managers cannot be perfectly solved but in practice, compensation of managers in the form of share ownership and long term incentive packages is often tied to the financial performance of a company.

The Agency Theory also explores how the ownership structure of a firm aligns managerial interest with those of owners to reduce agency problems in a firm. According to La Porta et al. (1999) controlling shareholders have strong incentives to monitor managers and maximize profits when they retain substantial cash flow rights in addition to control. Consequently, they are able to reduce agency costs and ensure that shareholders ultimately obtain better returns on their investments. Among the mechanisms that have received substantial attention are corporate boards due to their role of supervising managers. The agency role of the directors involves monitoring managers, setting strategies and ratifying the decisions made by the managers (Fama and Jensen, 1983). According to Jensen and Meckling, (1976) the monitoring role is achieved when the board size is small, with a majority of independent directors and the position of the CEO and the chairman of the board is separated.

The Agency Theory is relevant in privatization studies as it demonstrates the fundamental conflict of interest in public enterprises which could lead to inefficiency, loss of profits and reduction in corporate value. The implication of this theory to privatized companies is that corporate boards are expected to play a key role of supervising managers to protect shareholders interests and ensures maximization of shareholder returns. The board size of privatized companies should be small, with diverse skills. Majority of board members should be from outside the organization and the position of Chairman and CEO should be separated. The ownership structure of privatized companies should include large block shareholders for effective monitoring of managers.

2.2.3   The Resource Based Theory

The basic principle of the Resource Based Theory is that different types of resources possessed by a firm can have a significant influence on its performance (Pearce et al, 2012; Peteraf, 1993). The theory is derived from Penrose's (1959) definition of a firm as a collection of physical and human resources crucial for its growth and performance. 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. In business organizations, resources have been defined as tangible assets such as buildings and machinery, intangible assets such as software and goodwill, and capabilities in technical and managerial skills that are available and essential in detecting and responding to market opportunities or threats (Carter, 2013).

According to Ulrich and Barney (1984), organizations constrained by their resource reduce environmental uncertainty by co-opting the resources needed to improve performance increasing their control over vital resources. Consequently, Lawrence and Lorsch (1967) linked the Resource Based Theory to corporate boards as a means to manage external dependency and reduce environmental uncertainty. Pfeffer and Salancik (1978) argue that firms enhance competitiveness by co-opting directors who bring critical resources to a firm such as information, skills and access to key strategic networks with suppliers, buyers, public policy decision makers and social groups. The board composition should therefore reflect a match of the dependencies facing an organization attracted from the external environment (Hillman, et al, 2000).

The overarching proposition of the resource based theory is that a company's possession of specialized resources and skills permits it to enjoy a competitive advantage which could lead to improved financial performance. The theory is relevant to this study as privatization is expected to reorganize ownership and governance structure of SOEs to help the firms to attract the skills, technologies and financial resources needed to improve performance. Corporate directors of privatized companies should therefore be appointed to provide crucial resources and expertise required by an organization to enhance its competitiveness and performance. Privatized companies are also expected to attract skills and resources from institutional and individual investors. According to Thomsen and Pedersen (2000) large foreign institutional shareholders have good monitoring capabilities; bring professional expertise and expanded market networks. The domestic institutional shareholders are also considered a crucial resource in improving firm performance due to their role in monitoring managers and focus on profits (Wei et al., 2005)

2.2.4 The Stakeholder Theory

The Stakeholder Theory is considered to be an extension of the agency theory, as it examines the organization in the context of a wider range of constituents also known as stakeholders. Freeman (1984) defines stakeholder as any group of individuals who can affect or is affected by the activities of the firm, in achieving the objectives of the firm. Jawahar and MClaughlin (2001) identified the primary or key stakeholders in corporate entities to include shareholders, investors, employees, customers, suppliers, creditors, customers, government and the community in which an organization operates. These stakeholders are considered to have legitimate expectations and claims from the firm. Consequently, corporate entities are expected to take into account the interests of different stakeholders concerning social, environmental and ethical issues (Donaldson and Preston, 1995; Freeman et al., 2004). According to Turnbull (1997), they are considered instrumental to corporate success as their participation in corporate decision-making enhances efficiency and corporate value. The involvement of stakeholders also ensures consensus building to avoid conflicts in a firm (IFC, 2009).

The Stakeholder Theory like the Resource Based Theory is relevant in governance of privatized companies as it proposes the representation of the various interest groups on the organization's ownership and corporate boards in order to attract crucial resources from the environment. This requirement is emphasized in corporate governance guidelines which require diversity in corporate boards to encompass demographics, academic qualifications, technical expertise, nationality, age, race and gender (CMA, 2015). This theory has not only influenced corporate governance structures of listed companies but they are also required to make their financial reports public to serve the interests of all stakeholders.

2.2.5 The Stewardship Theory

The Stewardship Theory, developed by Donaldson and Davis (1991) offers an alternative view to the Agency Theory in understanding the existing relationships between management and the owners of the company. The theory considers directors and managers to be trustworthy stewards of the resources entrusted to them (Donaldson and Davis, 1993). The Stewardship theory further asserts that the steward's utility function is maximized when the shareholders' wealth is

maximized. According to Smallman (2004), where shareholders' wealth is maximized, the steward's utilities are maximized, as organizational success will satisfy managerial interests.

The Stewardship Theory therefore assumes that there are no conflicts of interest between the principal and the agent and consequently, there are no major agency costs (Donaldson and Preston, 1995). Consequently, the theory holds a contrasting view of the separation of the role of chairman and CEO, and therefore supports the appointment of a single person for the position of chairman and CEO and a majority of executive directors rather than NEDs. Proponents of this theory link majority of inside directors with a higher firm performance as they work to maximize profit for shareholders. Like the Resource Based Theory, the Stewardship Theory considers managers and the board of directors as an important resource since they provide skills and networks crucial to firm performance (Pearce and Zahra 1992; Johnson, et al., 1996).

The implication of Stewardship Theory to corporate governance is that corporate managers should be given autonomy based on trust, which should minimize the conflicts of interest and consequently the agency costs. The Stewardship Theory therefore links higher corporate performance with majority of inside directors and when the position of Chairman and CEO is held by same person. The validity of the Agency Theory propositions of corporate boards and firm performance should be evaluated with due consideration to the principles of the Stewardship Theory.

2.2.6 Summary of Theoretical Literature

It is apparent that theoretical literature shows lack of a unitary approach to explain the influence of ownership and corporate governance structures on firm financial performance. The Property Rights Theory focuses on the identity and size of property rights as the key variables that influence firm performance. Agency Theory is centered on the shareholder-manager conflicts and the mechanisms that reduce the agency problems in corporate entities. In contrast to Agency Theory, the Stewardship Theory considers managers to be good stewards who act in the best interest of a firm while the Resource Based Theory places emphasis on resources required by firms from external environment to create competitive advantage. The Stakeholder Theory considers the importance of the stakeholders in influencing financial performance. Consequently,

this study adopts a multi-theory approach by taking perspectives of the Property Rights Theory, the Agency Theory, the Resource Based and Stewardship Theory to generate a more holistic approach in examining the interrelationships between ownership, corporate governance and financial performance.

2.3   Empirical Literature

The aim of the empirical literature review is to achieve a more comprehensive understanding of the relationship among variables identified in this study and to establish gaps which require to be addressed. The literature review section is divided into four segments. Part one reviews studies focusing on privatization and firm performance while the second part analyzes studies on ownership structure and firm performance. The third part of the study discusses the influence of corporate governance on financial performance. A review of the combined effects of both ownership structure and firm performance was included to get a broader understanding of the relationship between the variables. The knowledge gaps identified following this review are summarized at the end of this section.

2.3.1   Privatization and Financial Performance

The studies comparing performance of privatized firms before and after privatizations are anchored on the Property Rights Theory which considers private ownership to be more efficient and profitable than the state ownership. According to Megginson and Netter (2001) the studies are conducted from the perspective of a policy-maker weighing the adoption of privatization programs. These studies can be grouped into multi- country and country specific studies.

In multi- country studies, Megginson et al. (1994) compared financial performance of 61 firms privatized during the period 1961-1990. The sample firms were drawn from firms operating in Europe, USA, Japan and South America. The authors document significant increases in output, efficiency, profitability, capital investment and dividend payments, as well as significant decreases in leverage following privatization. Boubakri and Cosset (1998) examined performance of 79 companies from 21 developing countries and 32 industries over the period 1980-1992. The study found significant improvement in output efficiency, profitability and capital investment.

Dewenter and Malatesta (2001) compared the pre- versus post-privatization performance of 63 large, information companies divested during 1981-94 over a short-term (-3 to +3) and longer-term (-5 to +5) horizons using data from the *Fortune* magazine. The study documented significant increase in profitability measured by net income and significant decreases in leverage and labor intensity over both short and long-term comparison horizons. However the operating profits were higher prior to privatization compared to the post privatization period. Following a similar empirical approach, D'Souza and Megginson (1999) compared the pre-and post-privatization performance of 85 companies from 28 industrialized countries privatized between 1990 and 1996. The study documented significant increases in profitability, efficiency, dividend pay and capital investment while leverage declined significantly.

There is a wide range of country specific studies comparing the pre- and post-privatization performance of privatized companies. La Porta and López-de-Silanes (1999) examined whether performance of 218 SOEs privatized in Mexico by 1992 improved after privatization. The findings indicate that profitability increased by 24% and output by 54.3%, while employment declined by 50%. In Argentina, Ramamurti (1997) examined performance of the national railroad following privatization using labor productivity and the number of employees as performance indicators. The study documented a 370% improvement in labor productivity and a 78.7% decline in total employment. In China, Wei et al. (2003) compared the pre- and post-privatization financial performance of 208 firms privatized between 1990 and 1997. The results show significant increase in output and sales efficiency, and significant declines in leverage following privatization. However, there was no significant change in profitability.

Okten and Arin (2006) examined the effects of privatization on productive efficiency of 22 privatized cement plants in Turkey for the period 1983–1999 and found that ownership changes led improvements in labor productivity. Kang (2009) examined the efficiency of Chaughwa Telecom Company in Taiwan before and after privatization using the DEA technique and found that privatization enhanced the company's production efficiency. In India, Gupta (2005) examined the performance of partially privatized firms and found that privatization had a positive impact on profitability, labor productivity and investment spending. However, there was no evidence that firms chosen for privatization had performed poorly before privatization.

In Africa, Boubakri and Cosset (1999) also evaluated the pre- and post-privatization performance of 16 companies drawn from Ghana, Morocco, Nigeria, Senegal and Tunisia. An insignificant change in profitability, efficiency, investment and leverage following privatization was documented. In Egypt, Omran (2004) compared the profitability and efficiency of privatized firms against a number SOEs. The study found that sales efficiency and income efficiency increased significantly in SOEs while in there was no significant increase in sales efficiency in privatized firms. The mean output measured by sales decreased in privatized firms while the sales in SOEs increased. The results suggest that SOEs performed better than privatized firms as a whole.

In Nigeria, Afeikhena (2008) examined the performance of privatized enterprises by comparing their mean performance five years before and five years after privatization. A significant increase was documented in all the performance indicators which include: ROA, ROE, technical efficiency and capital investment. Abdullahi, et al. (2012) compared the financial performance of the privatized firms in Nigeria, five years before and after privatization and found insignificant change in profitability measured by ROA and ROE. A positive increase in efficiency measured by sales per employee and net income per employee was documented. Kamaruddin and Abokaresh (2012) examined the technical efficiency of Libyan manufacturing firms over the period 2000 to 2008. An increase in efficiency from 49.5 % to 62.3 % after privatization was recorded but the change was insignificant.

In Kenya, Yaw and Toroitich (2005) examined performance of Kenya Airways following privatization and found that the company realized profits which were attributed to its strategic partnership with KLM. Makokha (2013) investigated the effect of privatization on performance of firms listed at the NSE by comparing profitability, leverage and activity ratios before and after privatization. An increase in profitability and activity ratios were documented. Mwangi (2013) analyzed the pre- and post-privatization performance of six (6) privatized companies in Kenya and found improvement in some indicators while other decreased after privatization. Ochieng and Ahmed (2014) compared the financial performance of Kenya Airways before and after privatization and found improvement on liquidity, profitability and efficiency ratios. It is

apparent that the studies reviewed under this subsection use the performance indicators such as ROA, ROE while efficiency is measured by sales output and the level of employment.

The use of efficiency indicators in evaluating performance of corporate entities in Kenya is evident. For instance, Mutanu (2002) compared the efficiency of highly capitalized banks with those of low capitalized banks for the period 1999 to 2001 and found that low capitalized banks were more efficient than the highly capitalized banks. Kubai (2011) examined the X-efficiency of insurance firms and found that the level X-efficiency was 100% and that large insurance firms were more inefficient with a mean X-efficiency of 139% compared to 57% in small insurance firms. Sifunjo et al. (2014) examined the X-efficiency of commercial banks in Kenya. The study found that X- efficiency was 18% and that inefficiency in large banks was more persistent than in small bank inefficiency as it was 23%. Kinara (2014) evaluates technical efficiency of technical and vocational education and training institutions for period 2008 to 2012. The results indicate that the institutions were not efficient and could improve efficiency by 32% using the same resources. These studies are centered on efficiency of commercial banks and hence do not focus on privatized companies. Due to inconsistencies in the empirical results, this study hypothesizes there is no significant difference in financial performance between the pre- and post-privatization period and also between privatized and listed companies.

2.3.2   Ownership Structure and Financial Performance

Studies on the relationship between financial performance and ownership structure were pioneered by Berle and Means (1932) who observed that ownership of a typical large firm in the United States had become widely dispersed among a large number of small shareholders often holding less than one percent of shares. They argued that under such circumstances, no shareholder could exert influence on managers and therefore such firms could not be considered to be controlled by their owners. The study by Berle and Means (1932) was followed by a large number of studies examining the relationship between ownership structure and firm performance.

Wei et al. (2005) examined the influence of ownership structure on firm value of privatized firms in China from 1991–2001 using an Ordinary Least Square (OLS) regression model. The study

found that the state and institutional ownership had a significant and negative effect on the Tobin's Q, while foreign ownership had a significant and positive relationship with the Tobin's Q. Ang and Ding (2006) compared market value of SOEs and private firms in Singapore and found that SOEs had higher valuation compared to private firms. In China, Tian and Estrin (2008) examined the relationship between retained state shareholding and corporate value of listed companies between 1994 and 2004 and found that government ownership and the Tobin's Q was U-shaped. This implied that large state ownership increases firm value.

In a similar study, Trien and Chizema (2011) examined the influence of the state ownership on firm performance of Chinese listed firms during the period 2004 –2005. The study found that at low levels of state ownership, the Tobin's Q and ROA was negative, while it was positive when state ownership was high. Alipour and Amjadi (2011) examined the relationship between ownership and financial performance of 68 companies in Tehran in 2006. A negative and significant relationship between institutional, individual shareholders and firm performance measured by Tobin's Q, ROE and ROA was documented.

Mrad and Hallara (2012) examined the relationship between the government ownership and performance of privatized firms in France over the period 1987–2009. The study documents a positive influence of high state ownership on ROA and the Tobin's Q, while the relationship on both indicators was negative when state ownership was low. Mishari et al. (2012) explored the effects of ownership structure on the ROA and Tobin's Q of firms listed in Kuwait in the year 2010. A positive relationship between institutional investors and firm performance was documented while the government ownership had a negative influence on firm performance. In Nigeria, Uwuigbe and Olusanmi (2012) investigated the relationship between ownership structure and the financial performance of listed firms in the financial sector during the period 2006–2010. A positive and significant relationship was documented between domestic institutions, foreign institutional investors and ROA.

In Croatian, Pervan et al. (2012) examined the relationship between ownership structure and ROA of listed firms for the period 2003–2010 and found that firms with dispersed ownership had a higher ROA than those with concentrated ownership. The study also found that foreign

controlled firms performed better than firms with high domestic ownership while firms with majority state ownership performed worse than privately held firms. Mei (2013) examined the relationship between state ownership and firm performance in China during the period 2003–2010. The study found that a higher state ownership had a better influence than dispersed ownership on ROA, ROE and the Tobin's Q.

In Kenya, Ongore et al. (2011) investigated the effects of ownership structure on performance of listed companies in Kenya. The study documents a negative relationship between state ownership and financial performance measured by ROA, ROE while foreign, insider, diverse and institutional ownership had a positive relationship with the same performance variables. Mang'unyi (2011) explored the effects of ownership structure on performance of 40 bank classified as state-owned, locally-owned and foreign-owned. The study found that foreign-owned banks had a better ROA and ROE than locally-owned banks. Kiruri (2013) examined the effects of ownership structure on bank profitability measured by ROE and found that state ownership had negative and significant effects on bank profitability while foreign ownership and domestic ownership had positive and significant effect.

The adoption of cost and technical efficiency as indicators of performance is also evident in studies examining the relationship between ownership structure and firm performance. The method involves using multiple firm outputs and inputs in computing the efficiency indicators. Liu (2001) examined the effect of ownership on technical efficiency of a panel of 23 international airlines operating over the period 1973–1983 using the DEA approach to compute the efficiency indicators. The study found that the state ownership was influenced technical efficiency negatively. Yildirim and Philippatos (2003) examined the cost and profit efficiency of banking sectors in Central and Eastern Europe over the period 1993–2000. The SFA technique was used to compute the efficiency indicators. In this study, foreign banks were found to be more cost efficient but less profit efficient relative to domestically owned private banks and state-owned banks.

Fries and Anita (2004) examined the influence of ownership structure on the cost efficiency of 289 banks in 15 East European countries using an intermediation approach to measure costs of a

bank. Privatized banks with majority foreign ownership were found to be more efficient than banks with higher domestic ownership. Zelenyuk and Zheka (2006) investigated the influence of ownership structure on efficiency of firms from seven industries in Ukraine using the DEA to generate inefficiency indicators. The study found that state ownership and foreign ownership had a positive and significant relationship to inefficiency. Destefanis and Sena (2007) investigated the relationship between ownership structure and the technical efficiency of 9 Italian manufacturing industries using DEA to compute the technical efficiency values. The study found that shares owned by the largest shareholder had a positive and significant influence on firm technical efficiency.

Yiwei et al. (2011) examined the cost and profit efficiency of banking sectors in six countries of South-Eastern Europe over the period 1998–2008. Using the SFA estimator to generate efficiency indicators, the average bank cost efficiency was found to be 68.59%. Foreign banks were also associated with lower cost efficiency compared to government and domestic private banks. The study also found that the efficiency gap between foreign banks, domestic private banks and government banks narrowed over time. Ochi and Yosra (2012) examined the cost efficiency of Tunisian banks during the period 1999–2009 using a SFA and found that private banks were more efficient than public banks while those with majority foreign ownership were more efficient than those with a high domestic ownership. Ayadi (2014) found that the technical efficiency of Tunisian banks for the period 2000–2011 was 57.1% which means they could improve performance by 42.9%.

2.3.3   Corporate Governance and Financial Performance

Corporate boards are considered to be the most fundamental corporate governance mechanism in any organization due to their role of monitoring managers and protecting the shareholders interests (Fama and Jensen, 1983). The governance structure variables used on empirical studies examining the relationship between financial performance and corporate governance include: board size, board composition, CEO duality and gender diversity.

There is evidence from a large number of studies examining the influence of corporate board structures on firm financial performance. Yermack (1996) examined the relationship between

board size and market value measured by Tobin's Q in 452 large U.S. companies operating between 1984 and 1991. A negative relationship between board size and firm value was documented. Firms were found to be more valuable when the CEO and the chairman of the board positions are separated. Liang and Li (1999) examined the relationship between corporate board and firm performance in China and had a positive relationship between ROA and executive directors. Duality of the CEO and the board size has no significant relationship with firm performance.

Adams and Mehran (2011) examined the relationship between corporate boards and performance of 35 publicly listed banks in the U.S. for the period 1986–1999. The results of the study indicate that NEDs had no significant relationship with the Tobin's Q while board size was positively related to the Tobin's Q. Rashid et al. (2010) investigated the influence of corporate board composition on firm performance in Bangladesh and found that NEDs added no value to the firm's performance measured by ROA and the Tobin's Q.

In Malaysia, Chaghadari (2011) examined the influence of corporate boards on financial performance of 30 companies listed in Bursa Stock Exchange in 2007. Using a linear multiple regression model, a negative and significant relationship between CEO duality and performance was documented. The NEDs and board size had no significant relationship with firm performance measured by ROA and ROE. Shukeri et al. (2012) examined the impact of corporate board structure on the ROE of 300 listed firms in Malaysia in 2011. Using a multiple regression model, the study found that board size had a positive relationship while NEDs had negative relationship with ROE. The study also documented no significant relationship between CEO duality and gender diversity on firm performance. Latief et al. (2014) analyzed the impact of corporate governance on ROA, ROE of privatized firms in Pakistan for the period 2006–2010 and found that NEDs and board size had no significant impact on firm performance.

The role of women directors in corporate boards and their influence on firm performance has emerged as a separate line of study. Under this line of study, Carter et al. (2003) examined the relationship between board diversity and firm value in publicly traded Fortune 1000. Using an OLS regression model, the study found a positive relationship between the women directors and

the Tobin's Q. Shrader et al. (1997) examine the influence of women directors on firm value using data published in the *Walls Street Journal* in 1994. Using a regression model, the study documented a negative relationship between women directors and the Tobin's Q. In Spain, Campbell and Mínguez (2008) analyzed the influence of women directors on corporate performance of non -financial firms of listed companies in Spain from 1995–2000 and found that the women directors had a positive effect on the Tobin's Q.

Carter et al. (2010) investigated the relationship between gender diversity of corporate boards and financial performance on companies in the S&P 500 index for the period 1998–2002. Using a regression model, the study found no significant relationship between women directors and firm performance measured by ROA and Tobin's Q. In Pakistan, Mirza et al. (2012) examined the relationship between women directors and firm financial performance on 395 listed companies for the period 2004–2009. Using a linear regression model, the women directors were found to have a negative influence on ROA and ROE. Yasser (2014) investigated the relationship between board gender diversity and its effect on firm performance on KSE 100 Index firms in Pakistan for the period 2008 to 2010. Using a two-stage least-squares regression model, the study documents no significant relationship between women directors and firm performance measured by net operating profit after taxation and weighted average cost of capital. Terjesen et al. (2015) analyzed the effects of gender diversity on corporate performance of 3,876 public firms drawn from 47 countries in 2010. Using a generalized method of moments (GMM) regression model, the study found that firms with more women directors had a higher Tobin's Q and ROA.

The adoption of cost and technical efficiency in measurement of performance is evident in corporate governance studies. This approach involves the application of models using multiple outputs and inputs in estimating efficiency variables. Using this method, Bozec and Dıa (2007) analyzed the effectiveness of the board of directors for a group of 14 Canadian SOEs over a 26-year period (1976–2001) using DEA to compute the efficiency scores. The board size and NEDs were found to be positively related to technical efficiency only when SOEs were exposed to market discipline. Lin et al. (2009) investigated the effect of corporate governance practices on productive efficiency in a sample of 461 publicly listed manufacturing firms in China using DEA

to compute efficiency values. The results indicate that state ownership had a negative effect on efficiency.

Tanna et al. (2009) examined the relationship between board size and composition and the efficiency of 17 banking institutions operating in the UK between 2001 and 2006 using the DEA to estimate efficiency values. A positive but insignificant relationship between board size and efficiency was documented while board composition had a positive and significant effect on efficiency. Agoraki et al. (2009) investigated the effects of corporate boards on the efficiency of European banks for the period 2002–2006 using the SFA technique to generate efficiency scores. The results indicate that board size had a negative effect on cost and profit efficiency while board composition and cost efficiency had an insignificant relationship.

María and Sánchez (2010) analyzed the influence of corporate boards on technical efficiency using a sample of 116 non-financial firms quoted in Spain. The efficiency values were computed using the DEA technique. The study found that technical efficiency increased with a diverse board while board size negatively influenced cost and profit efficiency. In Nepal, Ravi and Hovey (2013) examined the impact of corporate governance on efficiency of commercial banks during the period 2005–2011 and found that a bigger board and institutional ownership increased efficiency in the commercial banks.

The role of corporate governance on financial performance in Kenya has been investigated widely using the accounting and market based performance indicators. Using these performance indicators, Letting et al. (2012) examined the relationship between board diversity and financial performance of 40 firms listed in the NSE. The study found no significant effect of board diversity on ROA, ROE. Miring'u and Muoria (2011) investigated the influence of corporate boards on firm performance of some SOEs in Kenya and found a positive relationship between board size, NEDs and ROE of the companies. Wanyama and Olweny (2013) examined the relationship between corporate boards of insurance companies and firm performance. The study found a positive relationship between board composition and ROA and ROE while the CEO duality had a positive influenced on performance. Aduda et al. (2013) investigated the influence of board size, NEDs, inside directors, and CEO duality on firm performance using a regression

model. The study found that all board composition variables had a significant influence on the ROA and the Tobin Q. Lekaram (2014) investigated the relationship between corporate boards and financial performance of manufacturing firms listed at the NSE. The study found board size was negatively related to ROA and Tobin's Q while NEDs were positively related to Tobin's Q.

The influence of women directors on firm performance of corporate entities in Kenya has received substantial empirical attention as evidenced in the following studies. Ekadah and Mboya (2009) examined the effects of board gender diversity on performance of commercial banks in Kenya for the period 1998–2009. Using a stepwise regression model the study found that boards of commercial banks had no effect on the financial performance measured by ROA. Muigai (2014) also investigated the influence of corporate boards on performance of commercial banks in Kenya for the period 2009 – 2013. The results of the study show that the NEDs and gender diversity had a positive relationship to performance measured by ROA.

Wetukha (2013) investigated the influence of corporate boards on performance of listed firms at the NSE. The study documented a positive relationship between NEDs, board size and CEO duality and ROA. Women directors however had a negative effect on the firm performance. Ongoso (2014) examined the influence of corporate boards on financial performance of firms listed at NSE. The study found a positive relationship between board size, NEDs and firm performance measured by ROA while the women directors had an insignificant relationship with firm performance. These studies however leave knowledge gaps as they do not use efficiency indicators to measure performance, and do not focus on privatized companies.

2.3.4   Ownership Structure, Corporate Governance and Financial Performance

Several studies have examined the influence of the combined ownership and corporate governance structure on firm performance in a single model. The rationale is that an interaction between ownership and corporate structures is jointly designed to enhance firm performance. Using this empirical approach, Aljifri and Moustafa (2007) examined the effect of corporate governance and ownership variables of listed firms in the United Arab Emirates on financial performance for the year 2004. The study found that government ownership had a positive

relationship with the Tobin's Q while the institutional investors and the board size had an insignificant relationship with the Tobin's Q.

Omran et al. (2008) examined the performance of privatized firms in Egypt for the period 1995 – 2005 and found that foreign investors and NEDs had a positive effect on firm performance measured by ROA and ROE. In China, Lin et al. (2009) examined the relationship between corporate governance and efficiency in a sample of 461 publicly listed manufacturing firms. The findings show that state ownership had a negative impact on efficiency while the NEDs had a positive influence. In Pakistan, Safdar and Hasan (2009) found that board size had a negative effect on performance measured by the debt to equity ratio. Institutional ownership had a positive but insignificant relationship with performance. However the NEDs did not have a significant influence on performance.

Fauzi and Locke (2012) investigated the effect of ownership and governance structures on firm performance of 79 New Zealand listed firms for the period of 2007–2011. Using a generalized linear regression model, the study found that NEDs, women directors and block shareholders had a negative relationship with performance of listed firms in New Zealand. Haniffa and Hudaib (2006) also examined the relationship between the corporate governance and performance of listed companies in Karachi between 1996 and 2000. Using a regression model the study found board size and the top five shareholders had a significant relationship with the Tobin's Q and ROA.

In Ghana, Agyei and Owusu (2014) examined the influence of ownership and corporate governance structures on the capital structure of 8 listed manufacturing companies for the period 2007 to 2011. Using a multivariate regression model, the study found that board size, board composition and institutional investors positively influenced performance. Mangena et al. (2012) examined the effects of corporate board and ownership structures on performance of listed firms in Zimbabwe for the period 2000–2005. The period was split into the pre-presidential election period (2000–2002) and the post-presidential election period (2003–2005) to capture the differences in the political landscape. Using a system GMM regression model, the study found executive directors' share ownership were negatively related to firm performance measured by

ROA and the Tobin's Q during the post-presidential election period, but positively related to performance during the pre-presidential election period. The relationship between performance and the NEDs was negative and significant in both periods.

Tornyeva and Wereko (2012) examined the relationship between corporate governance and firm performance of insurance firms in Ghana. Using an OLS regression model, the study documented a positive relationship between board size, foreign ownership and institutional shareholders and firm performance measured by ROA and ROE. In Taiwan, Mao et al. (2014) investigated the influence of board characteristics and ownership structure on firm performance of listed firms for the period 1997 –2008. Using an OLS regression model, the study found that a higher proportion of NEDs and a smaller board size increased ROA and ROE. Institutional ownership and foreign ownership were positively related to the Tobin's Q. Valentin (2014) examined the relationship between board composition, ownership structure, and firm value of 300 companies listed on the Swiss Stock Exchange for the period 2008–2013. Using an OLS regression model, NEDs and institutional investors were found to have a negative relationship with firm performance measured by ROA and the Tobin's Q.

The importance of examining efficiency indicators to measure performance in corporate governance is evident from the review of literature. These studies however focus on the banking sector. Tessa and Ricky (2011) examined the technical efficiency of the Indonesian banks using the DEA estimator to compute the efficiency values. The study found that banks could improve their technical efficiency by 10.5%. Su and Dai (2012) examined the impact of ownership, and corporate governance on efficiency of listed firms in China using SFA technique to generate the efficiency values. The study found that efficiency decreased with state ownership and improved as the identity of the largest shareholder changed from government to private firms. However, the study found no evidence that NEDs influenced firm efficiency significantly.

In Kenya, there are relatively fewer studies examining the joint effect of ownership structure and corporate governance on firm performance. Mang'unyi (2011) examined the relationship between corporate governance and performance of banks and found that foreign-owned banks had better performance than domestic-owned banks. The study also found a significant

relationship between corporate governance variables and financial performance measured by ROA. Pamba (2013) examined the effect of ownership structure and governance on the debt to equity ratio of firms listed on the NSE. Using a multivariate regression model, the study found that board size was negatively related to financial performance measured by debt to equity ratio. The NEDs were negatively related to firm performance while state ownership had a positive relationship with performance. The percentage of institutional shareholding had a positive relationship with debt to equity ratio suggesting firms with higher institutional shareholding were more likely to employ more debt than equity.

2.4   Summary of the Empirical Literature

Literature reviewed exposed inconsistencies in the findings and gaps in the methodological approach. It is apparent that most of the studies comparing the pre- and post-privatization performance of privatized companies and found that performance improves following privatization (Afeikhena, 2008; Kamaruddin and Abokaresh, 2012; Makokha, 2013). However, other studies document decreased performance after privatization (Dewenter and Malatesta, 2001; Mwangi, 2013; Omran, 2004). The empirical approach in this line of study is narrow as it overlooks the influence of different ownership structures emerging following privatization.

These studies also rely on observations for a short period of time immediately before and after privatization and hence capture the short-term effects of privatization. The empirical studies focusing on the impact of privatization on performance in Kenya also use the accounting ratios (Ochieng and Ahmed, 2014; Makokha, 2013; Mwangi, 2013; Yaw and Toroitich, 2005). It is also evident that studies using efficiency indicators in Kenya do not focus on the banking sector (Mutanu 2002; Kubai 2011; Sifunjo et al., 2014). The studies also do not compare the performance of privatized firms to those of similar firms following privatization which limits the generalization of results.

The empirical studies examining the relationship between ownership structure and firm performance yield conflicting results. Some studies find that the state ownership negatively influences firm performance (Ongore et al., 2011; Pervan et al., 2012; Mishari et al., 2012). However, others found that large state ownership influences performance positively (Tian and

Estrin, 2008; Trien and Chizema, 2011; Mei, 2013). Some studies document positive relationships between institutional ownership and firm performance (Alireza et al., 2011; Mishari et al., 2012; Uwuigbe and Olusanmi, 2012). Other studies report a negative relationship between institutional ownership and financial performance (Alipour and Amjadi, 2011; Wei et al., 2005). In addition, Omran et al. (2008) found that foreign investors had no significant influence on performance while Wei et al. (2005) found a positive influence. Ongore et al. (2011) found that dispersed shareholders had a positive impact on performance while Mei (2013) found a negative relationship. Most of the studies leave knowledge gaps as they do not focus on privatized firms.

The empirical studies examining the influence of corporate governance on firm financial performance also generate inconsistent results. Some studies found a negative relationship between board size and firm performance (Agoraki et al., 2009; Yermack, 1996). However Adams and Mehran (2011) documented a positive relationship. Numerous studies found that NEDs influence performance positively (Aduda et al., 2013; Wanyama and Olweny, 2013; Wetukha, 2013). Apparently, other studies found a negative relationship (Fauzi and Locke, 2012; Rashid et al., 2010; Shukeri et al., 2012). A number of studies document a negative relationship between women directors and financial performance (Ekadah and Mboya, 2009; Wetukha, 2013). In contrast, Campbell and Mínguez (2008) found positive and significant relationship between women directors and firm performance.

These studies expose gaps in the methodology as they use accounting and market based value indicators such as the performance indicators Studies using efficiency indicators focus on the banking sector and efficiency is used as the only performance indicator (Bozec and Dıa, 2007; Zelenyuk and Zheka 2006; Tessa and Ricky, 2011). The DEA estimator is used to compute efficiency values except in the studies of Su and Dia (2012) and Yusof et al., 2010. The SFA is considered superior to other methods in estimating efficiency values. This study fills the existing empirical gaps by focusing on privatized companies in Kenya, using four performance indicators to give a comprehensive evaluation of corporate profitability, market value, cost and technical efficiency. Both cost and technical efficiency indicators were generated using the SFA technique.

2.5   Conceptual Framework

In the conceptual framework, the independent variables are ownership and corporate governance structures. The dependant variables are: ROA, Tobin's Q, cost and technical efficiency. The performance of companies after privatization may improve as the private investors are expected to be more focused on profits and effective in monitoring managers. The state ownership may influence performance negatively due to the government weakness in monitoring managers and focus on multiple objectives. However, the government as a large shareholder may influence performance positively by monitoring the managers and protecting the investor's interests. Local institutional shareholders are likely to have a positive influence on performance as they are more active in monitoring managers, focus on profits and have the expertise to improve performance.

Foreign institutions may influence firm performance positively by bringing technology and expertise to privatized firms. Individuals and dispersed shareholders may have insignificant impact on firm performance due to the small size of their ownership. A large corporate board may influence performance negatively due to problems in coordination and remuneration. The NEDs are likely to influence performance positively by enhancing monitoring of managers and bringing additional technical and managerial expertise. Women directors are expected to influence performance positively by bringing expertise and wider perspectives in decision-making. The conceptualized relationships are represented in figure 1 below

Ownership Structure
- Government
- Foreign institutional shareholders
- Local institutional shareholders
- Large individual investors
- Dispersed shareholders

Privatization
- Before
- After

Financial Performance
- Profitability
- Market value
- Cost efficiency
- Technical efficiency

$H0_1$

$H0_2$

$H0_4$

Dependent variables

Corporate Governance
- Board size
- Board composition
- CEO duality
- Gender diversity

$H0_3$

Independent variables

Figure 1: Conceptualized Relationship between Privatization, Ownership Structure, Corporate Governance and Financial Performance

Source: Author's Conceptualization

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used to address the objectives of this study. Section 3.2 discusses the research philosophy while section 3.3 presents the research design while the target population is described under section 3.4. The sample and the sampling framework are presented under section 3.5 while section 3.6 outlines the types of data and data collection instruments. The data analysis techniques are discussed under section 3.7.

3.2 Research Philosophy

Research philosophy is described as the foundation of knowledge on which underlying predispositions of any study are based. Saunders et al. (2009) argues that scientific research is based on some basic philosophical assumptions, namely ontology and epistemology and axiology. Ontology is defined as claims and assumptions that are made about the nature of reality, what exists, what units make it up and how these units interact with each other (Burrell and Morgan, 1979). Objectivism and subjectivism are identified as two opposing ontological positions which assist in classifying the perspectives of research. Burrell and Morgan (1979) indicate that objective researchers believe that social phenomena are independent in nature and hence researchers are seen as independent of the phenomena they are investigating. In contrast, subjectivist researchers assume that social phenomena are not only produced through social interaction but they are in a constant state of revision (Saunders et al., 2009).

The second philosophical assumption is epistemology which is concerned with what constitutes acceptable knowledge; the nature and methods of generating knowledge (Burrell and Morgan, 1979). The two main epistemological positions in research are positivism and phenomenology (Saunders et al., 2009). Positivism has been described as an approach under which knowledge is based on verification by way of using clear operational definitions, objectives, hypothesis testing and replicability (Anderson, 1983). Positivists therefore view reality as objective and measureable and therefore develop hypotheses or propositions testable for association or

causality. Researchers using this paradigm are independent of the research they are conducting. In contrast, phenomenologist researchers are seen as part of the research process as they provide their own explanation of the phenomenon. The phenomenological approach is also largely qualitative, focuses on immediate experience and describes things as they area (Anderson, 1983; Saunders et al., 2009).

Axiology is recognized as a philosophical stance concerned with judgments about value. Heron (1996) argues that researchers demonstrate axiological skill by articulating their values as the basis for making judgments about what research they are conducting and how they go about doing it. Pathirage et al. (2008) indicate that in value free research, the choice of what to study and how to study, is determined by objective criteria, while in value laden research choice is determined by human beliefs and experience. On the other hand, research is considered to be value laden where the researcher is influenced by the world views, cultural experiences and upbringing (Krauss, 2005). Consequently, the choice of axiological approach is a reflection of the epistemological position taken by researchers.

Induction and deduction are also categorized as two distinct approaches to discovery of knowledge (Saunders et al., 2009: Burney, 2008). Several authors indicate that deductive research proves findings and conclusions based on well-grounded theories, recognized facts and involves generation and use of quantitative data, testing of hypothesis, and analysis of causal relationship (Collins and Hussey, 2003; Gill and Johnson, 2002; Pathfage, et al., 2008).   On the other hand, Heit (2009) argues that inductive reasoning begins with specific observations of the phenomenon, and progresses analytically to broader generalizations and theories based on the observed cases.

The above-mentioned philosophical approaches lead to a distinction between qualitative and quantitative methodologies and in reference to sample size, data and analysis. Accordingly to Smith (1988), quantitative research is based on meanings derived from numerical and standardized data and involves measuring of events and performing the statistical analysis. Consequently, groups studied are larger, randomly selected, data collected is in numerical form and the analysis looks for cause and effect, among variables. This approach also allows

generalizations of results from a sample to an entire population of interest (Pathirage et al., 2008). Qualitative research on the other hand aims to understand and interpret social interactions and focuses on the study of the whole and not variables. Saunders et al. (2009), indicate that approaches used in data collection include open-ended responses, in depth interviews while the type of data collected includes words, images, participant observations and reflections. Pathfage et al. (2008), also indicate that groups studied are smaller and not randomly selected and the types of data analysis involve identification of patterns, features, themes.

The ontological position adopted in this study is objectivism under which researchers are independent of the phenomena they are investigating. This study also adopts a positivist approach by seeking to establish causal relationships using operational definitions, objectives and hypothesis testing. This approach is associated with value free axiological approach as the problem is determined following an objective criterion. The reasoning is deductive as the hypotheses are derived first and the data collected to confirm or negate the propositions. The method is quantitative as it involves the collection of data and use of statistical methods of analysis.

3.3   Research Design

The research design for this study is an ex-post facto design. Gall and Borg (2007) define ex-post facto research as a systematic empirical inquiry in which the researcher does not have any control of independent variables as their manifestations have already occurred or because they cannot be manipulated. Kerlinger and Rint (1986) indicates that an ex- post facto seeks to reveal possible relationships by observing existing conditions and searching back in time for plausible cause and effect relationships among variables using hypotheses tests.

This design is found applicable in this study as it is not possible to manipulate ownership, corporate governance and financial performance variables. The ex-post facto design is also considered suitable to examine how independent variables influence dependant variables.

3.4   Target Population

The unit of analysis in this study is a company and the population consists of all the 61 publicly listed companies in the NSE as at December, 2014 (**Appendix I**). These firms represent various sectors of the Kenyan economy which include: agriculture, commercial and services, telecommunication, automobiles, manufacturing, construction, energy, banking and insurance.

3.5   Sample and Sampling Procedure

This study used a combination of both purposive and stratified sampling. Purposive sampling was used to select the privatized firms included in the sample. According to Saunder *et al.* (2009) purposive sampling allows the researcher to pick the sample according to the nature of the research problem and the phenomenon under study. Firms selected were those privatized by sale of shares, listed at the NSE and the ones in which the GoK has retained some ownership. The sample therefore excluded firms privatized by other methods such as liquidation, pre-emptive rights and concession**.** The study was also 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 the SOEs as provided in the State Corporations Act (CAP 446). The sampled firms had published their annual reports. By using the criteria, eight firms were selected and are spread in economic sectors such as**:** communication; manufacturing; financial; commercial; insurance and energy (**Appendix A**).

Stratified random sampling method was used to select a control group of firms from a sampling frame of all listed companies at NSE. The population under this approach was divided into groups based the NSE classification of listed companies by industry sector (**Appendix B**). All privatized companies selected through purposive sampling were excluded from the sampling framework as they were already selected. Using random sampling, one company was selected from each of the economic sectors which include**:** Agriculture; telecommunication; automobiles and accessories; construction and allied; manufacturing; banking, commercial and services, insurance, investment, energy and petroleum. The 61 listed firms with analyzable data for the period 2003–2013 are shown in **Appendix C.**

3.6   Data and Data Collection Instruments

The data used to compute ownership variables were extracted from annual reports of both privatized and the control group of companies for the period 2003–2013. The audited annual reports were obtained from CMA. The ownership variables extracted from the annual reports included the percentage of shares of: state, local institutions, foreign institutions, large individuals, and dispersed shareholders. This was possible as the public offers, listing and disclosures regulations require listed companies to disclose the identity of major shareholders (CMA, 2002c).

The data used to compute corporate governance variables was extracted from annual reports of both privatized and control group of companies for the period 2003–2013. The annual reports were obtained from CMA. Corporate governance variables extracted from the financial reports included: board size measured by total number of board members, board composition measured as the percentage of NEDs in the board, duality (defined as 1 (one) if positions of chairman and the CEO were held by single person or zero if position held by different persons). Gender composition was measured as the percentage of women directors on the board.

The control variables comprised firm, leverage and capital investment. Firm size was measured by the total assets values extracted from the annual reports. Capital investment was measured as a ratio of expenditure on plants and capital equipment to total assets. The values of expenditure on plant and equipment were extracted from the statement of cash flows provided in the annual reports. Leverage was measured as the ratio of total liabilities to total assets and the values were extracted from the NSE handbooks and compared to those posted in the annual reports.

The data for pre privatization period (-3 years) was extracted from the sale prospectus of the privatized companies. The companies are mandated to disclose some key performance indicators of at least three years before privatization. Year of privatization of KCB was taken as 1998 when the bank sold 25% through an IPO thereby reducing it to 35%. Although the government had sold its shares in the bank in tranches of 20% in 1988, 10% in 1990 and 10% in 1996, the performance data prior to 1988 is only available for two years and sales in 1990 and 1996   were

over the counter and not through an IPO. The post-privatization data was extracted from the annual reports available at the CMA.

Financial performance variables used in the regression models were ROA, Tobin's Q, cost efficiency and technical efficiency. The values of ROA were computed by dividing profit after tax by total assets for each company for each year during the period 2003-13. 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 compared to those in the annual reports of both privatized and control group of firms for the period 2003–2013. 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 values 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 and operating) and total assets while output was measured by total sales. Financial and operating expenses were extracted from the income statements, while total sales were extracted from NSE handbooks and compared to those in the annual reports of both privatized and other listed firms.

3.7   Data Analysis Techniques

The data analysis techniques applied in this study included a combination of summary statistics, correlation and *t*-tests, regression diagnostic tests and regression analysis. These techniques are discussed in the following subsections.

3.7.1   Conceptual Models

The general relationship investigated can be stated as: firm performance is a function of privatization, ownership structure and corporate governance and control variables. This can also be expressed as follows:

Performance = f (privatization, ownership structure, corporate governance, control variables).

There are four equations derived from this model and are examined using *t*-tests and regression analysis. These are explained as follows:

PERF = f (Privatization) (**1**)

Privatization in this model was measured using the before and after privatization performance. The performance trends of privatized firms were also compared to those of the control group for the period 2007–2013.

The three specific regression models used in this study were:

PERF $_{i=}$ f(GOV, INST,FORI, LISH,DISP, FSIZE,LEV, INVE) (**2**)

PERF $_{i=}$ f (BSIZE+ COMP, GEND, FSIZE, LEV, INVE) (**3**)

PERF $_{i=}$ f (GOV, INST, FORI, LISH, DISP BSIZE COMP, GEND, FSIZE, LEV, INVE) (**4**)

Where:

$i = 1......4$

PERF $_{1=}$ ROA

PERF $_{2=}$ Tobin's Q

PERF $_{3=}$ CEFF

PERF $_{4=}$ TEFF

GOVT	=	Percentage of shareholding held by government.
INST	=	Percentage shares owned by local institutions
FORI	=	Percentage shares owned by foreign institutions
LISH	=	Percentage of shares held by large individual shareholders
DISP	=	Percentage of shares held by dispersed shareholders
BSIZE	=	Total number of directors on the corporate board
COMP	=	Percentage of non-executive directors on the corporate board
GEND	=	Percentage of female directors in the corporate board
FSIZE	=	The log of total assets
LEV	=	Total liabilities / total assets
INVE	=	Capital expenditure/ total assets
ROA	=	Profit after tax divided by total assets
CEFF	=	Cost efficiency scores computed using the SFA technique
TEFF	=	Technical efficiency scores computed using the SFA technique
Tobin's Q =		market capitalization (shares at year end multiplied by share price / by total assets

3.7.2   The Predicted Relationships

The envisaged influence of privatization, ownership and corporate governance structures on financial performance is informed by the Property Rights, Agency, the Resource Based, Stewardship and the Stakeholder theories.   Panel A of Table 1 presents the predicted performance before and after privatization while Panel B depicts the predicted performance of privatized companies compared to that of and other listed companies. Panel C displays the envisaged influence of ownership variables on the four performance indicators while panel D portrays the expected effect of corporate governance structures on the four financial performance indicators.

Table 1: Predicted Influence of Privatization on Financial Performance

Variable	Measurement	Expected Relationship
Panel A : ROA Before and after privatization		
Profitability	ROA= Net profit / total assets	$ROA_A > ROA_B$
Panel B : Performance Between Privatized and Other Listed Companies		
Profitability	ROA = Net profit/ total assets	$ROA_P = ROA_L$
The market value	Tobin's Q= Market capitalization / total assets	Tobin's Q_P= The Tobin's Q_L
Cost efficiency (CEFF)	Values computed using SFA technique. The input variables were: raw materials, financial and operating costs and assets. The output variable was the sales.	$CEFF_P = CEFF_L$
Technical efficiency (TEFF)	Values computed using SFA technique: Input variables were; raw materials, financial and operating costs and assets. The output variable was the sales.	$TEFF_P = TEFF_L$
Subscripts **A** and **B** indicate "after" and "before", respectively: Subscripts **P** and **L** indicate "privatized" and "other publically listed companies" respectively:		

Panel C: Predicted influence of Ownership Structure on Firm Performance

Performance Variable	Measurement	Predicted influence/ sign of the coefficient							
ROA	Profit after tax/ total assets	GOV- or +	FORI+	INST+ or -	LISH -	DISP-	FSIZE+ or -	INV+	LEV+ or -
Tobin's Q	Market capitalization/ Total assets	GOV- or +	FORI+	INST+	LISH-	DISP-	FSIZE+ or -	INV+	LEV+ or -
Cost efficiency (CEFF)	Values computed using SFA	GOV-	FORI+	INST+	LISH-	DISP-	FSIZE+ or -	INV+	LEV+ or -
Technical efficiency (CEFF)	Values computed using SFA	GOV-	FORI+	INST+	LISH-	DISP-	FSIZE+	INV+	LEV+ or -

Panel D: Predicted influence of Corporate Governance structures on financial Performance

Variable	Measurement	Expected relationship/ Sign of the Coefficient		
Profitability	ROA=Profit after tax/ total assets	BSIZE-	COMP+	GEND+
Tobin's Q	market Capitalization / total assets	BSIZE-	COMP+	GEND+
Cost Efficiency (CEFF)	Values computed using SFA. The input variables were; materials, financial and operating costs and assets. The output variable was the sales.	BSIZE-	COMP+	GEND+
Technical Efficiency (TEFF)	Values computed using SFA. The input variables were; materials, financial and operating costs and assets. The output variable was the sales	BSIZE-	COMP+	GEND+

3.7.3   Summary Statistics and Correlation Analysis

The averages of all ownership, governance and financial performance variables for all the firms were computed. A correlation analysis was done to determine whether a relationship exists among variables. Cooper and Schindler (2004) indicate a coefficient of correlation falls between

0.00 (no correlation) and +1.00 (perfect correlation) and a relationship is considered strong when **r**=0.5 and above, moderate if **r** is between 0.3 and 0.49 and weak if **r** is below 0.29.

3.7.4 Paired t-tests

The first objective of the study evaluated the influence of privatization on financial performance of privatized firms and two approaches were used. The first approach treated privatization as an event and therefore used matched pair methodology to compare the mean ROA of privatized firms before and after privatization (-3 years to +3 years). A three year period was used as some firms did not have pre-privatization data for more than three years. ROA was used as the only performance indicator as it was not possible to compute the market value and efficiency indicators as the firms were not listed before privatization.

Following the approach by Megginson et al. (1994) and Sun and Tong (2002), the year of the privatization was excluded from the analysis as it includes both the public and private ownership phases of the firm. A paired *t* test was used to examine whether there is a significant difference in performance before and after privatization. The second approach compared the performance trends of privatized firms to that of the control group. The period of analysis was revised from 2003–2013 to 2007–2013 as the Stata Software strongly balanced panels. The eliminated years (2003–2006) had some missing data. A paired *t* test was used to examine whether there is a significant difference between performance of privatized and other listed firms. Null hypothesis of the *t*-tests is that there is no significant difference in the means of the two samples. The general rule is that a *t*- value of more than 2.00 is an indicator of a significant difference.

3.7.5 Panel Unit Root Test

This study used panel data and had companies from various industries which were grouped by time (years) which implies that there were repetitive measuring of values. These groups could have their own peculiar characteristics that may be sources of differences in means and variances which could invalidate data. A unit root test was used to examine stationarity data which implies that mean of a variable remains constant over time. According to Hlouska and Wagner (2005) there are three possible outcomes of stationarity tests. The data series may be stationary which implies that it can be used in its original form in regression models. The data series may also be

non-stationary which means that it should be differenced until it becomes stationary. In addition, some variables may be non-stationary which means, the series is not mean-reverting and therefore can be used in their original form (Oscar, 2007).

There are several unit root tests such as Levin, Lin, Chu and (LLC), Dicky Fuller (DF) and Im, Pesaran, Shin test (IPS) which are used in panel data to examine stationarity. This study used the LLC test whose null hypothesis is that variables are non-stationary implying that it has a unit root. If the null hypothesis was accepted the variables were converted into a stationary form through differencing. Several authors argue that if a unit root is established, data should be examined whether there is a relationship between the variables using a cointegration test (Charito, 2010; Mule et al*., 2013*).

3.7.6 The Hausman Test

An assumption in panel data is that each entity has its own individual characteristics that may or may not influence the independent variable. There are two complementary regression models designed to control for the individual effects. The Fixed Effects (FE) regression model controls the effects of the individual characteristics (heterogeneity) that are correlated with independent variables and may bias the dependant variable (Park, 2011). The Random Effects (RE) regression model controls individual effects that are not correlated with any independent variables, may be a random occurrence and could influence performance (Schmidheiny, 2013).

A Hausman test was used to determine whether to use FE or RE regression model. This involved running both the FE and the RE regression models, saving the results and testing whether the error term is correlated with the independent variables. The null hypothesis under the test is that there is no significant correlation between the individual effects and the independent variables. A rejection of the null hypothesis confirms the argument in favor of the FE against the RE model. If the test result is < 0.05 the suitable model to use is the FE model, while if the test result is more than 0.05 the suitable model to use is RE. The FE and RE models used are specified in the following equations.

The Fixed Effect model specification

$$Y_{It} = \beta_i X_{it} + \alpha_i + \varepsilon_{it}$$

Where: $\alpha_i = (i = 1...n)$ the unknown intercept for each entity (n entity-specific intercepts).

$Y_{it} =$ The dependent variable where $i =$ entity and $t = time$

$X_{it} =$ Represents a vector of independent variables which includes .....

$\beta_i =$ Vector of coefficients to be estimated

$\varepsilon_{it} =$ Error term

The Random Effect Model Specification

$$Y_{It} = \beta_i X_{it} + \alpha + u_{it} + \varepsilon_{it}$$

Where: Y_{it}, β_i and X_{it} as defined above.

$\alpha =$ Intercept

$u_{it} =$ Between-entity error term

$\varepsilon_{it} =$ Within entity error

3.7.7   The Regression Models

The relationships between ownership structure, corporate governance and firm financial performance were examined through the following regression models:

Relationship between Ownership Structure and Financial Performance of Privatized Companies

The second objective of the study examined the influence of ownership structure on financial performance of privatized companies. This objective was addressed using the following four regression models:

ROA $_{it}$ $=$ $\alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 \ln FSIZE_{it} +$

$\alpha_7 LEV_{it} + \alpha_8 INVE_{it} + \varepsilon_{it}$ **(1)**

Tobin's Q $_{it}$ $=$ $\alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 \ln FSIZE_{it} +$

$\alpha_7 LEV_{it} + \alpha_8 INVE_{it} + \alpha_9 PRIV_{it} + \varepsilon_{it}$ **(2)**

$$\mathbf{CEFF}_{it} = \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 lnFSIZE_{it} + \alpha_7 LEV_{it} + \alpha_8 INVE_{it} + + \varepsilon_{it} \tag{3}$$

$$\mathbf{TEFF}_{it} = \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 lnFSIZE_{it} + \alpha_7 LEV_{it} + \alpha_8 INVE_{it} + \varepsilon it \tag{4}$$

Relationship between Corporate Governance and Financial Performance of Privatized Companies

The following regression models were used to address the third objective of this study which examined the influence of corporate governance on financial performances of privatized firms.

$$\mathbf{ROA}_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_5 \alpha_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \tag{5}$$

$$\mathbf{Tobin's\ Q}_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \alpha_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon_{it} \tag{6}$$

$$\mathbf{CEFF}_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon \tag{7}$$

$$\mathbf{TEFF}_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 COMP_{it} + \beta_3 GEND_{it} + \beta_4 FSIZE_{it} + \beta_5 LEV_{it} + \beta_6 INVE_{it} + \varepsilon \tag{8}$$

The Influence of Ownership structure and Corporate Governance on Financial Performance of Privatized Companies

The fourth objective examined the influence of the combined ownership and corporate governance structures on the financial performance of privatized companies. The following four regression equations were used:

$$\mathbf{ROA}_{it} = \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 BSIZE_{it} + \alpha_9 OMP_{it} + \alpha_8 GEND_{it} + \alpha_9 lnFSIZE_{it} + \alpha_{10} LEV_{it} \ \alpha_{11} INVE_{it} + \varepsilon_{it} \tag{9}$$

Tobin's Q $_{it}$ $= \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 BSIZE_{it} + \alpha_9 OMP_{it} + \alpha_8 GEND_{it} + \alpha_9 lnFSIZE_{it} + \alpha_{10} LEV_{it} + \alpha_{11} INVE_{it} + \varepsilon_{it}$ **(10)**

CEFF $_{it}$ $= \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 BSIZE_{it} + \alpha_7 COMP_{it} + \alpha_8 GEND_{it} + \alpha_9 LNFSIZE_{it} + \alpha_{10} LEV_{it} + \alpha_{11} INVE_{it} + \varepsilon_{it}$ **(11)**

TEFF $_{it}$ $= \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 BSIZE_{it} + \alpha_9 OMP_{it} + \alpha_8 GEND_{it} + \alpha_9 lnFSIZE_{it} + \alpha_{10} LEV_{it} + \alpha_{11} INVE_{it} + \varepsilon_{it}$ **(12)**

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

$PERF_{it}$	=	Financial performance (ROA; Cost efficiency; Technical efficiency and the Tobin's Q)
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 to be estimated: $i = 1\text{-}9$
i	=	Individual company
t	=	Time (year)
GOVT	=	Percentage of shareholding held by government in firm i in period t.
INST	=	Percentage shares owned by local institutions in firm i, in period t.
FORI	=	Percentage shares owned by foreign companies in firm i, in period t.
LISH	=	Percentage of shares held by large individual shareholders in firm i in period t.
DISP	=	Percentage of shares held by dispersed shareholders in firm i, in period t.
BSIZE	=	Total number of directors on the corporate board
COMP	=	Percentage of non executive directors on the corporate board
GEND	=	Percentage of female directors in the corporate board
FSIZE	=	Total assets of a company (the log of total assets)
LEV	=	Total liabilities / total assets
INVE	=	Capital expenditure/ total assets
ε_{it}	=	Error term

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1   Introduction

The overall aim of this study was to examine the influence of privatization, ownership and corporate governance structures on financial performance of privatized companies. This chapter presents the results and discussion of the findings and is organized as follows: section 4.2 presents summary statistics while part 4.3 discusses correlation among variables. Section 4.4 presents the results of pre-regression tests of the unit root and Hausman tests. Section 4.5 presents the results of the *t*- tests , the regression models and discussion as per the objectives while section 4.6 is a summary of the study.

4.2   The Summary Statistics

Table 2 below presents the mean, the standard deviation, minimum and maximum values of ownership, corporate governance control variables and performance of privatized and other publicly listed firms for the period 2007–2013.

Table 2: Summary Statistics

Var	Obs	Mean	Std. Dev.	Min	Max
Panel A: Ownership Structure of Privatized Companies					
Government	56	41.1	23.086	10.45	71.32
Institutional	56	10.47	13.347	0	49.63
Foreign	56	8.55	14.768	0	41.02
Large individuals	56	1.01	1.152	0	4.79
Dispersed	56	38.87	17.809	0	72.59
Panel B: Ownership Structure of Other listed Companies at NSE					
Government	56	7.48	17.161	0	52.33
Institutional	56	38.09	26.654	.33	73.72
Foreign	56	25.7	32.049	0	93.96
Large individual	56	3.95	4.052	0	11.81
Dispersed	56	24.75	12.688	3.43	47.75

Panel C: Corporate Governance of Privatized Companies

Board size	56	9.98	1.555	6	12
Board composition	56	.859	.070	.7	1
Gender composition	56	.180	.105	0	.4286

Panel D Corporate Governance of Other Listed Companies at NSE

Board size	56	7.8	1.82	4	11
Board composition	56	.789	.099	.5	.889
Gender composition	56	.088	.111	0	.455

Panel E: Financial Performance of privatized companies

ROA	56	.052	.054	-0641	.2129
Tobin's Q	56	.471	.492	0	2.132
Cost efficiency	56	.102	.004	.10003	.1116
Technical efficiency	56	.425	.305	.1253	.8955

Panel F: Financial Performance Other Listed Companies at NSE

ROA	56	.055	.087	-.2988	.283
Tobin's Q	56	.826	1.123	.0734	4.849
Cost Efficiency	56	.335	.223	.1067	.982
Technical Efficiency	56	.544	.155	.3316	.878

Panel G. Firm Size, Leverage and Investment of Privatized Companies

Firm size	56	17.874	. 969	16.154	19.783
Leverage	56	.619	.215	.239	.890
Investment	56	.066	.085	.0004	.309

Panel H: Firm Size, Leverage and Investment of Other Listed Companies at NSE

Firm size (Log)	56	16.453	1.582	13.082	19.14
Leverage	56	.579	.221	.228	.889
Investment	56	.052	.078	0	.389

Panels A and B of Table 2 above present the mean ownership of privatized firms and that of other publicly listed firms in Kenya for the period 2007–2013. The results indicate that the

government was the main shareholder in privatized firms with a mean ownership of 41 % compared to 7 % in other listed firms. This is consistent with studies which found that the state remains the ultimate shareholder in privatized companies (Bortolloti and Faccio, 2008; Omran, 2008; Tian and Estrin, 2008; Wei et al., 2005). This is an indicator that the government has the highest capacity to influence corporate governance in privatized companies. Local institutions own a mean of 10% shares in privatized firms compared to 38% in other listed publicly companies. The percentage of local institutional investors was low compared to 29.8% observed by Wei et al. (2005) in privatized companies in China. The findings imply that local institutions have a lesser capacity to influence governance in privatized companies.

The average foreign institutional ownership in privatized firms is 9% compared to 26% in other listed firms at the NSE. The percentage of foreign institutional investors is also lower than 11.77% observed by Omran (2008) in privatized companies in Egypt. The results suggest that foreign ownership in privatized companies is relatively low and may not have any significant influence on financial performance. Large individual investors' own 1% shares in privatized firms compared to 4% in other publicly listed firms. These sizes are considered to be too small to have any significant effect on firm performance. Maher and Anderson (1999) indicate that an individual should have at least 5% to have any significant influence on financial performance.

The average shares held by dispersed shareholders in privatized firms is 39% compared to 25% in other listed firms. This means that both privatized and other listed companies in Kenya are still owned by a large number of small shareholders often holding less than one percent of shares. This is similar to observations by Berle and Means (1932) and other studies which found the share ownership of the large firms around the world are more dispersed (La Porta et al., 1999; Faccio and Lang, 2002). According to Berle and Means (1932) such corporations have no control over the governance of their investments and firms are likely to experience the agency problems associated with a large separation between ownership and control.

Panels C and D of Table 2 present the summary statistics of corporate governance variables of both privatized and other publicly listed companies. The board size of privatized firms had an average of 10 members compared to 8 in other publicly listed firms. Board size in privatized

companies is also considered 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. Aduda (2013) also found that mean size of the board was 7.73 in listed companies in Kenya while Ravi and Hovey (2013) documented a mean size of 7 in Nepalese Commercial Banks. Some authors recommend a small board to include a maximum of seven to nine members (Lipton and Lorsch, 1992; Yermack, 1996).

The mean percentage of NEDs in privatized firms was 86% compared to 79% in other publicly listed companies. Several studies also found that most firms maintain more than a third of NEDs in corporate boards. Chaghadari (2011) found that percentage of NEDs in Iran was 42.62% while Fauzi and Locke (2012) records an average of 69.1% in New Zealand. Agyei and Owusu (2014) also found that NEDs constituted 76% of board in Ghana. This is an indicator that both privatized and other listed companies in Kenya complied with the CMA code of best practice on governance which requires that at least 30% of the board members should be from outside the organization. The mean percentage of women directors in privatized firms is 18% compared to 9% in other publicly listed firms. The mean percentage of women directors in privatized firms in Kenya is higher than 14.7% reported by Carter et al. (2010) in U.S. corporate boards and 17% documented by Mirza et al. (2012) in Pakistan. However, the size in privatized companies is below the required constitutional requirement of at least 30%.

Firm size of privatized companies expressed as the log of its assets was 17.87 compared to 16.45 in other publicly listed firms. The result suggests that the privatized firms had more assets than other publicly listed companies. This is expected as the government invested heavily in the establishment of the privatized companies in the strategic sectors of the economy as they were meant to serve national interests (GoK, 2005a). The ratio of total liabilities to total assets in privatized companies was 62% compared to 58% in other listed firms. The percentage of investment in privatized firms is 6% compared to 5% in other listed companies.

Panels E and F of Table 2 present a summary of the financial performance of privatized and other publicly listed firms for the period 2007–2013. This study envisaged that performance of privatized companies would be equal or surpass that of other publicly listed companies as they

are expected to be more focused on generating profits as investors demand returns of their investment in form of dividend. However, the overall mean of ROA in privatized firms is 5.2% compared to 5.5% in other publicly listed firms. The overall mean of ROA in privatized was lower than an average 6.18% observed by Boubakri and Cosset (1999) in privatized countries drawn from five African countries. It is also lower than the 7.17% documented by Sun and Tong (2002) in privatized companies in Malaysia. This was also lower than to 6.71 % documented by Rashid et al. (2010) in Pakistan.

The Tobin's Q of privatized companies was 48% compared to 83% in other publicly listed companies at the NSE. The Tobin's Q of privatized firms is smaller than 82.9% observed by Mrad and Hallara (2012) privatized French companies. The mean cost efficiency in privatized firms was 10% compared to 34% in other publicly listed companies. This is contrary to expectation as both privatized and other listed companies are expected to utilize resources efficiently as they operate under the supervision of private investors, independent corporate boards as well as the money and the capital markets. The technical efficiency in privatized companies was 43% compared to 55% in other listed companies which means that they could improve performance by 57% and 45% respectively using the same resources. This level of technical efficiency was low compared to 62.9% documented by Kamaruddin and Abokaresh (2012) in Libyan privatized companies in the manufacturing sector over the period 2000 - 2008.

Panels G and H of Table 2 provide the summary statistics of the control variables included in this study. Firm size of privatized companies in Kenya expressed as the log of its assets was 17.87 which is higher than 16.15 in other publicly listed companies. The firm size of privatized companies was also higher than an average of 10.23 documented by La Porta et al. (1999) in privatized firms in Mexico. Agyei and Owusu (2014) also observed that firm size expressed as logarithm of total assets in Ghanaian listed manufacturing firms was 7.54. The result suggests that the privatized companies in Kenya were larger in size than other listed companies. This is expected as the government invested heavily in the establishment of the privatized companies which were meant to serve national strategic interests (GoK, 2005a).

The leverage was higher in privatized firms with an average of 61.8% compared to 57.8% in other publicly listed companies. The ratio of total liabilities to total assets in privatized companies was also lower compared to 66. 26% observed 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. This implies that privatized firms had more access to public equity and loans from banks than other publicly listed companies in Kenya. The size of investment was also higher in privatized firms with a mean of 6.6% compared to 5.2% in the control group of companies. The size of investment in privatized companies was also lower than the 7.9% reported by Boubakri and Cosset (1999) and 13% documented by Hennesy and Whited (2005) in U.S. corporations.

4.3 The Correlation Analysis

Table 3 below presents the results of the correlation between corporate governance ownership, financial performance and the control variables of privatized companies. Panel A of Table 3 shows the correlation between ownership, financial performance and the control variables in privatized firms. Panel B of Table 3 presents the correlation of corporate governance, financial performance and the control variables in privatized firms. According to Mugenda and Mugenda (2003), a relationship is considered strong when **r**=0.5 and above, moderate if **r** is between 0.3 and 0.49 and weak if **r** is below 0.29.

Table 3: The Correlation Matrix

Panel A: Correlation between Ownership Structure and Performance Variables of Privatized Companies

	ROA	T Q	CEFF	TEFF	GOV	INST	FORI	LISH	DISP	FSIZE	LEV	INVE
ROA	1.0000											
TQ	0.6291	1.0000										
CEFF	-0.2268	-0.1232	1.0000									
TEFF	0.3575	0.4665	0.0133	1.0000								
GOV	0.1549	-0.1043	-0.0314	-0.2446	1.0000							
INST	-0.3298	-0.2348	0.0959	-0.3004	-0.6483	1.0000						
FORI	0.4193	0.5353	-0.0138	0.8250	-0.1611	-0.1986	1.0000					
LISH	-0.2930	-0.1303	-0.1239	-0.0316	-0.5550	0.3412	-0.1957	1.0000				
DISP	-0.2824	-0.1243	-0.0117	-0.1398	-0.6410	0.2336	-0.4589	0.6954	1.0000			
FSIZE	-0.2007	-0.0746	0.2270	0.0180	0.1187	-0.2525	0.2364	-0.2606	-0.1439	1.0000		
LEV	-0.6877	-0.5279	0.0846	-0.3721	-0.2373	0.4460	-0.2617	0.3167	0.1699	0.3249	1.0000	
INVE	0.5403	0.5731	0.0399	0.6347	0.0019	-0.3322	0.6954	-0.2057	-0.3168	0.1676	-0.5289	1.0000

Panel B: Correlation between Corporate Governance and Performance Variables of Privatized Companies

	ROA	TQ	CEFF	TEFF	BSIZE	COMP	GEND	FSIZE	LEV	INV
ROA	1.0000									
TQ	0.6291	1.0000								
CEFF	-0.2268	-0.1232	1.0000							
TEFF	0.3575	0.4665	0.0133	1.0000						
BSIZE	-0.3635	-0.2609	0.0486	-0.0509	1.0000					
COMP	0.4016	0.2517	-0.0094	0.0408	-0.0520	1.0000				
GEND	0.2310	0.1209	0.0151	-0.3014	-0.2278	0.2374	1.0000			
LNFSIZE	-0.2007	-0.0745	0.2270	0.0180	0.0815	-0.2098	0.0994	1.0000		
LEV	-0.6877	-0.5279	0.0846	-0.3721	-0.0133	-0.6117	-.1847	0.3249	1.0000	
INVE	0.5403	0.5731	0.0399	0.6347	-0.2287	0.3459	0.0215	0.1676	-.5289	1.000

Key: ROA means Return on Assets; TQ; is the Tobin's Q ; CEFF is Cost Efficiency ; TEFF means the Technical Efficiency; GOV means Government Ownership; INST is an indicator of Institutional Ownership ; FORI means Foreign Ownership; LISH implies Large Individual Shareholders.; DISP is an indicator of Dispersed Ownership ; BSIZE means Board size, COMP means Board Composition; GEND is the Percentage of Women Directors on Board; FSIZE means Firm Size; INVE in an indicator of the level of Investment by a firm; LEV means Leverage

Panel A of Table 3 shows the correlation between ownership, financial performance and the control variables in privatized firms. The results show that ROA has a positive correlation with government and foreign ownership but a negative correlation with institutional, large individual and dispersed shareholders. The ROA also had a negative correlation with firm size and leverage but positive with investment. A strong negative correlation of -0.69 is found between ROA and leverage. Except for foreign institutional investors, Tobin's Q had a negative correlation with all other ownership variables.

The Tobin's Q had a positive correlation with investment while it is negative with firm size and leverage. A strong positive correlation of 0.57 exists between Tobin's Q and capital investment. The Tobin's Q and ROA exhibit a high correlation of 0.63. The variables may be highly correlated as the Tobin's Q reflects the investor's opinion of the firm, based on performance measured by ROA. The relationship poses no problem in the regression models as they were examined separately. Cost efficiency had a negative correlation with government, foreign, large individual and dispersed shareholders and a positive correlation with institutional investors. Technical efficiency had a negative correlation with government and local institutional ownership while it had a positive correlation with foreign, large individuals and dispersed shareholders. It also had a positive correlation with investment and firm size while it had a negative correlation with leverage. A strong positive correlation of 0.83 exists between technical efficiency and leverage.

It is apparent government ownership had a high correlation with institutional investors with a coefficient of -0.65 and large individual shareholder with a coefficient of -0.56 and dispersed shareholders with a coefficient of -0.64. Foreign ownership had a high correlation with investment with coefficient of 0.70. Dispersed shareholders were also highly correlated with large individual investors with a correlation coefficient of 0.70. High correlation was an indicator of possible multi collinearity problem among the variables. Several authors have however argued that correlation does not prove causation (Cooper and Schindler, 2004; Mugenda and Mugenda, 2003). The causal relationships in this study were examined using the regression analysis.

Panel B of Table 3 presents the correlation of corporate governance, financial performance and the control variables in privatized firms. The ROA had a negative correlation with board size but a positive with both NEDs and the women directors. ROA also had a positive relationship with investment and a negative relationship with firm size and leverage. A high strong negative correlation of-0.69 was found between ROA and leverage indicating possible multi collinearity problem. The Tobin's Q had a positive correlation with NEDs and the women directors but a negative correlation with board size. The Tobin's Q also had a positive relationship with investment but a negative correlation with firm size and leverage. Cost efficiency had a positive correlation with the board size and the women directors, but a negative correlation with board composition. Cost efficiency had a positive correlation with firm size, investment and leverage.

The technical efficiency had a negative correlation with board size and women directors but a positive correlation with board composition. Technical efficiency also had a positive correlation with firm size and investment but a negative correlation with leverage. A high positive correlation of 0.63 between technical efficiency and investment may be an indicator of potential multi-collinearity. The correlation among variables does not however imply causal relationships (Mugenda and Mugenda, 2003). The causal relationships between ownership, corporate governance and financial performance in this study were examined using the regression models

4.4   Results of the Pre-regression Diagnostic Tests

4.4.1   Panel Unit Root 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. Rejecting the null hypothesis of a unit root means the variable is stationary. Table 4 below is a summary of the unit root test results.

Table 4: The Results of the Unit Root Test

Panel A : The Unit Root Tests   for the Ownership Variables and Financial
Performance of Privatized Companies

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		
Government	175.9886	1.0000	507.2046	1.0000
Institutional	-3.6325	0.0001		
Foreign	-1.9067	0.0283		
Large individual	-0.0949	0.4622	-2.9244	0.0017
Dispersed	-51.2902	0.0000		
Firm Size	1.0494	0.8530	-5.3204	0.0000
Leverage	-2.4433	0.0073		
Investment	-3.8166	0.0001		

Panel B : The Unit Root Tests   for the Corporate Governance Variables and Financial
Performance

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		

Panel A of Table 4 presents the results of the unit root tests of ownership and financial
performance variables. The results for ROA, Tobin's Q, technical efficiency, institutional,

foreign, dispersed, leverage and investment show that the p-values calculated were less than the critical value of 0.05. The null hypothesis of a unit root for these variables was rejected as they were stationary in their first level form. The results also indicate that the p-values for cost efficiency, government, firm size, and large individual were more than the critical value of 0.05 implying that the variables had unit roots. The variables were then subjected to a first level difference which involved creating a variable that reflects the difference in scores for one time period. Following this procedure, firm size and large individual achieved stationarity and hence the differenced values were used in the regression models. The cost efficiency and government remained non-stationary and could not be differenced further as the unit root test requires a minimum of six (6) panels. Their p-values also remained constant which means the series is not mean-reverting. The cost efficiency and technical efficiency were therefore used in the regression models in their original form.

Panel B of Table 4 above presents the unit root test results for corporate governance and financial performance variables of privatized firms. The results show that ROA, Tobin's Q, technical efficiency, board size, board composition, leverage, investment were stationary in their first level form as the p-values were less than the critical value of 0.05. The results also indicate that cost efficiency, firm size and gender were not stationary in their first level form and consequently the variables were subjected to a second level difference under which gender composition achieved stationary. The differenced value was used in the regression model. The cost efficiency did not achieve stationarity and could not be differenced further as the unit root test requires a minimum of six panels. The p-value of cost efficiency also remain constant which means they were 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.

4.4.2   The Hausman Test

Table 5 below presents the Hausman test for the regression models examining the relationship between the ownership, corporate governance and performance of privatized firms.

Table 5: The Results of the Hausman Test

Panel A: Hausman Test Results for the Relationship between Ownership and Financial Performance of Privatized Companies		
Variable	**Hausman test result**	**Suitable Model**
ROA	Prob> χ^2 = 0.0037	FE
Tobin's Q	Nil	FE
Cost Efficiency	Prob> χ^2 = 0.0008	FE
Technical Efficiency	Prob> χ^2 = 0.0001	FE

Panel B: Hausman Test Results for the Relationship Between Corporate Governance Performance and of Privatized Companies		
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

Panel A of Table 5 above presents the Hausman test for the regression models examining the relationship between the ownership and performance of privatized firms. The results indicate that FE regression model was the best suitable model for ROA, cost efficiency and technical efficiency since the p-values were significant. The results for the Tobin's Q yielded no results and this study opted to apply FE in this model to be consistent to results of other tests.

Panel B of Table 5 presents the Hausman test results for the regression models examining the relationship between the corporate governance and performance of the privatized companies. The Hausman test output showed that FE regression analysis was the best model to use for ROA and the Tobin's Q since the p-value was significant. The Hausman test output also shows that the RE regression analysis was suitable for the regression models using cost efficiency and technical efficiency since the p-value was insignificant.

4.5   Data Analysis and Discussion of Results

This section presents the results and discussions as per the objectives of the study. A combination of *t*-tests and regression analysis was used in testing the four hypothesis of this study.

4.5.1   Privatization and Financial Performance of Privatized Companies

This subsection addresses the first objective which aimed to evaluate the influence of privatization on financial performance of privatized firm. Two approaches were used. The first approach compared the mean ROA of privatized companies before and after privatization while the second compared the performance after privatization between the privatized and other listed companies. The findings are discussed in the following subsections.

4.5.1.1 The Pre- and Post- Privatization Performance of Companies in Kenya

Table 6 presents the results comparing ROA before and after privatization and also the results of a paired *t*- test.

Table 6: The Results of the Paired t-test of ROA Before and After Privatization

Comparison of ROA before and after privatization						
Variable	Obs	Mean	Std Err	Std. dev	Min	Max.
ROA before privatization(t-3)	24	0.0508	.0165	.0889	-.1028	.260
ROA after privatization(t+3)	24	0.0478	.0094	.0463	-.0239	.1451
Difference	24	.0030	.0139	.0684	-.0789	0.1149
Calculated *t*-value = 0.2164			Degrees of freedom = 23			

This study predicted a significant increase in ROA of privatized companies. This was envisaged as privatization was expected to improve firm performance by transferring ownership and governance rights from the state to private investors and corporate boards who then focus more on improving profits and efficiency. However the findings show that the mean ROA before privatization is 5.01 % compared to 4.8 % three years after. A paired *t*- test was used to examine whether there is a significant difference between the pre- and post- privatization performance of privatized companies. The general rule is that a *t* value of more than 2.00 is an indicator of a significant difference. Consequently, the *t*-test value calculated of 0.2164 which implies that

there is no significant difference in ROA between pre- and -post privatization periods. The null hypothesis (1a) that there is no significant difference between the pre- and- post privatization performance of privatized firms in Kenya was therefore accepted.

A decrease in ROA is however observed in privatized firms which contradict several studies which found that profitability increases after privatization (Afeikhena, 2008; Boubakri and Cosset, 1998; Kamaruddin and Abokaresh, 2012). The results are nonetheless consistent with other studies which document a decline in some performance variables following privatization (Dewenter and Malatesta, 2001; Omran 2004; Mwangi, 2013). This could be an indicator that firms chosen for privatization were not necessarily making losses prior to privatization.

The decline ROA in privatized firms could however be traced to huge losses posted by the Kenya Commercial bank (KCB) and Mumias Sugar following privatization. Evidence shows that although the government reduced its shareholding from 60% to 35% in 1998, the KCB posted loss in 1999 and 2000 financial years. According to Bohnstedt (2008) the privatized KCB was still burdened with a large portfolio of non-performing loans from political lending, under utilization of capacity, overstaffing and managerial inefficiency which impacted negatively on financial performance. Bohnstedt (2008) indicates that the turning around of the bank involved reducing staff from 4,000 to 2,000, making changes in top management and investments in technology and staff.

Mumias Sugar Company made its first offer in 2001 reducing the state ownership from 70.6 % to 38.4%. However, the firm posted a loss of 244 million for the 2002/2003 financial year. A task force appointed by the Ministry of Agriculture in 2003 to look into the problems of the industry, indicates that the sugar industry was riddled with corruption, mismanagement political interference, high operating costs, huge debts, managerial inefficiency, government interference, decline in production levels and poor returns, for farmers sub-sector was constrained by low production capacities (IEA, 2005: GoK, 2010). The results support the Property Rights Theory which asserts that firms with large state ownership experience managerial inefficiency, over employment and high operating costs which impacts negatively on performance.

4.5.1.2 Comparison of Financial Performance between Privatized and Other Listed Companies

This subsection presents results and the discussion addressing objective 1(b) of this study. Since performance is measured using 4(four) performance indicators, hypothesis (1b) involves four paired *t*-tests comparing ROA, the Tobin's Q, cost efficiency and technical efficiency between privatized and other listed companies. The trend of the four performance variables for the period 2007-2013 is also presented in a graph form under each sub section to enhance comparison in performance between privatized and other listed companies at the NSE.

Comparison of ROA between Privatized and Other Listed Companies

The following Table (7) presents a comparison of ROA between privatized and other companies listed at the NSE drawn from all subsectors of the economy**.** The table also presents the results of the paired *t*-tests examining whether there is a significant difference between privatized and other listed companies

Table 7: Comparison of ROA between Privatized and Other Listed Companies

Year	2007	2008	2009	2010	2011	2012	2013
Variable	**Obs**	**Mean**	**Std Err.**	**Std. dev**	**Variable**	**Obs**	**Mean**
Privatized Companies	0.0663	0.0683	0.0403	0.0558	0.0542	0.0495	0.0268
Other Publicly Listed Companies	0.0694	0.0757	0.0766	0.059	0.0074	0.0366	0.0574

Paired t-test for ROA			
Variable	**Obs**	**Mean**	**Std Err.**	**Std. dev**
ROA-Privatized Companies	56	0.0516	0.0072	0.0541
ROA- Other Publicly listed Companies	56	0.0545	0.116	0.0869
Difference		-0.0028	.0137	.1030
Calculated *t* = - 0.2106	Degrees of freedom = 55		

The results show that the overall mean of ROA in privatized firms was 5.2% compared to 5.5% in other publicly listed firms. The results also show that ROA in privatized companies ranges

from a low of 0.027 in 2013 to a high of 0.068 in 2008 while in other listed firms it ranges from a low of 0.007 in 2011 to a high of 0.076 in 2008. The results also show that other publicly listed companies recorded higher rates of ROA than privatized companies except in year 2011.

A paired t–test to examined whether there was a significant difference between ROA of privatized companies and that of other publicly listed companies yielded a value of 0.2106. This means that there was no significant difference between ROA of privatized and other publicly listed companies in Kenya. However it is notable that mean of ROA in both privatized and other listed companies at the NSE were lower than a mean of 6.18% reported by Boubakri and Cosset (1999) in privatized companies drawn from five African countries. It is also lower than the 7.17% documented by Sun and Tong (2002) in privatized firms in Malaysia and 6.71 % reported by Rashid et al. (2010) in Pakistan.

An insignificant difference may imply that private investors and new corporate boards may have enhanced managerial monitoring, oriented firms to profit objectives and improved decision making which enabled the privatized firms to perform closely to other publicly listed companies. It may also imply that the performance of both privatized and other listed companies is influenced by similar factors which made their mean performance to be close. A graphical comparison of ROA between privatized and other publicly listed companies presented in figure 2 below however reveals some wide performance variations in some time periods.

Figure 2: Comparison of ROA between Privatized and Other Listed Companies
Source: Author's Compilation

The figure 2 above shows that ROA in privatized company's first rises up to 2008 and then a takes a down ward trend from 2010 to 2013 while in other listed companies, ROA rises from 2007 to 2009 and then decreases to a low of 0.0074 in year 2011 before it starts to increase again.

However, noting that performance has a general declining trend, an insignificant difference may imply that the performance of both privatized and other publicly listed firms may have been adversely influenced by common local and global economic factors. For instance, the trend of ROA in privatized firm shows a rise up to 2008 and then a down ward trend from 2010 to 2013 while in other listed companies, it rises from 2007 to 2009 and then a declines to its lowest in year 2011.The decline could also be associated with post election violence which affected the whole economy. The declining trend in performance was also linked to the effects from instability in global markets that affected the economy. The unstable exchange rates, insecurity, drought and rise in petroleum prices affected the business enterprises negatively (GoK, 2011).

Comparison of the Market Value between Privatized and Other Listed Companies

The following Table 8 presents a comparison of Tobin's Q between privatized and other listed companies listed at the NSE drawn from all subsectors of the economy.

Table 8: Comparison of Tobin's between Privatized and Other Listed Companies

Year	2007	2008	2009	2010	2011	2012	2013
Privatized Companies	0.5320	0.6839	0.4147	0.6096	0.3427	0.2880	0.4252
Other listed Companies	1.1185	1.026	0.6917	0.8566	0.6497	0.6631	0.7746
Paired t-test for the Tobin's Q							

Variable	Obs	Mean	Std Err.	Std. dev
Tobin's Q - Privatized Companies	56	.4708	.0656	.4915
Tobin's Q -Other listed Companies	56	.8257	.1500	1.122
Difference		-.3549	.1758	1.315
Calculated *t*-value = -2.0185	Degrees of freedom = 55			

The results of Table 8 above show that the average Tobin's Q of privatized companies was 48% compared to 83% in other publicly listed firms. This is an indicator that it would cost more to replace the currents assets of both privatized and other listed companies. The Tobin's Q of privatized ranges from a high of 68% in 2008 to a low of 29% in year 2012 while that of other publicly listed companies range from a high of 112% in 2007 to a low of 65% in 2011.

A paired *t*- test to examine whether there was a significant difference between the means of Tobin's Q of privatized and other publicly listed companies yielded a *t* value of -2.0185. This implied that there was a significant difference in market value between privatized and other publicly listed firms. This is an indicator that privatized firms were valued lesser than other publicly listed companies. It is also an indicator that investors' opinion and confidence was higher in other listed companies. The Tobin's Q of privatized companies was also lower than 82.9% observed by Mrad and Hallara (2012) privatized French companies.

Figure 3 below presents the graphical comparison of the market value of privatized companies compared to that of other publicly listed companies for the period 2007-2013.
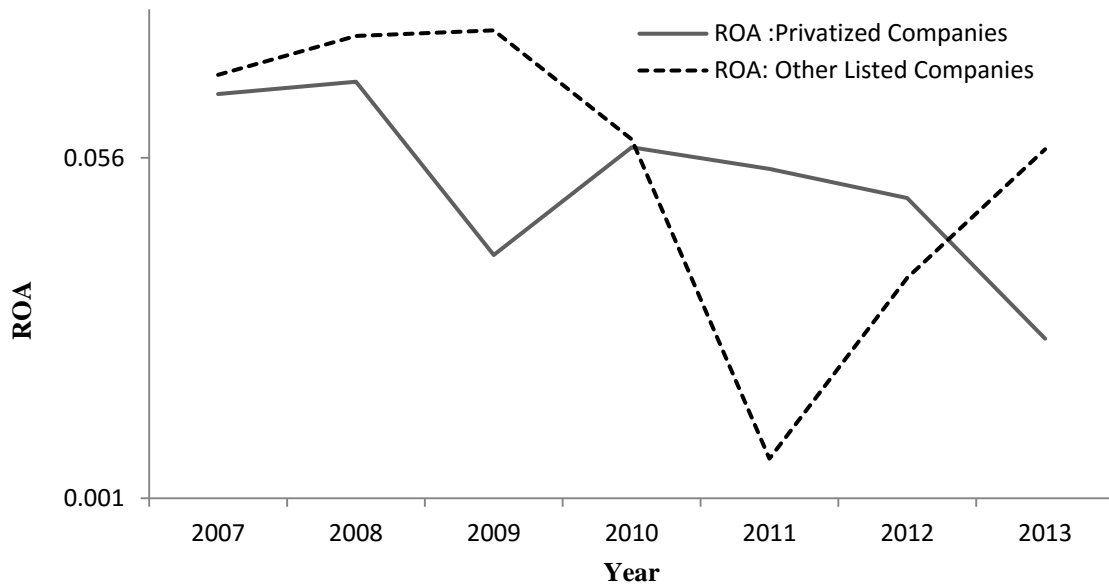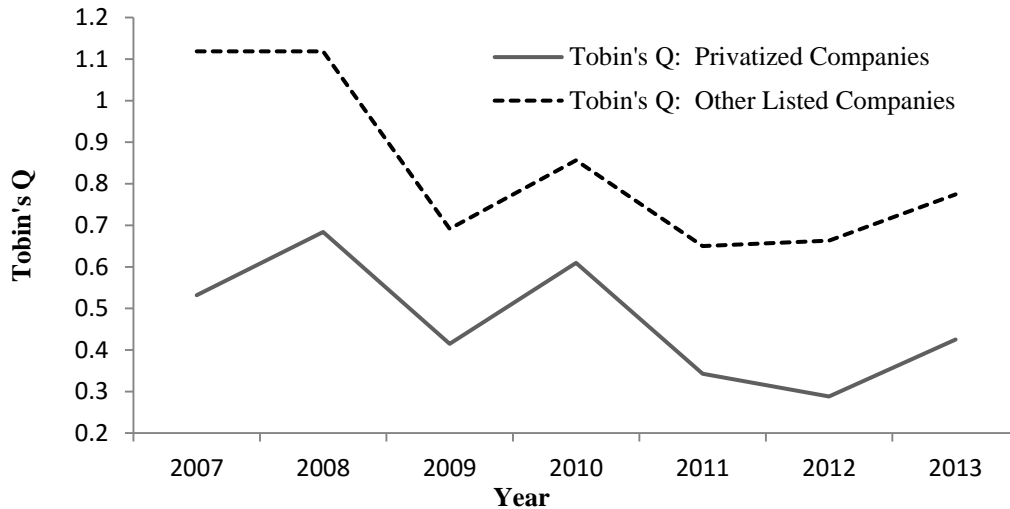
Figure 3: Comparison the Tobin's Q between Privatized and Other Listed Companies

Source: Author's Compilation

The figure 3 above shows that the Tobin's Q of privatized ranges from a high of 68% in 2008 to a low of 29% in year 2012 while that of other publicly listed companies ranges from a high of 112% in 2007 to a low of 65% in 2011. The figure also shows that Tobin's Q of privatized companies remained lower than that of other listed companies throughout the period. A lower Tobins Q confirmed that privatized firms were valued lesser than other publicly listed companies. It also implies that the investor confidence in privatized companies has remained lower throughout the period (2007-2008).

The general trend of the Tobin's Q shows a declining trend in both groups of companies. The declining investor confidence could be attributed to the lower and declining returns as evidenced by the ROA of privatized companies. The lower Tobin's Q in privatized companies could also mean that the market was reacting to low institutional ownership and representation in corporate boards of privatized companies. This is an indicator that privatized companies had lesser capacity to attract skill and expertise from private investors.

Comparison of the Cost Efficiency between Privatized and Other Listed Companies

The Table 9 presents a comparison of cost efficiency between privatized and other listed companies listed at the NSE drawn from all subsectors of the Kenyan economy.

Table 9: The Cost Efficiency of Privatized Compared to Other Publicly Listed Companies

Year	2007	2008	2009	2010	2011	2012	2013
Privatized Companies	0.1000	0.1001	0.1002	0.1006	0.1015	0.1139	0.1104
Other Publicly listed Companies	0.2849	0.2990	0.3144	0.3313	0.3500	0.3708	0.3938

Paired t-tests for The Cost Efficiency

Variable	Obs	Mean	Std Err.	Std. dev
Cost Efficiency- Privatized Companies	56	.1024	.00047	.0035
Cost Efficiency - Other listed Companies	56	.3348	.0297	.2225
Difference		-.2324	.0296	.2219

Calculated t-value = -7.8370	Degrees of freedom =55

The results show that the overall mean cost efficiency in privatized firms was 10% compared to 34% in other listed companies. This implies that privatized costs could cut costs by 90% while the other listed companies could reduce costs by 66% produce same outputs. The mean cost efficiency in privatized firms ranges from 10% in 2007 to 11% and compared to 28% in 2007 to 39% in other listed companies. The results show that both privatized and other publicly listed firms were not operating on the efficient frontier although performance was increasing gradually. These results are similar to those documented in other studies which found that cost inefficiency existed in corporate entities in Kenya (Kinara, 2014; Sifunjo et al., 2014). A paired t- test yielded a t-value of -7.8370 which implies that there was a significant difference in the means of cost efficiency between privatized and other listed firms.

Figure 4 below is a graphical representation of technical efficiency of privatized firms compared to other publicly listed companies in Kenya for the period 2007 to 2013.

Figure 4: Comparison of the Cost Efficiency between Privatized and Other Listed Companies

Source: Author's Compilation

The figure 4 shows that the cost efficiency of both privatized and other publicly listed firms was increasing gradually which means that both groups of companies were trying to reduce input costs. However, the cost efficiency of privatized companies remained lower than that of other listed companies throughout the study period. The lower cost efficiency in privatized companies could arise in firms with high state ownership as they could still be addressing both social and economic objectives. The inefficiency in privatized firms could therefore be attributed to high input costs and technical inability to transform inputs into outputs.

It is also evident that privatized firms were technically inefficient as they were operating at 43% efficiency level resulting into a productivity loss of 57%. The technical inefficiency in privatized firms could be ascribed to low utilization capacity and obsolete technologies in the firms that particularly made losses during the period. This is supported by reports of various sectors which have continued to post losses. A report on the sugar industry indicated that the sub-sector experienced managerial inefficiency, low utilization capacity and obsolete technologies (GoK, 2010). The Kenya Airways also posted losses in year 2013 and the company attributed the loss to factors such as fuel prices, terrorism and exchange rates. However, financial analysts attribute

the loss to poor investment decisions by management and partnerships which were no longer productive.

Comparison of the Technical Efficiency between Privatized and Other Listed Companies

The Table 10 below   presents a comparison of technical efficiency between privatized and Other Listed Companies listed at the NSE.

Table 10: The Technical Efficiency of Privatized and Other Listed Companies

Year	2007	2008	2009	2010	2011	2012	2013
Privatized Companies	0.3946	0.4004	0.4061	0.4119	0.4178	0.4237	0.4296
Other Listed Companies	0.5585	0.5537	0.5488	0.5439	0.5391	0.5341	0.5292
Paired t-tests for Cost Efficiency							
Variable				**Obs**	**Mean**	**Std Err.**	**Std. dev**
Technical Efficiency - Privatized Companies				56	.4249	.0408	.3054
Technical Efficiency - Other listed Companies				56	.5339	.0207	.1550
Difference					-.1189	.0523	.3913
Calculated *t*-value = - 2.2741				Degrees of freedom = 55			

The results show that the mean technical efficiency in privatized companies was 43% compared to 55% in other listed companies. This level of technical efficiency in both privatized and other listed companies was low compared to 62.9% documented by Kamaruddin and Abokaresh (2012) in Libyan privatized firms. A paired *t*-test yielded a value of -2.2741 which implied that there was a significant difference in technical efficiency between privatized and other listed firms.

As the efficiency in privatized companies was lower, it can be argued that privatized companies were not operating as efficiently as other listed companies. This implied that privatized companies had not attracted skills and expertise from private investors to match those of other listed companies. The difference could also mean that privatized companies were still experiencing agency problems associated with firms that have large government ownership as

some companies could still be addressing both welfare and economic goals which could impact negatively on technical efficiency.

The following Figure 5 presents the trend of the technical efficiency of privatized companies compared to that of other listed companies at the NSE for the period 2007-2013.
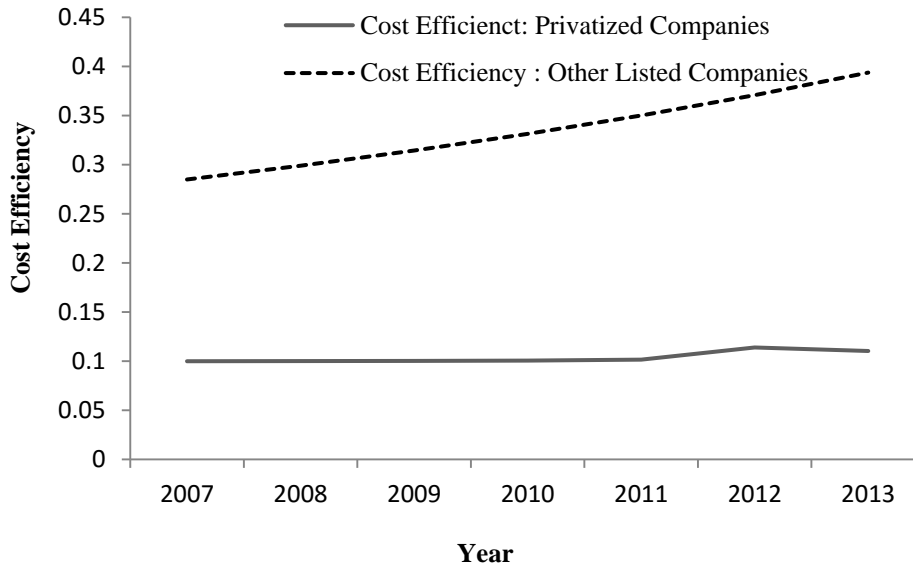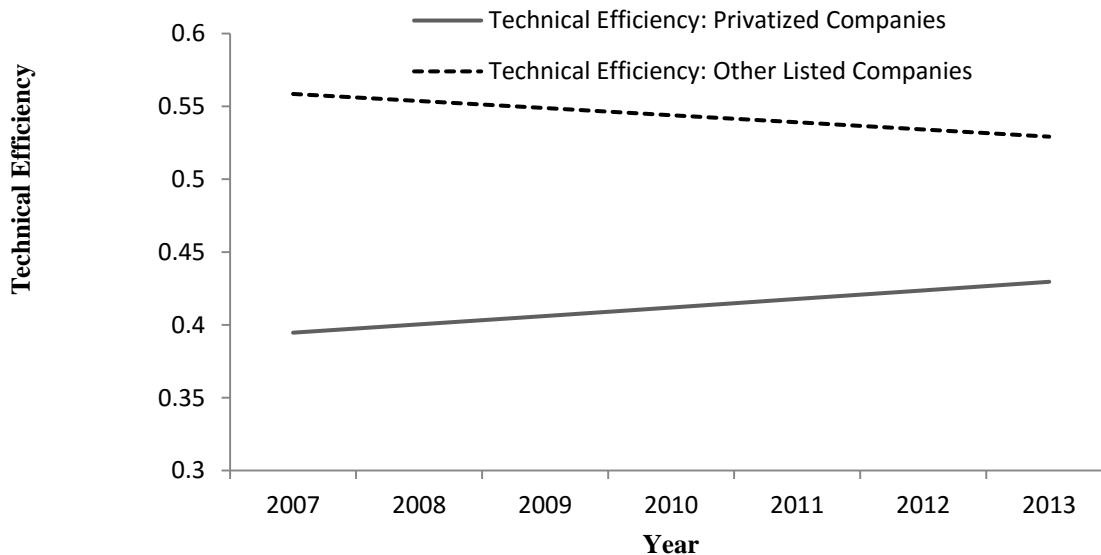

Figure 5: Comparison of the Technical Efficiency between Privatized and Other Listed Companies

Source: Author's Compilation

The figure shows that the technical efficiency for privatized firms rises from 39% in 2007 to 43% in 2013 while it declines from 56% to 53% in other listed firms. The slight upward trend in technical efficiency of privatized companies is an indicator that the firms were slowly closing the efficiency gap between privatized and other publicly listed companies. This is consistent with studies that found that efficiency increased following privatization (Abdullahi, et al. 2012; Kamaruddin and Abokaresh, 2012; Okten and Arin, 2006).

An improvement of the technical efficiency in privatized firms was predictable as they are expected to employ their human, financial and technical resources more efficiently. The efficiency gains could also be ascribed to reforms associated with privatization programs such as changes in managerial positions, employment and reduction of subsidies which exposes them to greater competition.

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4.5.2 Ownership Structure and Financial Performance of Privatized Companies

Table 11 below presents the results of four regression models used to address objective two which examines the relationship between ownership structure and performance indicators. The findings presented include: the robust standard error estimates; the coefficient of determination R^2; the F-value and *t*-value of the regression analysis. Four regression tests were done and the hypothesis was interpreted using (a) ROA (b) the Tobin's Q (c) cost efficiency and (d) technical efficiency.

Table 11: The Influence of Ownership Structures on Financial Performance of Privatized Companies

Panel A : The Influence of Ownership Structure on ROA of Privatized Companies

ROA	Coef	Robust Std. Err.	t	Prob. Value
Government	.0212***	.0045	4.73	0.002
Institutional	.0150***	.0048	3.15	0.016
Large individual	.0070	.0049	1.42	0.198
Dispersed	.0206***	.0048	4.30	0.004
Investment	.1670	.1069	1.56	0.162
Firm size (lag1)	. 0059	.0213	-0.28	0.791
leverage	-.3237*	.1513	-2.14	0.070
constant	-1.482	.4386	-3.38	0.012
R^2=0.4342		F= 13620.60	Prob> F = 0.0000	

Panel B: The influence of Ownership Structure on the Tobin's Q of Privatized Companies

Tobin's Q	Coef.	Robust Std. Err.	t	Prob. Value
Government	0.2081**	0.0063	3.28	0.014
Institutional	.0043	.01379	0.31	0.765
large individual	.0405	.03834	1.05	0.327
Dispersed(lag1)	.0106	.0105	1.01	0.347
Investment(lag1)	1.785	1.0224	1.75	0.124
Leverage	-2.188*	1.1504	-1.90	0.099
constant	.4081	.9778	0.42	0.689
R^2=0.3154		F = 122.94	Prob> F = 0.0000	

Panel C: The influence of Ownership Structure on Cost Efficiency of Privatized Companies

Cost efficiency	Coef.	Robust Std. Err.	t	Prob. Value
Government	-.0031**	.0012	-2.69	0.031
Institutional	-.0009	.0007	-1.36	0.216
large individual	. 0009*	.0004	2.09	0.075
Dispersed	-.0012**	.0009	-2.69	0.031
leverage(lag1)	.0278***	.0075	3.66	0.008
Firm size(lag1)	-.0148***	.0004	-3.70	0.008
constant	.3160***	.0845	3.74	0.007
R^2=0.5501		**F= 311.93**	**Prob> F= 0.0000**	

Panel D: The influence of Ownership Structure on Technical Efficiency of Privatized Companies

Technical Efficiency	Coef.	Robust Std. Err.	t	Prob. Value
Government	.0041	.0024	1.72	0.130
Institutional	0.007**	.0023	2.66	0.033
Large individual	.0096	.0092	1.05	0.329
Dispersed	.0048	.0026	1.84	0.109
Leverage	.0524	.0616	0.85	0.423
Investment	.08173	.1159	0.71	0.503
constant	-.0427	.2211	-0.19	0.852
R^2 =0.0082	**F= 8.00**		**Prob > F = 0.0074**	
The asterisks*,**and *** represent significance levels at 10%,5% and 1% respectively				

4.5.2.1 The influence of Ownership Structure on ROA of Privatized Companies

Panel A of Table 11 above presents the regression results of the influence of ownership structure on the ROA of privatized companies. A Hausman test identified FE as the suitable regression model to analyze the effects of ownership structure on ROA. The FE regression model was used to control the fixed effects of firm individual characteristics which could influence ROA. The model rejected variables that do not vary with time and consequently foreign ownership was eliminated as most of the values were not varying.

The procedure in Stata included a robust standard error option to control for heteroskedasticity and contemporaneous correlation which may cause standard errors to be biased. The Stata

procedure automatically generates the F value which measured the overall fit of the model. The computed F value was 13620.60 which was significant at 1% significance level. This implies that the joint effect of the ownership variables on ROA was significant, although coefficients of some ownership variables were insignificant. The null hypothesis (2a) that ownership structure has no significant influence on ROA was therefore rejected. The R^2 was 0.4342 which means that the regression model explained 43.42 % of the variance in the ROA. The remaining variation of 56.58% was unexplained and could be attributed to other factors not included in the model.

There were individual ownership structure variables that were found to statistically influence financial performance of privatized companies. Government ownership had a positive and significant influence on ROA at 1% levels of significance. The positive and significant finding contradicts the Property Rights Theory which asserts that state ownership is detrimental to firm performance. The results however support the Agency Theory which recognizes large shareholders to have the potential to improve firm performance as they are more effective in monitoring managers. This also implies that when the government shareholdings decrease and private investors have rights to an income and decision making of a firm, the performance of a firm increases. The findings support previous empirical studies which documented a positive and significant relationship between large government ownership and ROA (Trien and Chizema, 2011; Tian and Estrin, 2008).

A positive significant influence was an indicator that government ownership is crucial in a system where a large number of shareholders is dispersed. The government retained 41.1% ownership which means that legally, it is a major decision maker and therefore has incentives to influence financial performance. From the Agency Theory perspective, government as a large shareholder is more effective than dispersed shareholders in monitoring managers. It is also more effective than other private investors who also hold relatively smaller sizes of ownership. It was also notable that shares owned by the government are held by the Treasury which is expected to exercise its powers as shareholder in monitoring and exerting pressure on managers to perform.

It is also likely that the presence of government as an owner in a company decreases the likelihood of expropriation of corporate wealth by managers and other investors. The sale of

majority government ownership also removes most of the parastatals from the ambit of the State Corporations Act. This could have redefined the objectives of the companies and served to communicate the expectations of government in a privatized company. The reduction of subsidies by the government of such firms following privatization may also put pressure on managers to utilize the human, financial and physical assets more efficiently.

The institutional shareholders had a positive and significant relationship with ROA at 1% level of significance. A strong significant relationship was surprising as the institutional investors consisting of banks, mutual funds, insurance firms and the pension funds hold a mean of 10% ownership. These investors are however considered to more focused on profits as their cliental demand profits and consequently have incentives to enhance efficiency and profitability in firms where they invest. The findings of this study however render empirical strength to support the Resources Based and the Stakeholder theories. The institutional investors were considered to have brought in managerial, technological and financial resources crucial to firm performance. The results are consistent with other studies which documented a positive relationship between institutional shareholders and firm performance (Kiruri 2013; Mishari et al., 2012; Ongore et al. 2011; Uwuigbe and Olusanmi, 2012). The results also support the Property Rights Theory which views institutional investors to be more focused in making profits and therefore puts pressure on the managers to generate profits and increase the value of their investment.

Large individual shareholders had an insignificant influence on ROA. This is consistent with the prediction of this study and with the agency theory which asserts that individual shareholders have no capacity to monitor managers or influence decision making in corporate boards. Large individuals hold a mean ownership of 1% in privatized firms which is considered insufficient to monitor managers or influence decision making by corporate boards. According to Maher and Anderson (1999), an individual should have a substantial amount of ownership of about 5% to have any impact in monitoring managers and consequently firm performance.

Surprisingly, dispersed shareholders had a positive and significant impact on ROA at 1% levels of significance. The findings contradict the Agency Theory which asserts that diffuse shareholders lack capacity to collectively monitor managers. This argument, however fails to

recognize that dispersed shareholders demand dividends from former SOEs and therefore put pressure on managers to perform. The dispersed shareholders may influence decision making through the AGMs where they vote on key issues such as: election of directors, ratification of the auditor reports, approval of dividend and changes in by laws. They are also likely to protect themselves by selling their shares which puts pressure on managers to control capital flight. It can be argued that greater diffuseness in ownership conveys compensating advantages if the shareholders can influence decisions that affect their investments. The findings are consistent with those of Ongore et al. (2011) who found a significant and positive relationship between dispersed shareholders and firm performance in listed companies in Kenya.

The control variables included in this regression model were capital investment, firm size, and leverage. Capital investment had an insignificant impact on ROA which contrasts with the conventional view that investment in fixed assets increases prospective investment opportunities and associated with productivity. The insignificant results may be attributed to the small percentage of investment by privatized firms. The firm size has a negative and insignificant relationship with ROA. The results contradict the widely held view that large firms exploit economies of scale to hire more skilled managers and adopt new technologies which could improve performance (Himmelberg et al., 1999). However, some reports indicate that some privatized firms experience managerial inefficiencies, corruption, overstaffing and political interference (GoK, 2010).

The insignificant results may imply that the benefits of the large size were cancelled out by the managerial problems in privatized firms. Leverage had a negative and significant relationship with ROA at 10% significance level. The results contradict the Agency Theory which views debt as a tool to enhance monitoring by lending institutions (Jensen and Meckling, 1976). The results may be attributed to passiveness of the role of lending institutions which is not clearly specified in corporate governance guidelines. The disciplinary effects associated with leverage may also be cancelled out in privatized firms as they may experience increasing costs of borrowing associated with the money markets.

4.5.2.2   The Influence of Ownership Structure on the Tobin's Q of Privatized Companies

Panel B of Table 11 presents results of the regression model examining the relationship between the Tobin's Q and the ownership structure of privatized firms. The FE regression model was used to controls fixed firm individual characteristics which could influence the Tobin's Q. The model included a robust standard error option to controls for heteroskedasticity and contemporaneous correlation which may cause the results to be biased. Consequently, foreign ownership was automatically eliminated as most of the values were not varying with time. The model was significant when the dispersed ownership and investment were lagged once. This is an indicator that the past values of dispersed ownership and investment influenced the market value of privatized firms.

The computed F value was 122.94 and significant at 1% level of significance. This indicates that the joint effect of the ownership variables on Tobin's Q was significant, although the coefficient of some variables were insignificant. The null hypothesis (2b) that ownership structure has no significant influence on the Tobin's Q was therefore rejected. The R^2 statistic was 0.3154, which means that the regression model explained 31.54% of the variance in the Tobin's Q. The 68.46% of the variation is unexplained and could be attributed to other factors. Firm size was automatically dropped from the regression model due to the suspected problem of multi-collinearity. Firm size measured by total assets may be correlated with other variables such as investment and leverage as they include firm size in the denominator.

The *t*- test on individual ownership variables shows that government ownership has a positive and significant relationship with the Tobin's Q at 5% level. The results suggest that the government enhanced investors' confidence in privatized firms. This is inconsistent with the Property Rights Theory which asserts that state ownership impacts negatively on firm performance due to focus on multiple goals and also the wide separation between ownership and control (Jensen and Meckling, 1976). The finding is however consistent with empirical studies which document positive relationship between high state ownership and firm value (Ang and Ding, 2006; Wei, et al., 2005; Tian and Estrin, 2008). The results in reference to privatized firms imply that the presence of government increases the investors' confidence.

From an Agency Theory perspective, the government has the capacity to monitor managers more effectively in firms with large size of disbursed shareholders. The government ownership may give an assurance that shareholders investment will be protected from expropriation by managers and private investors. The state ownership may also lower uncertainty for investors as the government can use a wide range of measures to protect investors and reduce the likelihood of corporate failure. Consequently, the investors expect the government to intervene in the privatized firms to prevent any deficiencies by managers and private investors. The investors may also value state ownership positively as resources are likely to be used more efficiently if the state is a partner among other investors.

Institutional investors had an insignificant relationship with Tobin's Q. The results contradicts the Agency Theory which views, institutional investors as effective in improving performance due to their focus on profits objectives and effectiveness in monitoring managers. The results also contradict the Resource Based Theory which considers local institutional investors to be endowed with managerial and technological expertise to enhance the market value. These results were also inconsistent with others which documented significant and positive relationship between institutional ownership and firm value (Agyei and Owusu, 2014; Mishari et al., 2012). The insignificant results could however be attributed to the small size of institutional ownership as they hold only 10 % shares. The results suggest that the size of ownership is insufficient to influence the investors' confidence and consequently the market value of privatized firms.

Large individual investors have an insignificant influence on the Tobin's Q. This is consistent with the Agency Theory which perceives individual shareholders to lack capacity to enhance firm value due to the small size of their investment. Individual investors hold only 1% ownership in privatized firms which is considered ineffective to influence market value of firm. The dispersed shareholders also have an insignificant impact on Tobin's Q. The findings confirm the Agency Theory which asserts that diffuse shareholders lack capacity to collectively monitor managers and therefore may not influence the market value.

Among the control variables, investment have an insignificant relationship with the Tobin's which may be attributed to the low level of investment in privatized firms. The average

investment in privatized firms was Kenya is 6.63% compared to 13% reported by Hennessy and Whited (2005). The small size of investment may be insufficient to impact on performance and consequently the market value of privatized firms. Leverage has a negative relationship with the Tobin's Q of privatized firms which was significant at 10 % level. Leverage as a governance mechanism is expected to enhance monitoring by banks. The findings may imply the level of debt obligations with privatized companies may not have put pressure on the managers to enhance performance. It may also imply that the investors viewed debt negatively as firms incur relatively higher costs of debt following the withdrawal of guarantees by the government after privatization.

4.5.2.3 The Influence of Ownership Structure on Cost Efficiency of Privatized Companies

Panel C of Table 11 presents the regression test results of the relationship between cost efficiency and ownership structure of privatized firms. The FE regression model with a robust standard error option was used to control firm fixed effects which could be sources of heteroskedasticity and contemporaneous correlation which could influence cost efficiency. The FE model also eliminated foreign ownership as most of the values were not varying with time. Investment was also dropped from the model due to a suspected problem of multi-collinearity which may arise due to measurement issues. Investment, leverage and firm size may be correlated as the denominator of leverage and investment ratios is total assets which are also an indicator of firm size.

The computed F value is 311.91 and is significant at 1% level. This implies that the joint effect of the ownership structure variables on the cost efficiency is significant, although the coefficient of some ownership variables is insignificant. The null hypothesis (2c) that ownership structure had no significant influence on cost efficiency was rejected. The R^2 statistic is 0.5501 which indicates that the model explained 55.01 % of the variance in the cost efficiency. The remaining variation of 44.09% was attributed to other factors not included in the model.

There were individual ownership structure variables which were found to statistically influence financial performance of privatized companies in Kenya. Government ownership had a negative and significant influence on cost efficiency at 5% levels of significance. The results suggests that

when a government privatizes firms and retains large ownership, the agency conflicts between managers and shareholders may persist as top managers without any ownership of the firm are likely to be appointed by the government. The conflicts of interest may result into cost inefficiencies and expropriation of corporate wealth.

The findings support the Property Rights and the Agency theories which associate state ownership with inefficiency. The findings were also supported by studies which found that the state ownership can influence cost efficiency negatively (Zelenyuk and Zheka, 2006; Yiwei et al., 2011). The inefficiency could also be attributed to the government focus on both welfare and economic objectives particularly where it has retained large size of ownership. This makes some privatized firms employ an input mix that does not match costs. It is evident that the government has retained over 50% ownership in some privatized firms. These firms still operate under the State Corporations Act (CAP 446) and may be expected to address both welfare and economic objectives such as employment or production of public goods at subsidized costs. Some reports also point out that some privatized firms were still characterized by mismanagement, low capacity utilization and use of obsolete technologies which could lead to increased operational costs (GoK, 2010).

The local institutional shareholders had an insignificant relationship with cost efficiency. This is contrary to the prediction of the Agency Theory, which views institutional investors as having the capacity to reduce inefficiency in corporate entities. However the results could be attributed to a relatively small ownership in the individual firms which averages at 10%. The ownership is also held by numerous institutions which make it more difficult for the investors to influence the firm managers to reduce operational costs. The results may also suggest that although institutional shareholders may exert substantial pressure on managers, the costs of monitoring may cancel out the benefits as they hold only a small size of ownership. Under such circumstances, institutional investors may therefore take a passive role in monitoring managers leading to insignificant influence on cost management in privatized companies. These results are consistent with studies which found that institutional ownership has no significant influence on cost efficiency (Pi and Timme, 1993).

It is notable that the large individual shareholders had a positive and significant influence on cost efficiency at 10% level. This is inconsistent with the Agency Theory which views individual shareholders to have no capacity to monitor managers due to their small size of their shareholding. Individual investors held only 1% ownership in privatized firms. However a positive relationship could arise as large individual investors may interact closely with managers as they are among the top ten shareholders. They could also have some special decision making rights in firms where they have a large investment.

The individual investors are also vocal in decisions that influence their investments as they are also likely to bear the consequences of inefficiency by managers. Dispersed shareholders had a negative and significant impact on cost efficiency at 5% level. A negative coefficient was an indicator that the firms were likely to experience agency problems in a system with a large size of dispersed shareholders. The results were also consistent with the prediction of the Agency Theory which considers individual shareholders to be too widely dispersed to have any capacity to influence performance. This finding was inconsistent with studies which found that individual shareholders influence firm financial performance positively (Ongore et al., 2011).

Among the control variables, leverage had a positive and significant influence on cost efficiency at 1% significance level. This is consistent with the Agency Theory which recognizes debt as a monitoring mechanism by lending institutions to ensure that managers operate efficiently to repay debt obligations (Jensen and Meckling, 1976). The results may imply that banks were pressurizing managers of privatized firms to utilize corporate resources more effectively in order to meet their debt obligations. Firm size has a negative and significant relationship with cost efficiency at 1% level. This suggested that privatized firms had not taken advantage of their large size firms to exploit economies of scale and achieve higher efficiency. This is evident as most of the privatized firms have not attracted strategic partners who are more likely to bring in technology and expertise required to reduce costs.

4.5.2.4 The Influence of Ownership Structure on Technical Efficiency of Privatized Companies

Panel D of Table 11 presents the regression results of the relationship between ownership structure and technical efficiency of privatized firms. The Hausman test indicated that an FE regression model was suitable to analyze the relationships among the variables. The FE model included a robust standard error option to control the fixed individual firm characteristics which could cause heteroskedasticity and cross sectional dependence of errors and consequently impact on the technical efficiency. Foreign institutional ownership was eliminated as the values were not varying with time.

The regression model used eliminated variables that may suffer from multi-collineallity. Firm size was also eliminated due to suspected problem of multi-collineality. Firm size measured by total assets may be correlated with other control variables such as investment and leverage as their ratios include firm size (total assets) as the denominator. The computed F value was 8.00 and is significant at 1% level. This means that the joint effect of the ownership structure variables on technical efficiency was significant. The null hypothesis (2d) that ownership structure has no significant influence on cost efficiency was therefore rejected. The coefficient of determination R^2 is 0.0082, implying that the regression model explained only 0.08% of the variance in the technical efficiency. This implies that the explanatory power of this model was very weak. This is evident as only one ownership variable had a significant influence on the technical efficiency. It is therefore likely that there were other factors other than those conceptualized in this study which influenced technical efficiency.

Some individual ownership structures were found to statistically influence financial performance of privatized companies. Government ownership had an insignificant influence on technical efficiency. The findings were inconsistent with the Property Rights Theory which asserts that government ownership influences firm efficiency negatively. Several studies also document negative relationship between state ownership and technical efficiency (Lin et al., 2009; Zelenyuk and Zheka, 2006; Ochi and Yosra, 2012; Yiwei et al., 2011). The results suggest that the sale of government ownership may not be the only defining factor influencing firm technical efficiency. Leibenstein (1966) ascribes inefficiency to insufficient internal and external pressure and incentives on the managers to reduce costs.

The insignificant results could be attributed to the government's focus on both economic and welfare objectives which may cancel any benefit associated with privatization. It is evident in Kenya that the government still owns over 50% ownership in some companies. Such companies still operate under that the State Corporations Act (CAP 446) and are expected to address both economic and welfare objectives which may include employment and production of public goods at subsidized costs. From the perspective of the Property Rights Theory, firms with large state ownership may still be subject to political interference and lack sufficient incentives for managers to perform.

The local institutional shareholders had a positive and significant influence on technical efficiency at 5% level. The findings render support to the Resource Based Theory and the Stakeholder Theory implying that institutions may have brought in technical expertise, financial resources and greater access to new markets which may increase production. The institutional investors comprise banks, pension and mutual funds which may stimulate technical efficiency in firms formally owned by the state. The results were consistent with empirical studies which found a positive and significant relationship between institutional investors and technical efficiency (Ravi and Hovey, 2013; Su and Dai, 2012).

The large individual shareholders have an insignificant impact on technical efficiency which is consistent with the Agency Theory that considers individuals to have no capacity to influence performance due to the small size of ownership. Large individual shareholders own only 1% shares in privatized firms which is too low to have any impact on firm performance. The individual investors are largely venture investors and may not have technical and industry expertise required to stimulate the technical efficiency. The dispersed shareholders also had an insignificant influence on technical efficiency. This is expected as individual investors may have no avenues to interact with firms and consequently influence technical efficiency. The insignificant results support the Agency Theory which views dispersed shareholders to be too scattered to influence firm performance.

Among the control variables, leverage had an insignificant relationship to technical efficiency. This implies that although banks may put pressure on the managers to perform, they may not

have the industry expertise to influence technical efficiency. The insignificant results may imply that leverage alone may not be a key driver of technical efficiency. Some authors also indicate that technical efficiency is driven by technology and best practices in production (Leibenstein, 1966). Capital investment had an insignificant influence on technical efficiency. This contradicts conventional view that expenditure in fixed assets increases efficiency, production capacity and long term growth in a firm (Smith and Watts, 1992). This insignificant finding could however be attributed to the low percentage of investment in privatized firms.

4.5.3   Corporate Governance and Financial Performance of Privatized Companies

This subsection addresses the third objective of the study which aims to examine the relationship between corporate governance and financial performance. There are 4(four) performance indicators, consequently four regression tests were done and the hypothesis was interpreted using (a) ROA (b) the Tobin's Q (c) cost efficiency (d) technical efficiency. The Table 12 below presents the coefficients of individual variables, robust standard error estimates; the coefficient of determination, R^2; F-statistics and t-statistic of the regression analysis.

Table 12: The Influence of Corporate Governance on Financial Performance

Panel A: The Influence of Corporate Governance on the ROA of Privatized Companies				
ROA	**Coef.**	**Robust Std. Err.**	**t**	**Prob. Value**
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
R^2 =0.4164		**F=17.21**	**Prob> F = 0.0007**	

Panel B : The Influence of Corporate Governance on the Tobin's Q of Privatized Companies

Tobin's Q	Coef	Robust Std. Err.	t	Prob. Value
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
-cons	.1.3689	.7733	1.77	0.120
R^2 =0.3024		F =81.67	Prob> F = 0.0000	

Panel C: The Influence of Corporate Governance on Cost Efficiency of Privatized Companies

CEFF	Coef.	Robust Std. Err.	z	Prob. Value
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
R^2 =0.1238		χ^2 = 26.39	Prob> χ^2 = 0.0001	

Panel D: The influence of Corporate Governance on the Technical Efficiency of Privatized Companies

TEFF	Coef.	Robust Std. Err.	z	Prob. Value
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
R^2 =0.8740		χ^2 = 447.64	Prob> χ^2 = 0.0000	
The asterisks *, **and *** represent significance level at 10%, 5% and 1% respectively.				

4.5.3.1 The Influence of Corporate Governance on ROA of Privatized Companies

Panel A of Table 12 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 null hypothesis (3a) that corporate governance has no significant influence on ROA of privatized companies was therefore rejected. The coefficient of determination R^2 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 had 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 and Lorsch, 1992; Yermack, 1996). The results are however similar to other studies which found no significant relationship between board size and ROA (Liang and 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 had a positive significant influence on ROA at 1% level. The findings of this study render empirical support to the Resource Based Theory and the Stakeholder 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. This is also consistent with the Stewardship Theory which views managers and directors who are considered as good stewards in use of

corporate resources entrusted to them (Donaldson and Davis, 1994). These results were similar to those of other studies which found that NEDs influence ROA positively (Agyei and Owusu, 2014; Fauzi and Locke, 2012; Liang and Li, 1999).

The women directors had negative and significant relationship with ROA at 10% level. These findings contradict the Stakeholder Theory which advocates for involvement of interest groups in management of corporate entities to improve the decision making process. According to Bilimoria and Wheeler (2000), women executives bring fresh and well-informed views related to market, environment and ethical issues and have an impact on the decision-making process of corporations. The results were similar to other studies which found that female directors lowered ROA (Fauzi and 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 had an insignificant effect on ROA. This contrast with 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. It is of interest that leverage has a negative relationship with ROA at 10% level of significance.

The findings suggest that the lending institutions were not effective in the monitoring of managers. This is possible as most privatized companies operate in different sectors which would render banks and other credit institutions technically ineffective in monitoring their activities. It might also be an indicator that corporate 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 to13% reported by Henessey and Whited (2005) in U.S. The smaller size of investment may therefore be insufficient to modernize technology which could influence performance.

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

Panel B of Table 12 presents the regression results of the influence of corporate governance on Tobin's Q of privatized firms. An FE regression model used controls the fixed firm effects 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.

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 was 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 null hypothesis (3b) that corporate governance has no significant influence on Tobin's Q was rejected. The R^2 is 0.3024 which means that 30.24 % of the variance in the Tobin's Q was explained by the regression model. The remaining 69.76% were attributed to other factors not included in the model.

Among the corporate governance structures, board size has a negative influence on the Tobin's Q at 10% level of significance. These results were consistent with other empirical studies which found a negative relationship between large board size and the Tobin's Q (Yermack, 1996; Haniffa and 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 was 10 members compared to the recommended sizes of 7-8 in some studies (Yermack, 1996; Lipton, and 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 had a positive influence on the Tobin's Q at 5% level of significance. A positive influence suggested 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 with the Agency and the Stakeholder theories which support greater diversity in corporate governance. The Agency Theory suggests that NEDs monitor the opportunistic

behavior of managers, thereby maximizing shareholder wealth. The outside directors were also likely to have enhanced 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 were similar to those of Carter et al. (2003), who found a positive relationship between NEDs and firm value. Interestingly, some more recent studies document a negative relationship between NEDs and firm value (Fauzi and Locke, 2012; Rashid et al., 2010).

The proportion of women directors had an insignificant effect on the Tobin's Q which negates the perception that women bring in additional skills and ethical considerations which may enhance investor confidence. Some studies document positive relationship between women directors and the Tobin's Q (Campbell and Minguez, 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 women directors may lack the relevant managerial and technical expertise to influence the share price and consequently the market value of privatized companies.

Leverage as a control variable had an insignificant impact on the Tobin's Q. This contradicts the Agency Theory which views debts as a managerial monitoring tool (Jensen and 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 had 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 to 13% reported in U.S. corporations by Henessy and Whited (2005).

4.5.3.3 The Influence of Corporate Governance on Cost Efficiency of Privatized Companies
Panel C of Table 12 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 the women directors were lagged implying that past values of board size and women directors could influence the cost efficiency of privatized firms.

The $\chi2$ value computed was 26.39 and is significant at 1% level. The results indicate that the joint effect of the governance variables on cost efficiency is significant, although the coefficients of some individual variables were insignificant. The null hypothesis (3c) that corporate governance has no significant influence on cost efficiency was therefore rejected.   The R^2 was 0.1238 which means that the regression model explained only 12.38 % of the variance in cost efficiency and the remaining variation of 87.62% may be attributed to other factors not included in the regression model.

Among the individual variables, board size had an insignificant influence on cost efficiency which contrast with 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 to increased costs associated with remuneration of large boards, which could cancel benefits arising from a large board. Some authors also indicate that efficiency is influenced 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 had 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 with the Resource Based Theory which indicates that that NEDs bring valuable knowledge to increase efficiency, in addition to enhancing independence in decision making process. This finding supports the Stewardship Theory which views directors as good stewards

who utilize corporate resources entrusted to them to maximize shareholder value. The results were consistent with others which documented significant and positive relationship between NEDs and cost efficiency (Tanna et al., 2009; Agoraki et al., 2009). The women directors have an insignificant relationship with cost efficiency which is inconsistent with studies that found that women directors lowered firm performance (Fauzi and 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 had 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 creditor institutions in standards 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 to day management in corporate entities. Capital investment had positive and insignificant influence on cost efficiency which is inconsistent with the widely held view, that acquisition of additional plants and machinery reduce operational costs. The results are also inconsistent with studies that found significant relationship between capital investment and firm performance (Haniffa and Hudaib, 2006). The insignificant results could be ascribed to the low level of investment found in privatized firms.

4.5.3.4 The Influence of Corporate Governance on Technical Efficiency of Privatized Companies

Panel D of Table 12 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 control heteroscedasticity and contemporaneous correlation which could influence the technical efficiency. The $\chi 2$ value was 447.64 and is significant at 1% level. The results therefore imply that the joint effect of the corporate governance variables on technical efficiency

was significant, although coefficient of some governance variables was insignificant. The null hypothesis (3d) that corporate governance has no significant influence on technical efficiency of privatized firms was rejected. The R^2 is 0.8740 which means that the regression model explained 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. The results were consistent with those of Tanna et al. (2009) who document insignificant relationship between board size and cost efficiency. From an Agency Theory perspective the insignificant results may be attributed to increased costs associated with large boards, which may cancel the benefits of a large board. It may also imply that technical efficiency is influenced by factors other than the size of boards. Leibenstein (1966) indicate that efficiency of a firm is influenced by competition, incentives and pressure on the managers to reduce costs, skilled workforce and technology to transform inputs at minimum costs. 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 had a positive influence on technical efficiency at 10% level of significance. This finding strengthens the Agency Theory which associates NEDs with an increase in technical efficiency as they bring additional technical expertise crucial to firm performance. The results were also consistent with the Stakeholder Theory which recommends involvement of diverse groups in corporate governance to improve the decision making process. The results are also supported by the stewardship theory which views directors as good stewards who efficiently utilize resources entrusted to them to increase performance.

The findings were consistent with studies which found that boards with majority NEDs have a positive and significant influence on efficiency (Bozec and Dıa 2007; Lin et al., 2009; Tanna et al., 2009). The significant results may imply that individuals appointed in corporate boards posses technical skills required to enhance technical efficiency. The proportion of women directors had no significant influence on technical efficiency. The findings were inconsistent with other empirical studies which document positive and significant relationship between

women directors and firm performance using other performance indicators such as ROA and the Tobin's Q (Campbell and 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 had 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. Interestingly, 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 who usually sit in corporate boards and may possess relevant technical and financial skills in the industry. Capital investment had a positive and significant relationship with technical efficiency at 5% levels. Several empirical studies seem to collaborate this finding (Haniffa and Hudaib, 2006). Capital investment was expected to have a positive relationship with technical efficiency due to its potential to influence production capacity of a firm. This relationship was however insignificant when examined with ownership variables (Panel D of Table 11).

4.5.4 Ownership Structure, Corporate Governance and Financial Performance of Privatized Companies

This subsection addresses the fourth objective of the study which examined the combined influence of ownership and corporate governance structures on performance of privatized companies. Four regression tests were done and therefore the hypothesis was interpreted using (a) ROA (b) the Tobin's Q (c) cost efficiency and (d) technical efficiency. The Table 13 below presents the coefficients; robust standard error estimates; the coefficient of determination R^2; F-statistics and t-statistics of the overall regression model.

Table 13: The Influence of Ownership Structure and Corporate Governance on Financial Performance

Panel A: The influence of Ownership Structure, Corporate Governance on ROA of Privatized Companies

ROA	Coef.	Robust Std. Err.	t	Prob. Value
Government (lag1)	.0017*	.0009	1.98	0.088
Institutional (lag1)	.0035	.0021	1.62	0.149
Large individual	.0006	.0044	0.13	0.903
Firm size	-.0406	.0621	-0.65	0.534
Board composition	-1438**	.0507	2.83	0.025
Board size (lag1)	.0101	.0083	1.22	0.262
Gender(lag1)	.0506	.0334	1.51	0.175
constant	-.2841*	-1411	-2.01	0.084
R²= 0.1211		**F=202.13**	**Prob> F = 0.0000**	

Panel B: The influence of Ownership Structure and Corporate Governance on the Tobin's Q of Privatized Companies

TOBIN'S Q	Coef.	Robust Std. Err.	t	Prob. Value
Government	.0142**	.0053	2.69	0.031
Institutional (lag1)	.0167	-0162	1.03	0.338
Large Individual	.0322	.0547	0.59	0.574
Board size(lag1)	.1018	.0885	1.15	0.288
Board composition (lag1)	1.5386**	.6196	2.48	0.042
Gender (lag1)	.6706	.4757	1.41	0.201
Firm size	-.2588	.1869	-1.38	0.209
constant	-2.695	1.6611	-1.62	0.149
R²=0. 2686		**F=151.88**	**Prob> F = 0.0000**	

Panel C: The Influence of Ownership Structure and Corporate Governance on Cost Efficiency of Privatized Companies

CEFF	Coef.	Robust Std. Err.	t	Prob. Value
Government	-.00015***	.0004	-3.71	0.008
Large individual	.0012**	.0005	2.80	0.026
Dispersed shareholders	0011***	.0001	-6.70	0.000
Board composition(lag1)	.0185*	.0079	2.35	0.051
Gender	.02828*	.0119	2.36	0.051
Leverage (lag1)	.0164**	.0059	2.78	0.027
Firm size (lag1)	-.0148***	.0041	-3.52	0.010
constant	.01790***	.0274	6.53	0.000
R²= 0.6469		**F= 80.18**	**Prob> F = 0.0000**	

Panel D: The Influence Of Ownership Structure and Corporate Governance on Technical Efficiency of Privatized Companies

TEFF	Coef.	Robust Std. Err.	t	Prob. Value
Government	-.0036***	.0008	-4.76	0.002
Institutional	.0029***	.0005	5.79	0.001
Large individual	.0034	.0026	1.30	0.234
Board size (lag1)	-.0005	.0023	-0.21	0.838
Board composition	.0287	.0221	1.30	0.235
Gender	.0099	.0365	0.27	0.795
Firm size (lag1)	-.0148**	.0062	-2.37	0.050
constant	.5078***	.0446	11.39	0.000
R^2=0. 4430		F= 576.48	Prob> F = 0.0000	
The asterisks *, ** and *** represent significance level at 10%, 5% and 1% respectively				

4.5.4 The Influence of Ownership Structure and Corporate Governance on ROA of Privatized Companies

Panel A of Table 13 presents the results of the relationship between ROA, corporate governance and ownership structure. An FE regression model with a robust standard error option was used to control individual firm characteristics which could be sources of heteroscedasticity and contemporaneous correlation which could influence ROA. The model was significant when the lagged values of government, institutional ownership, large individual investors, and board size and women directors were used. This implied that the past values of the variables influence the present outcome on ROA.

The computed F value was 202.13 which is significant at 1% level. This is an indicator that the overall effect of ownership and corporate governance variables on ROA was significant. The null hypothesis (4a) that ownership structure and corporate governance have no significant influence on ROA of privatized companies was rejected. The computed R^2 was 0.1211 implying that the regression model explains 12.11% of the variance in ROA. The remaining variation of 87.89% was attributed to other factors not included in the model. In this model, the investment and leverage were automatically eliminated due to suspected problem of multi- collinearity which could arise due to measurement issues. Firm size measured by total assets may be correlated with investment and leverage ratios as the denominator in these accounting based ratios is the total assets.

The *t*-tests for individual coefficients show that government ownership has significant relationship with ROA at 1% level. The results were also significant at 1% level when the relationship between ROA and ownership structure was examined in a separate regression model in this study (Panel A of Table 11). This means that government ownership is a key determinant of firm performance. From an Agency Theory perspective, large ownership gave the government stronger incentives to monitor managers in a system with a large number of dispersed shareholders. The dispersed shareholders own 38.8% which could potentially generate agency problems as they do not have capacity to collectively monitor managers. The results therefore demonstrate that government as a major partner in a commercial enterprise may be more effective in monitoring managers in governance systems characterized by large number of dispersed shareholders.

The method used by large shareholders to monitor and influence corporate governance is through board representation. With a 41.1% retained in privatized firms, the government holds nearly half of the corporate board's seats in privatized firms. This means that the government can easily influence passing of ordinary resolutions as they require a simple majority of 51%. The government can also nominate nearly a half of the board of directors implying that they can influence decision making of boards which involve setting strategies and policies, appointing senior managers, monitoring performance and approving budgets.

A positive relationship may also indicate that the government as a major shareholder in privatized firms had a strong financial interest which creates incentives to monitor managers. The GoK shares are held by the Treasury which is expected to exercise its powers as a shareholder in monitoring managers and demanding returns. It is also likely that the presence of government in the ownership structure decreases the likelihood of corporate failure and expropriation of corporate assets by managers. The results are consistent with previous studies which found that large government ownership has a positive influence on ROA (Aljifri and Moustafa, 2007; Trien and Chizema, 2011; Tian and Estrin, 2008).

The institutional ownership had an insignificant relationship and ROA when the ownership and corporate governance variables were combined in one regression model. The relationship was

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however positive and significant at 1% significance level when the relationship between ROA and the ownership structure was examined in a separate regression model in this study (Panel A of Table 11). These findings contrast the Property Rights Theory which considers institutional investors to be more effective in monitoring managers and focused on generating profits. A number of studies also found that institutional shareholders influence profitability of firms positively (Kiruri 2013; Mishari et al., 2012; Ongore et al. 2011; Uwuigbe and Olusanmi, 2012).

The insignificant relationship could however be ascribed to the small size of ownership held by institutional investors. Although institutional were expected to enhance managerial monitoring, their effectiveness may be fostered when they have adequate representation in corporate board and large size of ownership. This would empower them to influence decisions making which involve: setting strategies, appointment of top managers and approval of budgets. It is notable that the institutional investors own 10% shares which imply that they were only entitled to at least one director to the board, which may not have significant influence on boards.

Large individual shareholders had an insignificant influence on ROA in the overall regression model. The results were similar when the relationship between ROA and the ownership structure was examined in a separate regression model (Panel A of Table 11). This confirmed the Agency Theory view which asserts that individual shareholders have no capacity to monitor managers or influence decision making in corporate boards. Large individuals hold a mean of 1% ownership in privatized firms which implies they have small ownership rights to have sufficient representation in corporate boards. This means that they have no capacity to monitor the managers or influence decision making in corporate boards. Maher and Andersson (1999) indicate that an individual should have about 5% to have any impact in monitoring managers and consequently firm performance.

The board size had an insignificant influence on ROA when the regression model combines both ownership and corporate governance variable. The findings were also insignificant when the relationship between board size and ROA was examined in a separate regression model in this study (Panel A of Table 11). The findings therefore contrasts with the Agency Theory perspective which views large boards as harmful to performance due to disadvantages in

coordination, flexibility and communication which may render them insignificant. The insignificant findings may imply that the negative effects of a large board may be cancelled out if corporate boards bring additional skills which could improve the decision making and monitoring of managers. The results are similar to other studies which found no significant relationship between board size and ROA (Chaghadari, 2011; Liang and Li, 1999).

The NEDs had a positive and significant impact on ROA at 5% level of significance. The results were positive and significant at 1% level of significance when the relationship was examined in a separate regression model focusing on corporate boards and ROA (Panel A of Table 12). This means that NEDs is an important determinant of firm performance particularly when the board reflects a higher proportion NEDs. The percentage of NEDs in privatized firms is 85. 9% of the total board size. A board with a higher proportion of NEDs is presumed to increase profitability by monitoring managers and protecting the interest of the shareholders. From a Resource Based and the Stakeholder theoretical perspective, the NEDs may have helped the privatized firms to attract skills and resources crucial to firm performance. These results were similar to studies which document positively and significant relationships between NEDs and performance (Liang and Li, 1999; Adam and Meheran, 2008).

The percentage of women directors had an insignificant relationship with ROA. This contrasts with the negative relationship established when the relationship between women directors and ROA was examined in a separate regression model (Panel A of Table 12). This finding suggests that gender alone is not a major determinant of ROA. From the Agency Theory and the Resource Based theoretical perspective, privatized firms have not achieved a composition of women directors to influence corporate boards in decision making. The findings were similar to other studies which documented insignificant relationship between women directors and financial performance (Carter, et al., 2010; Yasser, 2014).

Firm size was the only control variable included in the regression model and had an insignificant effect on ROA. Similar results are found when the relationship between firm size and ownership structure was examined in a separate regression model (Panel A of Table 11). The insignificant results could imply that the benefit of the large size of a company is cancelled out by bigger

bureaucracy and managerial problems associated with large firms which increase monitoring costs.

4.5.4.2 The Influence of Corporate Governance and Ownership Structure on the Tobin's Q of Privatized Companies

Panel B of Table 13 presents the results of the regression model examining the relationship between Tobin's Q, ownership structure and corporate governance of privatized companies. An FE regression model with a robust standard error option was used to control firm characteristics which could be sources of heteroscedasticity, and cross sectional dependence of errors that could influence the Tobin's Q. The model was stable when government, institutional ownership, large individual investors, board size and gender were lagged once. This is an indicator that the variables one year before could influence the current market value of privatized companies.

The computed F value was 151.88 which is significant at 1% level of significance. The results imply that the joint effect of the independent variables on the Tobin's Q was significant. The null hypothesis (4b) that ownership structure and corporate governance have no significant influence on the Tobin's Q of privatized firms was therefore rejected. The estimated R^2 value is 0.2686 which means that the regression model explained 26.86% of the variance in the Tobin's Q. The remaining variation of 73.14% was ascribed to other factors not included in the model.

The overall regression results show that only government had a significant relationship among ownership variables with Tobin's Q. The results were similar when the relationship between the government ownership and the Tobin's Q is examined in a separate regression model in this study (Panel B of Table 11). A positive and significant relationship suggests that the government as a large shareholder enhances investors' confidence in a firm and may be preferred by investors in a system where a large number of shareholders is dispersed. The results may also suggest that by having a larger representation in corporate boards, the investors may be convinced that the government can use a wide range of measures to ensure investor protection and economic stability which may increase the market value of the share price. The investors may also value privatized firms positively as they believe that resources are likely to be used more efficiently if the state was involved in firm governance and therefore reduce chances of

corporate failure. These finding were consistent with several empirical studies which found that government ownership influences firm value positively (Ang and Ding, 2006; Wei, et al., 2005; Tian and Estrin, 2008).

Institutional investors had an insignificant influence on Tobin's Q. These results were similar when the influence of ownership structure on the Tobin's Q was examined in a separate regression model (Panel A of Table 11). The results however contradict the Agency Theory which views, institutions investors to have the capacity to monitor managers more effectively due to their focus on generating profits. The findings also contradict the Resource Based Theory and the Stakeholder Theory which advocate for involvement of interest groups in corporate management to enhance performance. The insignificant results could however be attributed to the small size and low concentration of ownership by institutional investors. Institutional investors hold only 10 % ownership in privatized firms and this may be held by several institutions. Consequently, their capacity to influence performance may be limited by low representation in corporate boards where they could influence decision making. Consequently, from the Property Rights theoretical view privatized firms have not passed sufficient control and cash flow rights to private investors who are more focused in increasing the shareholder value.

Large individual investors had an insignificant influence on the Tobin's Q which conforms to the findings in a separate regression models in this study (Panel A of Table 11). The results concur with the Agency Theory which views individual shareholders to lack capacity to enhance firm value. The insignificant results could be attributed to the small size of individual investors who hold only 1%. This size is insufficient to allow the large individual investors to be represented in corporate boards to influence decision making. The dispersed shareholders also have a positive but insignificant impact on Tobin's Q. The findings also support the Agency Theory which asserts that dispersed shareholders lack capacity to influence firm value.

The board size had an insignificant influence on the Tobin's Q and the results were similar when the relationship between the board size and market value is examined in a separate regression model (Panel B of Table 12). These results were consistent to other empirical studies which document insignificant relationship between board size and corporate performance using ROA as

a performance indicator (Liang and Li, 1999; Chaghadari, 2011). The insignificant relationship suggested that investors' opinion may not be influenced largely by the size of corporate boards but rather by the independence and expertise of the board members.

The board composition had a positive and significant influence on the Tobin's Q at 5% level of significance. The findings were similar when the relationship examined in a separate regression model in this study (Panel A of Table 12). A positive relationship may suggest that the investors were reacting positively to the appointment of NEDs as a signal of board independence and better management. This is also consistent with Agency Theory which suggests that boards with a higher percentage of NEDs enhance corporate value by monitoring the opportunistic behavior of managers. From the Resource Based theoretical view, NEDs were associated with securing financial resources and professional expertise crucial to corporate value. From the Stakeholder theoretical view the involvement of stakeholders also ensured consensus building which reduces conflicts in a firm. These results were similar to those of Carter et al. *(2003)* who found a positive relationship between NEDs and firm value.

The women directors had a positive and insignificant relationship with Tobin's Q. The results were similar when the relationship between the Tobin's Q and the size of women directors in a separate regression model (Panel A of Table 12). The insignificant results could be attributed to the small size of women directors in corporate boards. The mean size of women directors in corporate boards of privatized firms is 18% which may be too small to impact on the market value of privatized firms. The size may also be insufficient in bringing technical skills and ethical considerations which could influence the market value. This confirms the argument that gender representation alone may not have any significant influence on firm performance. The only control variable included in the overall regression model was firm size and has an insignificant effect on Tobin's Q. The insignificant results could imply that the benefit associated with the large size is cancelled out by the inherent management of large companies due to bigger bureaucracy and managerial discretion which increases monitoring costs.

4.5.4.3 The Influence of Ownership and Corporate Governance structures on Cost Efficiency of Privatized Companies

The results of the overall regression model examining the relationship between cost efficiency, ownership structure and corporate governance of privatized companies are presented in panel C of Table 13. An FE regression model with a robust standard error option was used to control for firm characteristics which may cause heteroscedasticity and contemporaneous correlation in data values that could influence cost efficiency. The FE model used eliminated foreign ownership as the values were not varying with time. Institutional ownership and board size were also automatically eliminated from the model probably because they were not significant and also to take account of degrees of freedom. The model was also significant when board composition, leverage and firm size were lagged once. This is an indicator that the values of NEDs, leverage and firm size, one year before influence cost efficiency of privatized firms.

The computed F value was 80.18 which is significant at 1% significance level. This means that the combined effect of ownership and corporate governance variables on the cost efficiency was significant. The null hypothesis (4c) that ownership and corporate governance have no significant influence on cost efficiency was rejected. The coefficient of determination R^2 was 0.6469 indicating that 64.69 % of variation in cost efficiency was explained by the model. The remaining variation of 35.31 % was unexplained and attributed to other factors not included in the model.

The *t*-tests for individual coefficients indicate that government ownership had a negative and significant influence on cost efficiency at 1% levels of confidence. These results were significant at 5% level when the relationship between government and cost efficiency were examined in a separate regression model (Panel C of Table 11). These results supported the Property Rights Theory which views large government ownership as often characterized by underutilization of resources and failure to employ the input mix required for cost minimization. This is further collaborated by various reports which document inefficiency in privatized companies (GoK, 2010; IEA, 2005). These findings may also imply that the cost inefficiency associated with state ownership cannot be fully eliminated if the government retains large size of ownership in corporate entities.

The cost inefficiency in firms with large government ownership may be attributed to pursuit of both profit and multiple welfare goals for its citizens. This study observed that the government retained over 60% ownership in privatized companies such as Kenya Reinsurance Company, Ken Gen and the National Bank of Kenya. These companies operate largely under the State Corporation Act (CAP446) and could be addressing some goals of national interests. Some of the objectives which they could be addressing include employment and production of goods and services at subsidized prices. Such corporations may also be experiencing agency problems associated with large separation between ownership and control. This theoretical perspective is supported by studies which found a positive association between state ownership and inefficiency (Fries and Anita, 2004; Lin et al*.,* 1999; Yiwei, 2011; Zelenyuk and Zheka, 2006).

Notably, large individual shareholders had a positive and significant on cost efficiency at 5% levels. The influence of large individual shareholders on cost efficiency was also significant at 10% level when examined in a separate regression model level (Panel A of Table 11). The results were consistent with the Stakeholder Theory which advocates involvement in corporate governance to improve performance. The findings imply that some large individual who are among the top ten shareholders may have influenced cost efficiency positively as they have some special decision making rights. The individual investors could also have been vocal in decisions that affect their investment which could influence the managers to reduce costs.

The significant result is therefore inconsistent with the Agency Theory which views individual shareholders to have no capacity to monitor managers due to their small size of their shareholding. The relationship between dispersed shareholders is negative and significant. This was predicted as they hold the second largest size of ownership with a mean of 38% and yet they do not actively participate in decision making which could impact negatively on costs. This may also imply that privatized companies with a large size of dispersed shareholders experience agency problems which could lead to cost inefficiencies.

The NEDs had a positive and a significant influence on cost efficiency at 10% level of significance. The results were significant at 5% level of significance when the relationship was

examined in a separate regression model (Panel C of Table 12). This is an indicator that NEDs were a key determinant of cost efficiency in corporate entities. From the Agency Theory perspective, a large proportion of NEDs is crucial to exert pressure on managers to reduce costs and enhance efficiency. From the Stakeholder theoretical view, perspective, involvement of diverse groups in decision making could help firms to reduce costs. The results were also consistent with the Resource Based Theory, which views NEDs to be crucial in bringing additional financial and technical expertise to a firm. The appointment of a large number of directors, who are independent of the company, may have helped privatized companies in reducing operational and financial costs. The results were consistent with other studies which found that NEDs enhance efficiency (Agyei and Owusu, 2014; Lin et al., 2009; Mao, et al., 2014)

Women directors had a positive and significant influence on the cost efficiency at 10% level of significance. However, the results were insignificant when the relationship between gender and cost efficiency was examined in a separate regression model (Panel C of Table 11). These results were however consistent with the Stakeholder Theory which supports participation of women in corporate governance. The results were in consensus with studies which document a positive relationship between women directors and firm performance (Campbell and Mínguez, 2008; Muigai, 2014). A significant relationship imply that women directors may have brought some skills or influenced decision making which lead to efficient use of resources.

The control variables included in the regression model were firm size and leverage. Firm size had a significant and negative relationship with cost efficiency at 1% level of significance. These results were similar when the relationship was examined alongside ownership variables in a separate regression model (Panel C of Table 11). From the Agency Theory perspective, a negative relationship maybe attributed to management of large firms which is associated with bigger bureaucracy and increased monitoring and bonding costs. As Himmelberg et al. (1999) argued, larger firms can be less efficient as they are more vulnerable to managerial discretion and misuse of resources. Leverage had a positive and a significant relationship with cost efficiency at 5% level of significance. The results support the Agency Theory which recognizes debt as mechanism by banks to monitor managers. The results may imply loan repayments may have put

pressure on managers of privatized firms to utilize corporate resources more effectively in order to meet their obligations.

4.5.4.4 The Influence of Ownership and Corporate Governance structures on Technical Efficiency of Privatized Companies

Panel D of Table 13 presents the results of the FE regression model used to examine the influence of ownership and corporate governance structures on technical efficiency of privatized companies. The model controls for firm characteristics which may cause heteroscedasticity and contemporaneous correlation in data values which may influence technical efficiency. The regression model was significant when the lagged values of government, institutional ownership, large individual investors, and board size and gender composition were used. This means that the value of the variables one year before influenced technical efficiency of privatized companies.

The computed F value was 576.48 and is significant at 1% level of significance. The results imply that the joint effect of the ownership and corporate governance variables on the Tobin's Q was significant. The null hypothesis (4d) that ownership and corporate governance structures have no significant influence on technical efficiency of privatized companies was therefore rejected. The estimated R^2 value is 0.4430 implying that the regression model explains 44.3% of variance in the technical efficiency of privatized firms. The remaining percentage of 56.7% may be attributed to other factors not captured in the regression model.

The *t*- tests for individual coefficients show that government ownership has a negative and significant influence on technical efficiency at 5% level. The relationship was insignificant when examined in a separate regression model (Panel A of Table 11). This finding is consistent with the Property Rights Theory which asserts that state ownership influences firm performance negatively. These findings imply that the inefficiency associated with state ownership cannot be fully eliminated if the government retains large size of ownership in corporate entities.

The findings also were consistent with studies which found that the state-ownership influence performance positively (Lin et al., 2009; Zelenyuk and Zheka 2006; Ochi and Yosra, 2012; Yiwei et al., 2011). This is an indicator that companies with large state ownership could still be

addressing some non profit objectives such as maintaining employment and producing goods at subsidized prizes. This may affect privatized companies where the government has retained more than 50% ownership such as Ken Gen Kenya Reinsurance and the National Bank of Kenya. Privatized companies may still be operating inefficiently as they still turn to government to be bailed out in case of financial difficulties as in the recent cases of Mumias Sugar Company and the Kenya Airways.

The institutional shareholders had a positive and significant influence on technical efficiency at 1% significance level. The results were also significant at 5% when the relationship was examined in a separate regression equation (Panel A of Table 11). The results therefore confirmed that local institutional investors have potential to stimulate technical efficiency which may come from monitoring and emphasis on profit goals. From a Resource Based theoretical view, local institutions may have brought in better managerial expertise, and production technologies, financial resources as well as greater access to new markets which increase production. The results were consistent with studies which found a positive and significant relationship between institutional shareholders and technical efficiency (Su andDai, 2012; Ravi and Hovey, 2013).

Large individual shareholders had an insignificant influence on technical efficiency. The results were similar when the relationship between ownership structure and cost efficiency was examined in a separate regression equation (Panel A of Table 11). The findings support the Agency Theory which perceives individual shareholders to have no the capacity to influence performance due to small size of ownership (Jensen and Meckling, 1976). The descriptive statistics showed that large individuals hold 1% ownership in privatized companies which is considered to be too low to have any representation in corporate boards and consequently firm performance.

Board size had an insignificant influence on the technical efficiency in the overall model. The results were similar when the relationship was tested in a separate regression model (Panel D of Table 12). They results were consistent with those of Tanna et al., (2009), who documented insignificant relationship between board size and technical and cost efficiency. The insignificant

results may imply that board members may not have the required skills and expertise to influence technical efficiency which may cancel the monitoring benefits associated with large corporate boards. Some studies indicate that efficiency of a firm is influenced by competition, skilled workforce and technology to transform inputs at minimum costs into maximum profits (Sifunjo et al., 2014). It can therefore be argued that board size alone may not be a significant driver of cost efficiency without consideration of managerial and technical inputs to reduce the costs.

Board composition had a positive and insignificant influence on the technical efficiency. However the relationship was significant at 10% when examined in a separate regression model (Panel D of Table 12). This contradicts the Agency Theory and the Stewardship theories, which view boards dominated by NEDs as having the capacity to bring additional managerial and technical expertise to increase output. The findings are also inconsistent with those of previous studies which found that boards with majority NEDs improve efficiency (Aduda et al., 2013; Lekaram 2014; Lin et al., 2009; Tanna et al., 2009). The insignificant results may imply that the presence of NEDs alone may not be able to enhance the technical efficiency. Leibenstein (1966) indicates that the key drivers of efficiency are competition, skilled labor and technology. These variables may not have been captured, as the regression model explains 44.30 % of variance in the technical efficiency.

Women directors had a positive but insignificant influence on the technical efficiency. The results were consistent when the relationship was examined in a separate regression model (Panel D of Table 12). An insignificant relationship means that gender alone is not sufficient to significantly influence the technical efficiency. The small size of women representation implies that they are not adequately represented in corporate board and therefore cannot influence the decision making. Firm size had a negative and significant relationship with technical efficiency at 5% level of significance. The results contradict the widely held perception that firm size increases productivity and efficiency as companies take advantage of economies of scale to produce efficiently. The results imply that the benefits associated with large firm size may be cancelled out by managerial problems inherent in firms formerly owned by the state. Reports also indicate that some that privatized companies were still operating less productively as they were utilizing obsolete technologies and low-quality inputs (GoK, 2010).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This study sought to establish the influence of ownership and corporate governance structures on the financial performance of privatized companies in Kenyan. To achieve this, specific objectives and matching hypothesis were developed. The relationship was conceptualized and schematized into a conceptual framework. Data was collected and analyzed using descriptive statistics, correlation t-tests and regression models with the robust standard error option. The results were compared to theoretical propositions and previous empirical studies and discussed in their context. These results confirmed some hypotheses and some previous studies while refuted others. The results also support several theoretical postulations but also refuted by some. The study has drawn several conclusions and recommendations. This chapter presents a summary of the study, the conclusions and recommendations for future studies.

5.2   Summary of the Study

This study investigated the influence of privatization, ownership structure and corporate governance on performance of privatized companies. This subsection summarizes the whole study. The specific objectives of the study were to examine whether there was a significant difference between the pre-and post- privatization performance and also between privatized and other listed companies. The study also examined the influence of ownership and corporate governance structures on financial performance in separate and in a joint regression models. The study was informed by the Property Rights, the Agency, the Resource Based, the Stewardship and the Stakeholder theories. A sample of 8 privatized firms and a control group of companies drawn from the publicly listed companies at the NSE for the period 2007–2013 was used.

Unlike previous studies, this study used four measures of financial performance to capture different dimensions of firm performance: The performance indicators include: ROA, Tobin's Q, cost efficiency and technical efficiency. The cost and technical efficiency indicators were computed using the SFA approach. The ownership structure variables included: government, foreign and local institutional, individual and dispersed investors. Corporate governance included:

board size, board composition, percentage of women directors. The control variables were: firm size, investment and leverage. A combination of t-tests and regression models were used to address the objectives of the study. A unit root test was used to examine stationarity data while a Hausman determined whether to use FE or RE regression model.

The summary statistics show that the government still retained large ownership and control in privatized firms with 41% shares compared to 10% by local institutions, 9% by foreign investors, 1% by large individuals and 39% by dispersed shareholders. The average board size of privatized firms was 10 members which was considered large as it surpasses the recommended number of 7-8 members. The mean percentage of NEDs in privatized firms was 86 %. This is an indicator that privatized companies had adopted the recommended best practice in corporate governance. The percentage of women directors in privatized firms was 18% which is below the constitutional level of at least 30%.

The second objective examined the influence of ownership structure on the four indicators of financial performance. The overall model confirms that ownership structure influences financial performance of privatized companies. There were several individual governance variables which were found to influence performance significantly. The government ownership had a positive and significant influence on ROA and the Tobin's Q but a negative significant influence on cost efficiency. Institutional shareholders had a positive and significant relationship with ROA and technical efficiency while large individual investors have a positive and significant influence on cost efficiency. Dispersed shareholders had a positive and significant relationship with ROA but a negative and significant influence on cost efficiency.

The third objective examined whether corporate governance structures influence of financial performance significantly. The results confirm that corporate governance structures influence financial performance significantly. Several individual governance variables had a significant influence on financial performance. The board composition had positive and significant relationship ROA, Tobin's Q and cost efficiency while women directors had a negative and significant influence on ROA. Leverage had negative and significant influence on ROA, Tobin's

Q but a positive influence on cost efficiency. Firm size had a significant and negative influence on cost efficiency and technical efficiency.

The fourth objective sought to determine whether the combined ownership and corporate governance structures influence financial performance. The results indicate that that government ownership had a positive and significant influence on ROA, Tobin's Q, but a negative and significant influence on cost efficiency and technical efficiency. Institutional ownership had a positive and significant influence on technical efficiency while large individual shareholders had a significant influence on cost efficiency. The board composition had a positive and significant influence on ROA, Tobin's Q and cost efficiency while women directors had a significant and negative influence on ROA. Among the control variables, firm size had a negative and significant influence on cost and technical efficiency while leverage had positive and significant influence on cost efficiency.

5.3   The Conclusions of the Study

This study sought to establish influence of ownership structures and corporate governance on financial performance of privatized companies in   Kenyan. To achieve this, specific objectives and matching hypothesis were developed and tested. There are several conclusions which were derived from this study.

Objective (1a)

1a.   To determine whether there is no significant difference between pre- and post - privatization performance.

HO$_{1a}$: There is no significant difference between the pre- and post- privatization   performance of privatized firms.

The study found that there is no significant difference in ROA between the pre- and post-privatization period. It was concluded that profitability of privatized companies had not improved following privatization. This conclusion could be attributed to several observations made in this study. The summary statistics indicate that the government still retains large ownership and control in privatized firms with 41% shares compared to 10% by local institutions, 9% by foreign investors, 1% by large individuals and 39% by dispersed shareholders. This implies that privatized firms had not attracted large ownership by institutional

investors to enable them acquire new production technologies and managerial skills crucial to firm performance. The ownership structure was also characterized by a large size of government ownership and dispersed shareholders. The privatized companies could therefore be experiencing agency problems due to the wide separation between ownership and control. The average board size of privatized firms was 10 members which is considered large as it surpasses the recommended number of 7-8 members. The mean percentage of NEDs in privatized firms is 86 %. This is an indicator that privatized have adopted the recommended best practice in corporate governance. The percentage of women directors in privatized firms was 18% which is below the constitutional level of at least 30%.

Objective (1b)

1b. To determine whether there is a significant difference between privatized and other publicly listed companies in Kenya.

HO$_{1b}$: There is no significant difference in financial performance between privatized companies and other publicly listed companies

A comparison of the performance between privatized and other listed companies at the NSE showed that there was no significant difference in ROA between privatized and other listed firms. It was therefore concluded that the ROA of privatized firms was not significantly different from that of privatized companies. The performance of the companies during the period (2007-2013) reflected a declining trend. It can also be concluded that the performance between the two groups of companies was affected by common factors. This study also found that there was a significant difference between the Tobin's Q of privatized and other listed companies in Kenya. The study concluded that the investor confidence in privatized companies was lower than in other listed companies. It is also concluded that it would cost more to replace the assets of privatized companies than it would do so in other listed companies.

This study established that there was a significant difference in cost efficiency between privatized and other listed companies. The performance trend showed that other listed companies were more cost efficient than the privatized companies. It was therefore concluded that the inputs costs in privatized companies were higher than the value of outputs. There is also a significant

difference in technical efficiency between privatized companies and other listed companies. The performance trend showed that other listed companies had a higher technical efficiency than the privatized companies. It was concluded that privatized companies were using more inputs to generate a given input. This inefficiency in privatized companies could be attributed to the focus on non profit objectives particularly in privatized companies where the government retains more than 50% shareholding.

Objective 2

2.   To establish the influence of ownership structure on financial performance of privatized companies in Kenya.

HO$_2$: Ownership structure has no significant influence on financial performance of privatized companies.

This study established that   ownership structure influences financial performance significantly. The ownership structure explained 43.42% of variations in ROA, 31.54% of the Tobin's, 55.1% of cost efficiency and 0.08% of the technical efficiency. The remaining percentages were explained by other factors not considered in the regression models.   There were individual ownership structure variables which statistically influenced financial performance of privatized companies. Government ownership   had a positive   and significant influence on the ROA and the Tobin's Q of privatized companies. This   study concluded that government ownership in privatized companies strengthened profitability and the investor confidence of privatized companies. This could be attributed to the government's capacity to enhance managerial supervision and legality in protecting shareholders investment in an ownership system with a large size of dispersed shareholders.

Government ownership had a negative and significant relationship on cost efficiency. This study concluded that large government ownership was detrimental to cost efficiency. This study concluded that government ownership was detrimental to cost efficiency.   This   could be attributed the government focus on both welfare objectives, and addressing national interests through privatized companies particularly where it retains over 50% shareholding. The institutional ownership had a positive and significant influence on ROA and technical efficiency of privatized companies. This study concluded that institutional investors enhanced profitability

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and the technical efficiency of privatized companies. Institutional investors were likely to have enhanced managerial supervision and brought in additional technical expertise to privatized companies to enhance efficiency of privatized companies Large individual had a positive and significant influence on cost efficiency. This study concludes that large individual investors enhance cost efficiency in firms where they invest. This is possible as they interact with managers and the board more often as they are among the top 10 large shareholders. They are also vocal in decision making that affect their investment as they are likely to bear the consequences of inefficiency.

Dispersed shareholders had a significant and positive influence on ROA of privatized companies. It is concluded that dispersed shareholders influence ROA of privatized companies. This is possible as they demand dividend from former SOEs and therefore exert pressure on managers to perform. Dispersed shareholders however had a negative and significant relationship with cost efficiency. This study concludes that an ownership structure with a large size of dispersed ownership results into increased operational and financial costs.

Objective 3

3.   To determine the influence of corporate governance structure on financial performance of privatized companies in Kenya.

HO₃: Corporate governance structure has no significant influence on financial performance of privatized companies.

The study established that corporate governance structures influence financial performance significantly. The corporate board structure explain 41.64 % percent of variations in ROA, 30.24 % in Tobin's, 12.38% in cost efficiency and 87.4% in technical efficiency. In addition, there were individual corporate board structures that were found to statistically influence financial performance of privatized companies**.** The board composition had a positive and significant influence on ROA, Tobin's Q and cost efficiency. This study therefore concluded that a higher percentage of outside directors in corporate boards increase profitability, efficiency and market value of privatized companies. This could be attributed to their role in providing strategic leadership, monitoring managers and bringing in managerial and technical expertise crucial to improving profits, investor confidence and reducing costs. The presence of women

directors had a negative and significant influence on ROA. It was therefore concluded that the women directors influenced profitability negatively. This may be attributed to appointment of women directors in corporate boards to meet the constitutional requirements without due consideration of the professional expertise to enhance financial performance.

Objective 4

4.   To establish the influence of joint ownership and corporate governance structures on financial performance of privatized companies in Kenya.

HO₄: Ownership and corporate governance structures have no significant influence on financial performance of privatized companies.

The results of objective 4(four) confirm that the combined ownership and corporate governance structures influence the firm performance significantly. The results indicate that the model explains 12.11% of variations in ROA, 26.86 % in the Tobin's Q, 64.69% in cost efficiency and 44.3% in technical efficiency. The study concludes that government ownership influences ROA and the Tobin's Q positively, but influences cost efficiency and technical efficiency negatively. Institutional ownership influences technical efficiency positively while large individual influence cost efficiency positively. The board composition influences ROA, Tobin's Q and cost efficiency positively while women directors influence ROA negatively. These results confirm the findings of objective of the objective 2 and 3.

5.4   Recommendations

This study has various implications to policy, managerial practice and investment decision making. The subsequent sections present the recommendations linked to the objectives of the study. The results of objective 1(a) showed that there was no significant difference in performance between the pre- and post-privatization period. This implied that privatized companies may not have acquired an ownership and corporate board structure to increase post-privatization performance. This is evident as the government and dispersed shareholders still hold the largest sizes of ownership which generates agency problems in privatized companies. The board size in privatized companies was large compared to that of other listed companies and in other countries which could lead to difficulties in coordination and decision making. It is also

evident that privatized companies had not achieved the gender diversity to enhance decision making and skills needed to improve corporate financial performance.

This study therefore recommends to the Privatization Commission of Kenya to reduce the percentage of the government and dispersed shareholding in privatized companies to allow the companies to attract large institutional investors who are likely to bring in managerial and technical expertise to a firm to improve financial performance. The CMA should reduce board size of privatized companies currently considered large to between seven (7) and nine (9) to enhance co-ordination and faster decision making. It is also recommended the CMA appointment of women directors in corporate boards should be based on the professional expertise required by corporate entities.

The study found significant differences between the Tobin's Q, cost and technical efficiencies of privatized and other listed companies in Kenya. The results further indicate that the Tobin's Q, cost and technical efficiencies remained lower in privatized companies than in privatized companies. The results showed that privatized firms were operating at 10.2 % cost efficiency compared to 33.5% in other listed companies. Privatized companies had a technical efficiency of 42.5% compared to 54.4 % in other listed companies. This finding has managerial implications and the study therefore recommends that the managers should develop strategies to enhance investor confidence. The managers should also reorganize corporate resources to reduce costs by 88.8% and increase technical efficiency by 45.6% in privatized companies.

The second objective examined the influence of ownership structure on financial performance and found that that government ownership has a positive and significant influence on ROA and the Tobin's Q. This was attributed to the government's capacity to supervise managers and protect the shareholder investments. This study recommends to the Privatization Commission that privatized companies should retain some government ownership to enhance profitability and build investor confidence.

The government had a significant and negative influence on cost efficiency which could be ascribed to its focus on both welfare and economic objectives in firms where it retains over 50%

ownership. It is therefore recommended that the Privatization Commission should reduce government ownership to below 50% to remove all the privatized firms from the ambit of the State Corporation Act. This study further recommends that a strategic institutional investor in each company should be identified and be allocated adequate ownership to enable privatized companies attract managerial and technical expertise crucial to improve governance and financial performance.

The large individual investors have a positive relationship with cost efficiency. It is therefore recommended to the Privatization Commission of Kenya that the role of large individual investors should be strengthened by giving them some special decision making rights to enable them influence performance. The dispersed shareholders have a negative effect on ROA which was attributed to agency costs that may arise where a large number of investors are dispersed. A reduction of the percentage of dispersed investors is recommended.

The third objective examined the influence of corporate governance firm performance of privatized companies and found that non executive directors had a positive and significant relationship with ROA, the Tobin's Q and cost efficiency. This study therefore recommends to the CMA that diversity in corporate boards should be strengthened as the NEDs bring managerial and technical skill needed by a firm, to improve performance. The CMA should however stipulate the specific percentage of NEDs required and their roles in a firm. The women directors have a negative effect on the ROA of privatized companies. As corporate entities are required to fulfill the gender diversity requirement, it is recommended that women directors should be appointed on the strength of their skill and expertise required by firms to improve financial performance.

The fourth objective confirms that government ownership and the outside directors currently play a significant role in influencing the financial performance of privatized companies. The overall policy implication is that privatization alone is not sufficient to improve financial performance unless privatized companies attract significant institutional and outside directors with managerial and technical expertise and resources required to improve financial performance. It is therefore recommended that the Privatization Commission and the CMA

should strengthen the ownership and corporate board attributes which have a positive and significant relationship with financial performance. The attributes with a negative relationship should be corrected in order to steer the privatized companies to a path of improved financial performance.

5.5   Recommendations for Further Research

This study focused on the influence of privatization, ownership and corporate governance structures and financial performance. The study achieved all its objectives. However several ideas and potential research areas emerged which could serve as a foundation for further research. One of the main issues in this study is that the fitted models explained only a certain percentage of the variance in the dependant variables. This means that there are several other factors that explain performance in privatized companies other than ownership and corporate governance structures. Researchers could therefore extend the study by including in the regression models other governance variables such as managerial skills, education levels, skills diversity, ethnicity and age of top level managers. Similarly, ownership may be further explored by differentiating shares held by managers, directors, employees, and block-investors.

Contrary to the prevailing theoretical opinion, this study found that government ownership enhanced profitability and investor confidence in privatized companies. There is therefore need for studies to explore potential benefits of partnerships between government and private sector to improve firm performance. This study also observed that several companies have continued making losses even when they were privatized which calls for further investigation into the other factors influencing performance. Case studies of individual companies are necessary as privatized companies operate in different sectors of the economy which could influence performance. This study measured performance using 4(four) performance indicators which made the study repetitive in some areas. A composite measure that incorporates all the proxies of firm performance could be developed in future.

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APPENDICES

Appendix A: NSE Listed Companies by Sector

S/No.	Company	S/No.	Company
	Agriculture	3	Sameer Group of Companies
1	Eaagads Ltd	4	Marshall East Africa Ltd
2	Kapchorua Tea Co. Ltd		**Insurance**
3	Kakuzi Ltd	1.	Jubilee Holdings Ltd
4	Limuru Tea Co. Lt	2.	Pan Africa Insurance Holdings Ltd
5	Rea Vipingo Plantations Ltd	4.	Kenya Re-Insurance Corporation Ltd
6	Sasini Ltd	5.	Liberty Kenya Holdings
7	Williamson Tea Kenya Ltd	6.	British-American Investments Company (Kenya) Ltd
	Commercial and Services	7	CIC Insurance Group Ltd
1	Express Ltd		**Investment**
2	Kenya Airways Ltd	1.	Olympia Capital Holdings ltd
3	Nation Media Group	2.	Centum Investment Co Ltd
4	Standard Group Ltd	3.	Trans-Century Ltd
5	Tips Eastern Africa Serena		**Manufacturing and Allied**
6	Scan Group Ltd	1.	B.O.C Kenya Ltd
7	Uchumi Supermarkets Ltd	2.	British American Tobacco Kenya Ltd
8	Hutchings Biemer Ltd	3.	Carbacid Investments Ltd
9	Longhorn Kenya Ltd	4.	East African Breweries Ltd
	Telecommunication andTechnology	5.	Mumias Sugar Co. Ltd
1	Access Kenya Ltd	6.	Unga Group Ltd
2	Safaricom Ltd	7.	Eveready East Africa Ltd
	Automobiles andAccessories	8.	Kenya Orchards Ltd
1	Car and General Ltd	9	A.Baumann Co Ltd
2	CMC Holdings Ltd		

	Banking		**Construction and Allied**
1	Barclays Bank Ltd	1	Athi River Mining
2	CMC Holdings Ltd	2	Bamburi Cement Ltd
3	I and M Holdings Lt	3	Crown Berger Ltd
4	Diamond Trust Bank Kenya	4	E.A.Cables Ltd
5	Housing Finance Co Ltd	5	E.A.Portland Cement Ltd
6	Kenya Commercial Bank Ltd		**Energy and Petroleum**
7	National Bank of Kenya Ltd	1	KenolKobil Ltd
8	NIC Bank Ltd	2.	Total Kenya Ltd
9	Standard Chartered Bank	3.	KenGen Ltd.
10.	Equity Bank Ltd	4.	Kenya Power and Lighting Co Ltd
11	The Co-operative Bank of Kenya	5.	Umeme Ltd

Source: NSE Hand Book 2012/13

Appendix B: **Privatized Companies in Kenya by Sale of Shares   (1988 – 2008)**

	Company	Year	GoK Share Before (%)	GoK Share After (%)	Sector
1	Bamburi Portland Cement	1991	26	0	Mining
2	Uchumi Supermarkets Ltd.	1992 (ICDC)	90	44	Retail Trading
3	Housing Finance Company of Kenya	1992 (GOK)	50	30	Banking
4	E.A. Oxygen Ltd.	1993	15	0	Chemical
5	CMC Holdings	1993	20	0	Services
6	National Bank of Kenya	1994	100	42.5	Banking
7	Kenya National Capital Corporation	1996	(2nd Issue - 42.5)	22.5	Banking
8	Kenya Airways	1995	100 (26% shares by competitive bidding)	84	Transport
		1996	84 (sold 51% through IPO)	23	
10	Kenya Commercial Bank	1988 sold 20%	100	80	Banking
		1990 –sold 10%	80	70	
		1996- sold 10%	70	60	
		1998-sold 25%	60	35%	
14	Kenya Electricity Generating Company (Ken Gen)	2006	100	70	Energy
15	Mumias Sugar Co. Ist Offer	2001	70.6	38.4	
16	Mumias Sugar Co. 2nd Offer	2006	38.4	20	Manufacturing
17	Kenya Reinsurance Co.	2007	100	60	Insurance
18	Safaricom	2008	60	35	Telecommunication

Source: Privatization Commission of Kenya at _www.pc.go.ke_.:Downloaded July, 2014

Appendix C: The Sample of both Privatized and Other Listed Firms In Kenya

Panel A: Privatized Companies	
Company	**Industry /Sector**
Kenya Airways Ltd	Commercial and Services
Mumias Sugar company	Manufacturing
Housing Finance Co Lt	Banking
Kenya Commercial Bank Ltd	Banking
Kenya Electricity Generating Company (Ken Gen)	Energy and Petroleum
Kenya Reinsurance Corporation.	Insurance
Safaricom	Telecommunication
National Bank of Kenya	Banking
Panel B: Other Listed Companies In Keya	
Barclays Bank	Banking
Sasini Limited	Agriculture
Total Kenya Ltd	Energy and Petroleum
E.A. Portland Cement Ltd	Construction and allied
Express Ltd	Commercial and Services
Jubilee Holdings Ltd	Insurance
Sameer Group of Companies	Automobile and Accessories
E. A Breweries	Manufacturing
Olympia Capital Holdings ltd	Investment

Appendix D: List of Publications

1 Gitundu E. W., Sifunjo E. K., Kiprop S. K, Kibet L. K (2015). Corporate Ownership and Financial Performance: A Comparison Between Privatized and Other Publicly Listed Companies in Kenya. *American Journal of Research Communication*, 3(12), 32-48.

2 Gitundu E.W., Sifunjo E. K., Kibet L.K., Kiprop S, K (2015). The Influence of Change in Corporate Governance Structure on Financial Performance of Privatized Companies in Kenya. *Research Journal of Finance and Accounting.* 6,(22), 94-104.

3 Gitundu E.W., Kibet L.K., Kiprop S, K., Sifunjo E. K., (2015). The Influence of Ownership Structure and Corporate Governance Reforms on Profitability and Market Value of Privatized Companies in Kenya. *International Journal of Economics, Commerce and Management.* 3(12), 314-330.

4 Gitundu E.W., Sifunjo E. K., Kiprop S, K., Kibet L.K., (2016). The Effects of Ownership and Corporate Governance Reforms on Efficiency of Privatized Companies in Kenya. *International Journal of Economics and Financial Issues,* 6(1), 323-331.

5 Gitundu E.W., Kiprop S, K., Kibet L.K., Sifunjo E. K., (2016). The Influence of Ownership Structure on Financial Performance of Privatized Companies in Kenya. *African Journal of Business Management* 10(4), 75-88

6 Gitundu E.W., Kibet L.K., Kiprop S, K., Sifunjo E. K. (2016). The Changing Role of Government in Commercial Activities: A Literature Review of The Kenyan Historical and Contemporary Perspective. *International Journal of Development Research. 6, (2), 6847-6854.*

7 Gitundu E.W., Kiprop S, K., Kibet L.K., Sifunjo E. K., (2016). Corporate Governance and Financial Performance: Theoretical and Philosophical Predicaments in Research. *European Journal of Business and Management.* 8, (11), 164-174.