EFFECT OF PRIVATIZATION ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I declare that this project is my original work and has not been presented for a degree in any other university.

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ABSTRACT

Privatization has been a key component of structural reform programs for both developing and developed economies. This study looked at the effect of privatization on the financial performance of listed companies at the Nairobi Securities Exchange. The objective of the study was to determine the effect of privatization on the financial performance of companies at the Nairobi Securities Exchange.

The study summarized the financial performance of 14 privatized companies listed at the Nairobi Securities Exchange. Secondary data was used. The study employed Descriptive statistic; regression analysis to analyse data. The indicators examined were profitability, operating efficiency, output, capital investment, employment, leverage and payout. Since the sample size was small student *T*- Test was used to test for significance of the difference between pre- and post- privatization performance indicators. The study measured the changes in the performance indicators by comparing its average value for five years before and after privatization.

Privatization increased profitability, shareholders' rates, operating efficiency and capital investment and reduced leverage as expected. Surprisingly, privatization led to an increase in employment. The coefficient of determination r^2 showed that 80.31% of the variations in the financial performance were explained by the independent variables. The study therefore, concluded that privatization had a positive effect on the financial performance of companies listed at the NSE.

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ABBREVIATIONS AND ACRONYMS

CPI	Consumer Price Index
HHI	Herfindahl - Hirschman Index
IR	Inflation Rate
KCB	Kenya Commercial Bank
KENGEN	Kenya Electricity Generating Company Limited
KES	Kenya Shillings
NASI	NSE All Share Index
NSE	Nairobi Securities Exchange
OECD	Organization for Economic Cooperation and Development
Proxy	Measure variable used to infer the value of a variable of interest
SOEs	State-Owned Enterprises

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CHAPTER ONE
INTRODUCTION

1.1 Background

Privatization became an important factor of economic reforms in most countries during the 1990s, putting increasing emphasis on private sector development. Privatization policies developed were aimed at enhancing the efficiency of resource allocation via increased competition, providing fiscal benefits to cash-strapped government, attracting more private investment and improving the access of the private sector to finance in general. In order to introduce increased accountability in the management of parastatals, the government of Kenya was forced to reconsider its public sector stance especially relating to organization, management, regulation and ownership structure by implementing a parastatal reform project.

The objective of the project, financed by the World Bank, was to support parastatal reform as a means to reduce the Government's role in the economy. The proposed study will therefore look at the concept of privatization and financial performance of privatized companies with a view to determining the effect of privatization on the financial performance of privatized companies at the Nairobi Securities Exchange.

1.1.1 Privatization

Primarily, privatization is the process of transferring ownership of a business, enterprise, agency, public service from the public sector to the private sector, either to a business that operates for a profit or not for profit. It may also mean government outsourcing of services or functions to private companies. Privatization has also been used to describe two unrelated transactions: the first is the buying of all outstanding

shares of a publicly traded company by a single entity, making the company privately owned (often described as private equity); the second is demutualization of a mutual organization or cooperative to form a joint-stock company. Demutualization is the process by which a customer-owned mutual organization or co-operative changes its legal form to a joint stock company (Chowdhury, 2006).

The privatization objectives may range from economic to political. Economic objectives include: to achieve higher productivity and efficiency, to strengthen the role of the private sector in the economy, to improve the public sector's financial health and to provide autonomy to satisfy financing requirements. The Political objectives include: to remove the enterprise from political interference, to free resources for allocation to other priority areas and to make it possible for employees to participate as shareholders. Whereas firm oriented objectives may include improving performance, consumer oriented objective is about improving services and/or goods. Given the variety of objectives, it seems appropriate to follow the argument that a privatization program should be evaluated by whether or not the original objectives of the privatization have been achieved. (Sheshinski and López, 1999) It is apparent, however, that many of these objectives are interrelated.

The forms of privatization range from Commercialization, Liberalization, Divestiture, Deregulation, Contracting, Public-Private Partnership, Franchise, Grants and Subsidies, Asset Sales, Volunteerism, Private Donations, partial sale, to concessions, leases, and management contracts, to the hiving off and sale of non-core business activities, to the opening of previously restricted sectors to new private entrants and

competitors. Each form has been carried out in a variety of ways (Djankov and Murrell, 2002); (Higgins, 2000)

Various studies have shown that to a large extent benefits from properly executed privatization have improved considerable, which includes improved welfare, productivity, company performance and operational efficiency, reduced government debt and spending on public enterprises, consumer benefits, improved employment levels, strengthened capital markets and broader ownership of capital, more completion, increased investment and greater inflow of foreign direct investment, and finally technology and skills transfer (Megginson *et al.* 1994). On the other hand, privatization has encountered resistance in key public service sectors such as water and electricity as they are considered natural monopolies. Privatization has also been viewed with much scepticism in many countries by all segments of the society including academicians, professionals, politicians and public officials, trade unions and workers, civil societies and domestic private sectors (Harsch, 2000)

1.1.2 Financial Performance

Financial performance may be defined as a general measure of a company's overall financial health over a given period of time, and can be used to compare similar companies across the same industry or to compare industries or sectors in aggregation (http://www.investopedia.com). It may also be defined as the results of a company's policies and operations in monetary terms. These results are reflected in the company's return on investment, return on assets and return on sales among others (http://www.businessdictionary.com).

Financial performance indicators may include the following: Profitability measured by three accounting measures namely, ROS which is net income to total sales, ROA which is net income to total assets and ROE which is the net income to total equity. Similarly, Financial Leverage is measured by Debt to Assets which is total liability to total assets, Long-Term Debt to Equity which is long-term liabilities to total equity and Debt- Equity ratio which is the total debt to total shareholders' equity. Activity ratios however are measures of how well assets are used and are for most part turnover ratios. The most common turnover ratios include: Inventory Turnover, which is the cost of goods sold to inventory; Account Receivable Turnover, which is the net credit sales to accounts receivable; Total Asset Turnover, which is sales to total assets and Fixed Asset Turnover, which is sales to fixed asset ratio.

Shareholder ratios on the other hand forecasts on the interest of owners. The ratios include: EPS, which is the amount of income earned during a period per share of common stock; Book Value Equity per share, which is the amount of book value of common equity per share of common stock and PE Ratio, which is the price per share of common stock to the earnings per share of common stock. Liquidity Ratios provide information on a company's ability to meet its short-term, immediate obligations. It is measured by the Current Ratio, the amount of Working Capital, and the amount of Working Capital per Shilling of gross revenue. Solvency Ratios indicate the degree to which all debts are secured, and the relative mix of equity and debt capital used by the firm. The Total Debt to Asset ratio is one of several ratios used to measure solvency, all of which are based on the same relationship of assets, liabilities and net worth (Pamela & Frank, 1999)

1.1.3 Privatization and Financial Performance

The support for the effect of privatization on company performance has mainly been motivated by a wide body of empirical evidence on the comparative performance of public and private ownership. On the other hand, the empirical evidence to substantiate claims of the improved efficiency due to the privatization of SOEs is scanty and is still developing. Nevertheless, the results from comparative studies of private and public companies are mixed although largely supporting the propositions that emerge from the property rights and public choice theories that private enterprises are more efficient than state enterprises in achieving lower costs and higher productivity and profitability where companies operate in competitive environments (Martin & Parker, 1997)

The pre-privatization and post- privatization financial and operating performance of 85 companies that were privatized through public share offerings (1999-1996) indicated that privatization had led to significant increase in profitability, output, operating efficiency and dividend payments as well as a significant decrease in leverage ratios. However, an examination of 6 Moroccan privatized companies revealed that privatization had a negative or no effect on financial performance (D'Souza & Megginson, 1999); (Ernst, Edward, Gegory, & Holt, 1999). A comparison of the pre-privatization and post- privatization financial and operating performance of 61 companies from 18 (12 developed and 6 developing) countries and 32 industries produced improved performance in operating profit margin and to some extent, in labour productivity (Megginson *et al*., 1994).

The advocates of theories of privatization believe that privatization offers the best opportunities for improving organization's performance. Relevant theories include: productive efficiency theories, property rights theory, agency theory as well as the theory of allocative efficiency. Generally, these theories emanate from two schools of thought (as described in the literature)

Productive efficiency focuses on a decrease in the production costs, which is achieved by efficient management and the right incentives. In this respect, neo-classical economists argue that private ownership stimulates the implementation of efficiency-enhancing policies. Property rights theories are instrumental in achieving both allocative and productive efficiency in respect of organization's resources (Vickers &Yarrow, 1988). Agency theorists believe that privatization stimulates the design of organizations including the accounting systems. Public choice theory showed that privatization lead to efficient restructuring thus improved performance.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) was constituted as Nairobi Stock Exchange in 1954 as a voluntary association of stockbrokers in the European community registered under Societies Act. It is an organized and licensed market for the buying and selling of listed securities (shares, stocks and bonds). Individuals and companies can buy shares of companies through Licensed Stockbrokers and dealers hence become part-owners lenders to or creditors of the listed companies or the Government. Currently, the Nairobi Securities Exchange is the only licensed exchange in Kenya. In the 1980s the Kenyan Government realized the need to design and implement policy reforms to foster sustainable economic development in

particular setting out the role of private sector in the economy. This reduced the demand of public enterprises on the exchequer (www.mbendi.com). In 1988 the first privatization of KCB through the NSE, a sale of 20% government's stake materialised. The sale left the government of Kenya and other institutions with 80% ownership. 1996 so the largest share issue in the history of NSE, the privatization of Kenya Airways. Having sold 26% stake of KML, the government of Kenya proceeded to offer 235,423,896 shares (51% of fully paid and issued shares of KES 5 per share) to the public at KES 11.25 per share reducing government's shareholding from 74% to 23% (www.en.m.wikipedia.org).

In May 2006, the NSE formed a demutualization committee to spearhead the process of demutualization. As an instrument of privatization, the NSE has provided an avenue of liberalization of sectors previously dominated by the government and facilitated public divesture of its shares in public enterprises such as Safaricom, Kenya Reinsurance Corporation, KENGEN, Mumias Sugar Company, KCB, Eveready Batteries (K), Stanbic Kenya Limited, among others. NSE encourages the broader ownership of firms. The opportunity accorded the general public to have ownership rights over listed enterprises helps to reduce large income inequalities through the sharing of profits made by these enterprises, thereby facilitating the redistribution of wealth. Investors are accorded the opportunity to buy the number of securities that are afforded to them, thereby facilitating the small investors' source of extra income. The activity in the market therefore, serves as a "barometer" for the economic performance (http://www.nse.co.ke).

On June 27, 2014, the Capital Markets Authority proved the listing of NSE stock through an Initial Public Offer (IPO) and subsequent self-listing of its shares on the Main Investment Market Segment. The listing made NSE the second in Africa after Johannesburg Stock Exchange (JSE) as the only self-listed exchanges

1.2 Problem Statement

Since the eighties, privatization has become an integral part of the public policies in the developing world. The governments' aims, through these privatization programs, are to enhance the efficiency of the SOE sector, to decrease the budgetary burden of the SOEs, and to make capital markets more dynamic. However, there are arguments against privatization and Kenya is no exception. Those not in agreement believe that just as any other African countries that the economic reforms in Kenya is a ploy by few elites to sell public enterprises to themselves at the expense of the masses. Rather, that government should improve the SOEs by making them competitive rather than transferring them to private ownership whose main objective is profit maximization that cannot bail Kenya from the precarious economic predicaments. For this, attention must be made to the competitiveness of the resulting market structure in addition to ownership of the companies. What follows therefore, is determination of the effect of privatization on the financial performance of the companies (before and after privatization) with a view to determining areas that need strong measures.

A test of whether the performance of 218 Mexican SOEs privatized through June 1992 improved after divestiture was performed by comparing the profitability, employment, and efficiency levels of the privatized companies to an industry matched control group, and found that the former SOEs rapidly closed the yawning

performance gap that had existed prior to divestment. Output increased by 54.3 percent, (in spite of a reduced level of investment spending), sales per employee roughly doubled, and privatized companies reduced blue-collar and white-collar employment by half (La Porta & Lopez-de- Silanes, 1999). In another study, the impact of privatization in the United Kingdom concluded that the results on profitability and value-added per employee were less encouraging from the conclusion that it was difficult to sustain unequivocally the hypothesis that private ownership is preferable to nationalization on efficiency grounds (Martin & Parker, 1997).

After privatization, Kenya Airways registered a gross profit of KES.237,204,000 from a previous gross loss of KES.53,867,000 in 1992. In 1994, earnings per share rose to - 0.09 from - 1.11 in 1993. Return on investment rose to - 0.007 from - 0.103 in the same period (Kenya Airways, 1989-1998). In another study 77% of the respondents believed that the efficiency of the public sector was enhanced after privatization, 20% believed that public expenditure on the public sector was reduced while 3% believed that privatization enabled the former public enterprises to operate on the basis of market principles, operational autonomy and the enhancement of accountability (Mutuku, 2002). Institutions that took the bold step of converting into commercial banks did not register improved performance as anticipated. In fact, most performance indicators showed a declining trend (Koros, 2001).

Out of the total 48 banks examined 86% had no government ownership, 10% were partially government owned and only 4% were entirely owned by the government. It was established that there was no significant relationship between the extent of

government ownership and the financial performance of the Kenyan banks (Thuku, 2002). A comparison of the financial performance of public enterprises and the privately owned firms was done in Kenya and concluded that public enterprises were poor in performance as compared to the private ownership that is, private sector was found to perform better than state owned enterprises. The degree of indebtedness was found to be the same in the two sectors (Ogeto, 1994).

Existing comparative studies on the effect of privatization on economic efficiency do not offer unequivocal support that privatization increases efficiency. Needless to say, most of these studies have been undermined by the short time horizon of the period after privatization and the practical difficulties of separating other factors that affect companies' performance. This study therefore, sought to address the research question: Is there an effect of privatization on the financial performance of privatized companies at the Nairobi Securities Exchange?

1.3 Objective of the Study

The study objective was to determine the effect of privatization on financial performance of companies at the Nairobi Securities Exchange

1.4 Value of study

The findings of this study may be of benefit to the following:

Policy makers who make use of performance measures of the stock market in advising public corporations on privatization prospects that may arise when listing in the stock market may find the findings useful. In addition, it may guide policy makers

of new baselines to use the results in determining privatization options for public corporations.

The findings may provide general impetus to the underperforming privatized companies, that is adoption of the global best practices along with management and motivation of the best human talent in fostering sustainable competitive advantage and improvised management of resources and by extension improved economic and social welfare of the general public.

The findings of this study may provide a methodological guide helpful to other researchers interested in evaluating the effects of privatization and financial performance in different nations and in various industries. The findings may also provide significant literature to the students in their quest for filling the gap of knowledge

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

There is a wide range of theoretical and empirical literature relating to the effect of privatization on financial performance of privatized enterprises. This chapter reviews seven theories with respect to privatization

2.2 Theoretical Review

There are several different schools of thought in favour of privatization, each of which addresses one particular aspect of economic adjustment. The schools of thought can be divided into two categories based on when they emerged. The first category consisting of the Austrian School, the Property Rights School and the Public Choice School. The second category, which refers to recent ideas, comprises of the Principal-Agent Theory, the New Political Economy, the New Austrian School of Economics and the New Institutional Economics.

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2.2.1 Property Rights Theory

It explains differences in the performance of public and private enterprises in terms of marked differences in attenuation of property rights. Property rights in public enterprises are attenuated partly because property rights cannot be easily transferable. The problem of transferability implies that the cost and rewards of economic activities do not accrue more directly to individuals responsible for the property rights. It acknowledges that shareholders in a large corporation are not able to monitor management as closely as manager-owned company. The general conclusion from the property rights theory is that the more attenuated property rights are the less

productively efficient will be the enterprise because attenuation weakens the rewards-penalties systems that are necessary for cost minimizing behaviour (De Alessi, 1980; Davies, 1981).

2.2.2 The Principal-Agent Theory

In extending the property rights approach, the principal-agent theory focuses on differences in the monitoring mechanisms and incentives that public and private managers face as agents of shareholders given welfare maximization for the agents and profit maximization for the shareholders (Bös & Peters, 1991). The change in ownership from the public to the private sector has at least two effects: a change in the objective from a weighted welfare function to profit maximization and a change in the incentive structure by linking reward to the level of performance under the private ownership. This shift towards profit maximization may imply higher price, thus foregoing allocative efficiency, but there may be an increase in operational or productive efficiency.

2.2.3 The Public Choice Theory

The public choice theory takes a bureaucratic approach in which public enterprises are seen as instruments of enhancing utility functions of politicians such as maximization of votes and budgets. The proponents of the public choice theory held that government departments pursue objectives that do not maximize profits and therefore, pursue goals such as maximizing budget, risk aversion, employment and investment (Blankart, 1983; Boycko *et al*, 1996). A proposed model of privatization within the framework of public choice theory showed that privatization lead to effective

restructuring of state-owned enterprises that were producing at inefficiently high levels to maximize employment, only if both cash flow rights and control rights passed from the government into private hands. This made it difficult for the government to bribe managers to produce at inefficient levels by offering them operating subsidies. Therefore, cutting the 'soft budget constraint' is vital to improving performance (Boycko *et al*, 1996).

2.2.4 The Organizational Theories

These theories emphasize on the role of organizational characteristics in determining the performance of companies. Proponents of the organizational theories argued that differences in the performance of public and private companies are influenced by differences in management, goals, labour, communication and reporting systems, organizational structure, and the nature and location of business. In all the four aforementioned theories of privatization, there is a consensus that ownership matters and does affect the internal efficiency of companies (cost minimizing behaviour) and the allocative efficiency in the market place (Martin & Parker, 1997; Bishop & Thompson, 1994).

2.2.5 The Austrian School

The Austrian school points to the fact that continual changes over time in tastes, techniques, available resources, prices, plans and expectations require that individuals (economic agents) be allowed to arrange their property as they see fit, in order to gain access to more and better knowledge than would be possible with less freedom of action (Moldofsky, 1989). The welfare of economic agents is improved in a

competitive market which allows them to learn what consumers want, how much they are willing to pay, what factors and methods of production are available and so on. This process continuously ensures that resources are reallocated to new preferable uses in the best possible way. The competitive market, whose foundation is price and shared economic knowledge, can generally exist in the context of private ownership which follows that privatization via competition improves efficiency and sensitivity to customer demand.

2.2.6 The New Political Economy

The new political economy sees rent seeking behavior from government intervention into the market. It also sees these interventions as destroying a perfectly competitive environment. The new institutional economics sees the internal organization of the firm as separate from its external market relations. It also sees that the economic agent has limited power to obtain all available information and that market transactions are not costless. Non-market institutions cannot act optimally, but individuals can (Sheshinski & López, 2003).

2.3 Determinants of Financial Performance

2.3.1 Economic Conditions

Economic conditions of a country can affect organization's performance on multiple fronts. Cost of borrowing can negatively influence the organization's capability to generate finances and invest in projects. Prices of utilities, high costs associated with plant and machinery due to either deterioration of currency or import costs, high

inflation rates and low income level of people can decrease the organization's performance (Forbes, 2002).

2.3.2 Corporate Governance

These are structures and behaviours that guide how a business entity sets its objectives, develop strategies and plans, monitors and reports its performance, and manage its risks (Reddy, 2010). Good governance enhances the performance of an organization. There are two models of corporate structure; shareholder model and stakeholder model. Shareholder model focuses on wealth creation of owners while stakeholder model covers broader aspects that concern the welfare of shareholders and overall organization performance (Maher & Andersson, 1999).

2.3.3 Ownership Structure

This is the separation of ownership and control. There are three types of ownership namely; owner- controlled, managerially- controlled and externally controlled organizations. Owner-controlled organizations are those with managers as dominant shareholders, managerially controlled are those in which no dominant shareholders exist while externally-controlled are those not dominated by managers (Ugurlu,2000) According to the agency theory, if managers of an organization are also owners, they are most likely to maximize shareholders wealthy. However Agency conflict is an important problem associated with ownership structure. Ownership structure is influenced by the size of the organization and composition of board of directors. Short-term profitability has been found to have a positive relationship with institutional ownership (Ugurlu, 2000). This is measured by block holding

(percentage of ownership of shareholders) and inside ownership (percentage ownership by managers)

2.3.4 Capital Structure

Every industry require substantial amount of resources be it land, labour or capital employed. These finances can either be generated internally (through equity) or externally (through debt). The decision on the basis of finance depends on the cost of capital and capital structure of the organization. Capital structure is also an important determinant of an organization's performance. It is also referred to as debt to equity ratio. Internally generated finances have the highest opportunity costs (Lewellen, 2004). The ratios used to determine the capital structure includes debt-equity ratios, long-term debt to total assets and short-term debt to total assets.

2.3.5 Risk Management

Risk management of an organization also impacts its performance. Risky organizations tend to attract only risk seekers. The relationship of risk and returns has to be managed so that the investors can expect returns based on the risk they are bearing. Risk management has two variables; business risks and firm level risks.

2.3.6 Organization's characteristics and policies

Certain organization's characteristics are associated with high performance of the organization. These include; size of the organization, growth rate, dividend policies, liquidity (Gurbuz *et al*., 2010), sales and market capitalization (Forbes, 2002). Large organizations attract better managers and workers who intern contribute to the

performance of the organization. It has the following control measures; Dividend yield, size of organization, sales growth, current ratios and market capitalization

2.4 Empirical Review

Privatization has been part of governments' policy toolkits since the past two decades. This provided enough time for academic researchers to generate wide range of empirical studies on the effects of divestment on post- privatization financial and operating performance of former SEOs. Advocates of privatization argued that private ownership was more efficient than public one. Their arguments were based on claims that the change in enterprise's ownership redefined the enterprise objectives and the manager's incentive to reduce cost and increase profit (Shirely & Nellis, 1991).

An assertion was made that governments expected the level of employment to decline once the SOE that were overstaffed turned private and no longer received government subsidies. However, in growing sectors, the newly privatized firm absorbed surplus labour through new capital investment and more productive use of existed assets. (Kikeri, Nellis & Shirley, 1992)

A study to compare pre and post privatization financial and operating performance of 61 firms that experienced full or partial privatization through public share offerings from 32 industries in 18 countries (6 developing countries and 12 developed countries) between 1961 and 1990 by using several financial indicators such as profitability, sales, operating efficiency, capital investment, leverage ratios and dividend pay-out figures, showed that strong performance improvements were achieved without sacrificing employment security. Specifically, after being privatized,

firms increase real sales, became more profitable, increase their capital investment spending, improved their operating efficiency and increased their work forces. Furthermore, these companies significantly lowered their debt levels and increased dividend payout. Finally, there was a significant change in the size and composition of corporate boards of directors after privatization (Megginson, *et al*., 1994).

Performance changes following the privatization by share offering of 17 national telecommunication companies were examined for the periods between 1981 and 1994 and found persuasive evidence that profitability, output, operating efficiency, capital investment spending, number of access line (a proxy for units of physical output), and average salary per employee all increased significantly after privatization. Though, leverage and employment declined significantly (D' Souza & Megginson, 1998)

An examination of pre-privatization and post-privatization financial and operating performance of 208 companies privatized in China (1990-1997) showed significant improvement in real output, and sales efficiency while significant decline in leverage following privatization, but surprisingly, no significant change was recorded in profitability. Further analysis by the authors showed that, privatized companies experienced significant improvement in profitability as compared to fully state-owned enterprises during the same period. Companies in which more than 50% voting control was conveyed to private investors via privatization experienced significantly greater improvements in profitability, employment and sales efficiency as compared to those that remained under the state's control (Zuobao *et al*., 2003).

The post-privatization performance of newly privatized companies in Asia was examined on how the private ownership structure evolved overtime. It showed that privatization lead to an increase in profitability, efficiency, and output in former state-owned companies from Asia while employment increased but insignificantly. Compared to related literature on the effects of privatization in developing countries, results from the study indicated improved performance in Asia where most companies were partially privatized though less significant than those documented in other studies. Finally, the study showed that governments generally did not relinquish control and that private ownership concentrated overtime, but by far less than what was observed elsewhere in developing countries (Boubakri, *et al*., 2004)

An evaluation of stock returns done on privatized companies through the stock between 1991 and 1995 (3 years before and after privatization) indicated that efficiency of privatized companies had significant differences after privatization. The study had the evaluation on returns based on stock returns than shares, dividends per share and non-cash benefits (Nasrollahi & Bagheri, 2009).

The effect of full privatization on the performance of Chinese listed companies were explored (full privatization is defined transferring the ultimate control of a state-owned company from the government to private owners) using a sample of 127 companies and indicated that the companies' performance had improved significantly following this transfer (Huang & Wang, 2010).

An analysis of financial performance before and after the transfer of the Stock Exchange, explained the privatization process during the first quarter of Development

Economic, Social and Cultural Rights in Iran to determine the effect of privatization on the performance of private organizations over the past 12 years by using the market value method and concluded that the profitability ratios, debt and leverage these organizations after privatization improved significantly (Farookhi, 2012).

2.5 Summary of Literature Review

From above reviews, it is clear that privatization produced mixed results, but most of the research conducted revealed performance improvements as a result of privatization though some studies indicated dismal performance after privatization. Governments efficiently restructured at least some companies before selling them. Once governments restructured such companies and improved their performance before privatization, such improvements may have had a contribution towards the change in ownership. Rather, the political impetus behind privatization. From the example, it is important to note that some of these successes are not achieved entirely as a result of privatization. Privatization need not only to achieve efficiency but to sustain them in the face of changing political, social and economic circumstances. Despite over two decades of experience with privatization, Kenya has not privatized all the approved SOEs. In addition, the studies that were done dwelt only on a few factors. Based on the reviews therefore, the study identified some research gaps in particular desired outcomes.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the research design, the population of study, sample design and selection, data collection methods as well as data analysis and data presentation methods employed.

3.2 Research Design

The study used a descriptive research design which is a set of brief descriptive coefficients that summarizes a given data set, which can either be a representation of the entire population or a sample (http://www.monroecollege.edu). The design was employed to determine the relationship between financial performance variables and privatization by measuring the central tendencies and dispersion variability.

3.3 Population and Sample

The population of the study was 16 privatized companies listed at the Nairobi Securities Exchange.

3.4 Data Collection

Secondary data was used in the study. The data obtained were of the following nature and obtained from the sources indicated in table 1 below;

Table 1: Nature of data and data source

Nature of Data	Data Source
Year of privatization	http://www.pc.go.ke
Listed privatized companies	http://www.nse.co.ke
Proxies for performance measures	http://www.cma.or.ke and selected privatized companies' audited annual reports
Inflation Rates and Consumer Price Index (CPI)	http://www.knbs.or.ke and https://www.centralbank.go.ke
Competitive data	Selected companies' audited annual reports

3.5 Data Analysis

The empirical model by Megginson, Nash and Van Randenborgh (1994), allowed for comparison between privatized firms in different industries and time period. The model was of the following general form:

$$\pi_{jt} = \beta_0 + \beta_1 PRIV_{jt} + \sum_{k=1}^{m} \alpha_k X_{kt} + \varepsilon_{jt} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

π_{jt} = performance measure for firm ***j*** in industry ***i*** and at time ***t,***

β_0 = the mean value of the dependent variable,

β_1 (estimated value of slope) = effect of privatization on the trend of dependent variable by representing the value of the difference in the mean value of the dependent variable.

PRIV = both privatization intensity and method of privatization thus a variable capturing privatization; it takes a value of one (1) for each year in the post-privatization period and zero (0) in the pre- privatization period.

X = the vector of variables representing competition, barriers to entry and exit, demand variables, organizational characteristics and the policy environment.

ε = the error term.

In determining the effect of privatization on the performance a modified pooled regression analysis was used. It was of the following form:

$$\pi_{jt} = \beta_0 + \beta_1 PRIV_{jt} + \beta_2 DCOMP_{jt} + \beta_3 SIZE_{jt} + \beta_4 STATE_{jt} + \varepsilon_{jt} \quad \ldots\ldots (2)$$

Where:

π_{jt} = Industry- adjusted performance proxy for company j at time t

β_0 = Mean of financial performance proxies

β_1 = Gradient (mean difference of performance proxies)

$PRIV_{jt}$ = Dummy variable for Privatization (Pre=0, Post=1) for company j at time t

$DCOMP_{jt}$ = Domestic Competition measured by HHI index

$SIZE_{jt}$ = the size of the company (natural log of total asset)

$STATE_{jt}$ = State ownership (% share ownership)

ε_{jt} = Residual error of company j at time t

The model was used to calculate performance for the selected company for a 10 year period (5 years prior to privatization and 5 years after privatization) with the year of privatization as year zero (0). The date of privatization was the one the government divested in the first time, a certain amount of shares. In estimating the equation, panel data method was employed as follows:

First Step: Three measures of financial performance that is, Profitability (ROS, ROA and ROE), Leverage (LEV_1 and LEV_2) and Shareholder (EPS and PAYOUT) proxies were calculated. The ratios were computed using nominal data in both the numerator

and denominator. In computing real sales and sales efficiency (revenue per employee), the sales revenue data was deflated using appropriate consumer price index (CPI).

Second Step: Having computed pre- and post-privatization means, Wilcoxon signed-rank test was used as a principal method of testing for significant changes in the variables. It was of the following form:

$$Z = \frac{w-0.5}{\sigma_w}, \sigma_w = \sqrt{\frac{N_r(N_r+1)(2N_r+1)}{6}} \qquad For\ Nr \geq 10 \ldots\ldots\ldots\ldots\ldots (3)$$

Where: $\boldsymbol{W}$ = Absolute value of the sum of signed ranks, $\boldsymbol{N_r}$ = (N-1)

The procedure tested whether the median difference in the variable values between pre- and post-privatization samples/population was zero (0). Conclusion was based on standardized test statistic *Z*, which for samples of at least ten followed approximately a standard normal distribution (equation … 3). Wilcoxon singed- rank test is a parameter free test, well-suited for small sample sizes. In addition, a (binomial) proportion test was used to determine the level of success that is, whether the proportion (*p*) of companies experiencing changes in a given direction is greater than would be expected by chance (typical testing whether $p = 0.05$).

Third Step: To capture the effect of domestic competition on financial performance, HHI index was used which is the sum of squared market share (Sales) of all companies in the nine sectors. Finally, to establish the extent to which differences in mean performance attributed to privatization, a statistical package SPSS version 16.0 (2007) was employed.

CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The purpose for this study was to evaluate the effect of privatization on the financial performance of 16 listed companies at the Nairobi Securities Exchange. This chapter therefore covers data analysis and discussion on the findings

4.2 Data Analysis

Financial performance was measured by ROA, ROS, ROE, LEV_1, LEV_2, DIVSAL, PAYOUT and EPS ratios. Other performance indicators were also determined such as, SALEFF, NIEFF, CESA, CETA, EMPL and SAL. For each proxy, a number of observations were made which included mean and median of the variables and Z – Statistics of the Wilcoxon-signed rank test, which was the test of considerable change in median value. To capture the extent of competition the Herfindahl-Hirschman Index (HHI) was used by summing the squared market shares (sales) of all companies in a sector. Finally, a multiple linear regression analysis was used to determine the effect of privatization

4.3 Results and Discussion

This section discusses empirical results for 14 out of 16 companies listed at the NSE as no data was obtained for 2 companies. For each proxy, the number of observations, the mean and median, percentage change and the standard deviation was determined. In addition, percentage of companies that performed in the way expected as per the predicted performance indicators together with ρ- values of the proportion test was

performed. The results are in two sections; Section one, Financial Performance (Profitability, Leverage and Shareholders Rates) and the second section, Other Performance indicators (Operating Efficiency, Capital Investment, Output and Employment)

4.3.1 Privatization

There are various forms of privatization though there were four forms of privatization of the listed companies at the Nairobi Securities Exchange. From the analysis performed on the 14 out of the 16 companies, the initial public offer (IPO) indicated a 48.22% success with Liquidation at 40%. There is however no significant statistical difference between the two (Figure 1). IPO has been somewhat the preferred ways to privatize SOEs because it involves the citizens (Kikeri & Phipps, 2008). Large and more profitable SOEs are more likely to be privatized through public offering.

Figure 1: Performance of various forms of privatization

No	FORM OF PRIVATIZATION	No. OF Co.	% OF SUCCESS
1	Initial Public Offer (IPO)	4	48.22%
2	Pre-emptive Rights	2	46.83%
3	Public Floatation- Divestiture	7	46.63%
4	Liquidation	1	40.00%
	TOTAL	**14**	**45.42%**

There is no one right or wrong approach to privations. However lessons learnt from countries' experience in dealing with privatization can serve as general guidelines for other countries with common features. Although there are various elements to be considered in the process and implementation of privatization, evaluation should be

concentrated on those that are appropriate which may include strategies, communication and consultation not forgetting ownership restrictions.

Implementing privatization policies is a complex issue and therefore, requires an effective, well co-ordinated approach to the formulation of its strategy, which ultimately paves the way to effective, successful privatizations. Without political commitment to privatization at the highest level, issues such as bureaucratic inertia and inter-institutional rivalries hamper the process. Political commitment to privatization in Kenya has been strong since its launch although, it has lost momentum. A transparent privatization process can enhance the integrity and gain credibility with potential investors and political support from the public

4.3.2 Financial Performance

Appendix 4 presented empirical results for each proxy and a number of usable observations given; the mean and median values, standard deviation of the proxy for the five-year periods prior and subsequent to privatization, the mean and median change in the proxy's value for pre-privatization versus post-privatization period, and a test of significance of the change in median values. The final two columns detailed the percentage of firms whose proxy values increase after privatization.

Changes in Profitability

SOEs are often chronically unprofitable partially because they are charged with objects such as maximizing employment rather than profit maximization. Return on Sales (ROS), Return on Assets (ROA) and Return on Equity (ROE) were employed to

measure profitability at 5% level of significance. From the performance indicators (*Appendix 3*), it was expected that ROS, ROA and ROE will increase after privatization. There was a 45% increase and a 2% decrease in ROS mean and median respectively. There was however, a decrease in both the mean and median of ROE at 18% and 1% respectively. 42.86% of the companies showed a positive change in ROS and ROA while 50% in ROE (*Appendix 4*). In overall, it seems privatization created the necessary impetus in improving profitability. The overall increase in profitability may have resulted from increased subsidies or prices after divestiture rather than from privatization.

Changes in Leverage

For leverage, Debt to Asset (LEV_1) and Long-Term Debt to equity (LEV_2) was calculated to determine the changes in leverage of privatized companies. As companies move from public to private ownership, leverage is expected to decrease due to the removal of government debt guarantees thus increasing the companies' borrowing costs and their ability to access public equity market (Megginson, *et al*., 1994). From the results (*Appendix 6*), there was decrease of 7% in debt to asset ratios. 53.85% of the companies showed a negative change in respect of LEV_1 while 30.77% with respect to LEV_2. Privatization programs in some countries especially in Latin America, feature debt restructuring of the companies prior to privatization by writing off the debt or part thereof. The government may therefore increase the companies' attractiveness for sale. This process may be achieved through debt –to-equity swap at the company level or between privatized companies and other SOEs Countries implementing such policies include Brazil, Mexico, Agentina, Chile and Venezuela (Boubakri & Cosset, 2004). Evidence also suggests that, at least in emerging capital

markets with significant privatization experiences (e.g. Chile), privatization contributed to stock market development particularly, in enhancing liquidity of local markets (Perotti & Pieter, 1995)

Dividend Policy

This was measured using Earnings per Share (EPS), Dividend Payout and Dividend to Sales (DIVSAL). There was a strong expectation of dividend increasing after privatization. This was because unlike governments, private investors generally demand dividend and as a point of reference, dividend payouts are a classic response to atomized ownership structures to which most privatization programs lead. Earnings per Share were also expected to increase after privatization since profits were to increase (Megginson *et al*., 1994). From the results (*Appendix 4*), there was a decrease in EPS (42.61 points) albeit an increase in PAYOUT (20%) and DIVSAL (2%). 85.71% on EPS, 78.57% on PAYOUT and 42.56% on DIVSAL of the companies showed a positive change (*Appendix 7*).

4.3.3 Other Performance Indicators

Other performance indicators include Operating Efficiency, Capital Investment, Output and Employment. Appendix 8 shows the results for each of the 6 proxies and a number of observables on; the mean and median values, standard deviation of the proxy for the five-year periods prior and subsequent to privatization, the mean and median change in the proxy's value for pre-privatization versus post-privatization period, and a test of significance of the change in median values. The final two

columns detailed the percentage of firms whose proxy values increased after privatization.

Operating Efficiency

For operating efficiency, inflation- adjusted sales per employee and net income per employee was used. The values added and net income figures were adjusted for inflation using the consumer price index (2009=100) computed by the Kenya National Bureau of Statistics (*Appendix 2*). From the results (*Appendix 8*) above, both SALEFF and NIEFF increased by over 6000 and 2000 points respectively. 83.33% and 66.67% of the companies also experienced increments in Sales efficiency (SALEFF) and Net Income efficiency (NIEFF) respectively (*Appendix 9*). In general, divested companies seem to improve their operating efficiency thus meeting the objective most frequently put forward by governments when launching privatization programs. After privatization, companies are expected to employ their human, financial and technological resources more efficiently because of a greater stress on profit goals and reduction of government subsidies (Kikeris & Nellis, 1992).

Labour unions and some experts assert that restructuring reforms often deteriorates the quality of products and services, stability and safety, but people as taxpayers want to slack. Moreover, if products and services were to be provided as before, people would naturally prefer privatization and smaller SOEs.

Capital Investment

To determine the changes in capital formation, two variables were calculated: Capital Expenditure to Sales (CESA) and Capital Expenditure to Assets (CETA). Greater

emphasis on efficiency and profitability makes newly privatized companies increase their capital investment spending this is because of reduced government's bureaucratic procedures in addition to increased access to private debt and capital market (Megginson *et al*, 1994). Appendix 8 indicates a decrease of 1% in CESA and no change in CETA. However, in general, 80% of the companies had an increase in both CESA and CETA (*Appendix 10*).

Countries with fairly developed capital market as opposed to those with less developed capital markets are likely to have market friendly frameworks, a factor likely to favor success of privatization (Kikeris & Nellis, 1992). Notable, many of the privatization programs in developed countries reserve a fraction of their share issue (of between 5% and 20%) for the companies' employees. The purpose of this Employee Stock Ownership Plans (ESOP) being to advance voting rights and residual claims hence ensuring employees' support for the privatization program thus improved efficiency (Boubakri & Cosset, 2004). As the government relinquishes both ownership and control, the newly privatized firms have to adjust their levels of production to more efficient levels and increase through more investment spending their productive capacity, to be able to survive in the new competitive environment.

Output

For changes in output real sales (nominal sales divided by consumer price index) was used to determine the effect of privatization on output. Government's expectation after privatization is an increase in real sales due to perceived better incentives, more flexible financing opportunities, increased competition and greater scope for entrepreneurial incentives. On the other hand, it was argued that effective

privatization led to the reduction in output since governments were no longer enticing managers (through subsidies) to maintain inefficiently high output levels (Boyco *et al.*, 1993). Appendix 8 indicates that there was an increase of 2,840 points. It also showed a 46.15% in real sales (*Appendix 11*). Despite the positive results as predicted by Megginson, Nash and Van Randenborgh (1994), for a sample of most developed countries, it's contrary to Boycko, Shleifer and Vishny's (1993) model which predicted a decrease in output after privatization due to inefficiencies observed while owned by state.

Employment

One of the most important obstacles facing privatization is the fear of employment opportunities reducing. This is from the fact that SOEs tend to overstaff and no longer receive subsidies from the government after privatization. From the results (*Appendix 8*), employment decreased by 387.34 points. The decrease occurred across 60% of the listed companies (*Appendix 12*). This also shows that privatization does not necessarily mean a decline in employment levels as high levels of investments and efficiency lead to more output and employment. However, in growing sectors, newly organizations could absorb surplus labour through new capital investment and more productive use of existing assets (Shirley & Nellis, 1992). The relationship between privatization, the organization's work environment and employee attributes has received less attention. Factors such as trust and reciprocity can play a significant role in the principle-agent relationships that exist within the organizations.

As agents, employees enter an organization with certain needs, and the ability of the organization and its management (the principle) to provide an environment in which

they can satisfy this needs determine employees' commitment and subsequent behavior. Share ownership of employees has become a key feature of privatization. Turning SOE employees into their shareholders through privatization increases their commitment to the privatized companies guaranteeing higher performance (Zuobao *et al*., 2003)

4.3.4 Privatization and Financial Performance

The statistical results obtained in the prior sections assume that privatization is the only factor influencing performance although in practice, other factors such as domestic completion, company size and state ownership may have also contributed to the performance. To capture the effect of privatization on financial performance therefore, a cross-sectional pooled regression was employed. It was of the following general form:

$$\pi_j = \beta_0 + \beta_1 PRIV_j + \beta_2 DCOMP_j + \beta_3 SIZE_j + \beta_4 STATE_j + \varepsilon_j \quad \ldots\ldots\ldots\ldots\ldots (3)$$

The analysis was used to describe statistical relationship between the mean change in performance indicators, privatization and other predictor variables. A number of observations are given (*Appendix 13*); Performance indicators (*VAR*), the coefficient of regression (R^2), coefficient of privatization, domestic competition, company size, state ownership and residual (β_1, β_2, β_3, β_4 *and RES*) respectively. The final four columns detail the residuals, probability values (ρ), standard errors and the various levels of success per company in respect of privatization. In order to run the multiple regression analysis, a number of assumptions were made including normality, homoscedasticity of variance, independence of errors and outliers. Homoscedasticity

of variance refers to the residual at each level of independent variable being similar. The regression analysis was done for each dependent variable.

Test for normality of distribution

The test for normality was done using Wilcox signed- rank test which was appropriate for the study given that the sample size was less than 50 ($n<50$). If the tests is significant ($p<0.05$), the distribution is not normal. From the results, the tests showed that all variables except for state ownership were significant. Therefore, the distribution is not normal for all the variables in the study

Homogeneity of variance

Levine's test is normally used to test homogeneity of variance for a group of data with a decision criteria that if Levine's test is significant at ($p\leq0.05$), then an assumption of homogeneity of variance between the group is to be rejected. If however, the test is non-significant ($p\geq0.05$), then the assumption of homogeneity of variance between the group is accepted (Field, 2005). From the results, the test was non-significant. The data is therefore homogenous.

Level of Measurement

In this study, the dependent variable (profitability variables; ROA, ROE ...) were measured at the interval or ratio level i.e. on a continuous scale.

Descriptive Analysis

The descriptive results shown (*Appendix 14*) indicated the lowest (Minimum) and the highest (Maximum) values for ROA and other factors affecting financial performance, mean, standard error and standard deviation. The statistics showed that government ownership ranged from between a minimum of zero and a maximum of 70% in post privatization period. The mean state ownership was 28.2% with a standard error and standard deviation of 2.7% and 22.1% respectively. ROA represented the company's financial performance and had a mean of 0.09 and increase of 0.008 from pre-privatization. The result also showed that outside debt does not seem to be the popular method of financing the listed companies; an average company had a long-term debt to equity (LEV_2) of 17%

Although 14 variables are reported in both figure 4 and 5, only results for 2 variables; ROA as the benchmark profitability indicator and SALEFF as the preferred operating efficiency indicator. The results showed a positive effect of privatization on ROA at 16%. There were also other variables that led to a positive change in ROA (*Appendix 14*) which include domestic completion at 14%, state ownership at 35%. However, company size had a negative effect on ROA at -7%. 97.91% of the variations in ROA were explained by the independent variables

Appendix 15 showed a negative effect of privatization (-21,711.26) on sales per employee (SALEFF) and a positive effect (2%) on return on capital. The results confirms the observations made by Ahsan *et al*. (1999) who observed that increased return on capital led to a decrease labour return. He attributed the decline in labour productivity to increase in labour intensiveness of production in the structural

adjustment period. The relationship between state ownership and SALEFF denoted by β_4 was also negative (-77,265.77). However, company size and SALEFF was positive.

4.4 Summary of Findings and Interpretations

The study was designed to assess the effect of privatization on the financial performance of listed companies at the Nairobi Securities Exchange. The following are summary of findings and the interpretations therefrom:

There are many forms of privatization though there were four forms at the Nairobi Securities Exchange namely Initial Public Offer (IPO), Public Floatation-Divestiture, Pre-Emptive Rights and Liquidation. From the results, IPO was preferred at 48.22% followed by Pre-Emptive Rights, Public Flotation and Liquidation at 46.83%, 46.63% and 40% respectively. There was however no statistical difference between them.

For changes in profitability in general, there was a 45% increase and a 20% decrease in ROS mean and median respectively, a decrease in ROE at 18% and 1% respectively. 43.86% of the companies sampled at the NSE indicated positive changes in both ROS and ROA. This indicated that privatization had positive impact on profitability. Debt to asset (LEV_1) and long- term debt to equity (LEV_2) ratios were used to determine the changes in leverage. The results showed a decrease of 7% in LEV_1 while LEV_2 had no change. However, 53.85% and 30.77% of the privatized companies at the NSE experienced a decrease in both LEV_1 and LEV_2 respectively. Generally, there was a drop in earnings per share and by 42.61 points and an increase in both PAYOUT and dividend to sales (DIVSAL) ratios of 20% and 2% respectively.

There was however an 85.71%, 78.57% and 42.56% increase in EPS, PAYOUT and DIVSAL respectively for the sampled privatized companies at the NSE.

Analyses for other performance indicators were also done which included operating efficiency, capital investment, output and employment. Operating efficiencies were measured using sales efficiency (SALEFF) and net income efficiency (NIEFF). The results showed an increase in both SALEFF and NIEFF of 83.33% and 66.67% respectively. In general, divested companies seem to improve their operating efficiency. Capital investment was measured by expenditure to sale (CESA) and capital expenditure to asset (CETA) ratios. CESA decreased by 1% while no change in CETA. There was however an increase of 80% in both CESA and CETA for all the sampled privatized companies at the NSE. Output indicated an increase of 2,840 points while real sales had a 46.15% increment. From the analysis, employment decreased by 387.34 after privatization which was experienced by 60% of sampled listed companies.

The capture the effect of privatization on the financial performance of listed companies at the NSE, a cross-sectional pooled regression was employed. The regression model had four independent variables which had possibilities of also affecting the financial performance of the privatized companies. These independent factors included; privatization (PRIV), domestic completion (DCOMP), company size (SIZE) and state ownership (STATE). The model indicated a positive effect of privatization on the financial performance ROS, ROA, ROE, EPS PAYOUT , DIVSAL and a negative effect on LEV_1 and LEV_2 as expected (*Appendix 3*)

The model also indicated that domestic competition had a positive effect on ROS, ROA, ROE, EPS and DIVSAL though a negative effect on LEV_1, LEV_2 and dividend PAYOUT. The size of the company had positive effect on LEV_1, LEV_2 and PAYOUT while a negative effect on ROS, ROA, ROE, EPS and DIVSAL. Consequently, state ownership had positive effect on ROS, ROE, LEV_1 and EPS. State ownership however, had no effect on ROA, LEV_2, dividend payout and DIVSAL. The coefficient of determination (R^2) ranged between 62.86% and 99.90% meaning that the model could only explain 62.86% to 99.90% of the variations in the dependent variable (financial performance variables) while the remaining 0.1% to 37.14% could be explained by other independent variables affecting performance that were not captured by the model. It should be noted that the higher the R^2, the better the function. A rule of thumb is that R^2 must be at least 80%.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary, conclusion and recommendations with respect to the effect of privatization on the financial performance of listed companies at the Nairobi Securities Exchange.

5.2 Summary and Discussions

The objective of the study was to determine the effect of privatization on the financial performance of privatized companies at the Nairobi Securities Exchange using descriptive (cross-sectional) survey, quantitative ratio analysis and MNR methodology. The study used a sample of 14 (87.5%) companies listed at the Nairobi Securities Exchange with complete data. Of the 14, only 2 (14.3%) were controlled by the government (share ownership>50%). The indicators used were Profitability, Leverage, Shareholders' Rates, Operating Efficiency, Capital Investment, Output and Employment. To determine the effect of privatization on the financial performance, a cross-sectional multivariate pooled regression analysis was used. The results on average showed:

Initial public offer (IPO) is the preferred mode of privatization though in comparison to other forms of privatization, there was no statistical difference. Generally, after privatization, there was an increase in profitability, dividend payout ratios and EPS while a decrease in leverage.

Other performance indicators were also performed and was determined that after privatization, operating efficiency increased, capital investment had mixed results; capital expenditure to sales increased while capital expenditure to assets had no change.

To assess the effect of privatization on the financial and operating performance of listed companies at the Nairobi Securities Exchange, a multiple regression analysis was performed and obtained the following results: Privatization had a positive effect on profitability and shareholders rates. It however had negative effect on leverage and output. It also had mixed results on both operating efficiency and capital investment. Surprisingly, employment level increased due to privatization.

Other independent variables affecting performance were also measured which included: Domestic completion which had positive effect on profitability and employment, negative on leverage and output while mixed on shareholders' rates, operating efficiency and capital investment; company size which had negative effect on profitability and employment, positive effect on leverage, operating efficiency, capital investment and output. There was however mixed results for shareholders' rates. Finally, change in state ownership increased profitability and shareholders' rates. However, it reduced leverage and output with mixed results on operating efficiency and capital investment. Surprisingly, change in state ownership led to an increase employment levels. In sharp contrast, to arguments that privatization reduced employment the results indicated an increase in employment. The evidence is opposite to that found in the empirical studies (D'Souza & Megginson, 1998) but supported other studies (Zuobao *et al.,* 2003)

5.3 Conclusions

Privatization is a major concept of Kenya's economic reforms. The conversion of SOEs into profit maximizing companies with significant non-government ownership is seen as mode of revitalizing industries; enhance technological advancements and growth eventually reducing or eliminating subsidies from government. Success in these pursuits will manifest themselves in the form of increased profitability, improved efficiency, increased capital expenditure and growth in output.

In order to realize the full benefit of privatization, the state and state agents need to sell all their shares to individuals and non-government affiliated institutional entities. Despite mixed statistical evidence obtained on the effect of privatization on the financial performance of listed companies, the study concluded that there was a positive effect of privatization on the financial performance of listed companies at the Nairobi Securities Exchange.

These findings therefore, are consistent with other empirical evidence demonstrating that when cash flow rights accrue directly to the dominant investor, companies are motivated to perform better and that sales and capital expenditures grow rapidly after privatization. The proceeds of the IPO, together with subsequent seasoned equity offerings, fund asset expansion. The injection of assets and operations from the parent SOE or other SOEs also enhances sales growth. Although sales revenues increase substantially, this is the result of expanding the asset base rather than an increase in efficiency.

5.4 Limitations of Study

This study however, did not escape some research constraints namely:

The study was primarily limited by its small size. The sample size could have been expanded by including unlisted companies at the NSE.

Data accessibility for some companies was a challenge as they considered it a sensitive issue in releasing information to outsiders. Employee data was missing for some companies. In addition, there were inconsistencies in the audited reports submitted by some companies at the Capital Markets Authority (CMA).

The study used ratio analysis to obtain useful information concerning the organizations operating and financial conditions. These ratios however, have their own limitations that necessitate care and judgment. Some of the potential problems include; seasonal factors distorting ratio analysis, organizations employing "window dressing techniques to make their financial statement stronger and different accounting practices thus distorting comparison among organizations (e.g. inventory valuation, depreciation methods, leasing of assets)

The model used book values except for a few variable n determining the dependent and independent variables. The methodology could have also included survey or interviews

The study was also limited by the time frame as it looked at 5 years prior to privatization and 5 years after privatization. Given the time frame, capturing all aspects of the companies' performance may have not been possible.

5.5 Recommendations

Given the positive effect of privatization on financial performance of listed companies at the NSE, the government as the policy makers may consider privatizing other poorly performing state owned enterprises (SOEs) and other companies that are not state owned. The recommendations may also provide impetus to the underperforming privatized companies and other researchers.

5.5.1 Policy Recommendations

Clear privatization strategy

The government of Kenya should put in place and make public clear privatization strategies which spell out the objectives and details of privatization programme. They should also incorporate the programme into Kenyan's broader economic reform effort such as devising ways for private sector participation in improving the economic performance of chosen companies and sectors. Also a full public debate prior to passing of new framework law would enhance government's image hence improved transparency.

Proper competitive process

To ensure best market access for investors, advisors should be hired openly and transparently through a competitive bidding process. This will enable advisors to represent the interest of the organization than their own interests. In dealings with external advisors, the government needs to develop an intelligent "customer capability" to avoid being taken advantage of. This is achieved by developing

sufficient knowledge of the issues at hand with the aid of Organization of Economic Cooperation and Development (OECD) guidelines and expertise.

Effective communication with stakeholders

Prior to privatization, the government should design and implement a more co-ordinated formal approach to consultation with a broader cross-section of stakeholders on a regular basis. Moreover, the results of the consultations should be made public. The timing and availability of official bulletins should be shared along with seminars and other conferences on issues organized by the government. To ensure support of trade unions and minimizing resistance, more effort should be put into working closely with the unions in the affected companies and propose retraining and redeployment of staff where applicable.

Full cost- benefit analysis of the projects undertaken

A cost- benefit analysis should take into account all alternative models of delivery (e.g. management and service contracts, divestiture and concessions,) as well as costs and benefits over the project's life cycle, whether financial or non-financial. The cost-benefit assessment should include analysis of the degree to which costs can be recovered from end-users and, in the event of shortfall, what other sources of finances to be mobilized. The cost-benefit analysis should also include a risk assessment based on the public interest for instance shifting too much risk on the private sector may result in higher prices for consumers to offset that risk. Finally, there should be an assessment of potential public finance implications of sharing responsibilities with the

private sector i.e. fiscal implications of issuing guarantees, even in the event of macroeconomic crisis.

Foreign Ownership restrictions

Policy on foreign ownership of privatized SOEs can be a sensitive issue, particularly in industries considered to be of national and strategic importance. The rational of opening up privatization transactions to foreign investors is that they can be important source of capital, especially where the domestic pool is too small to absorb the offerings. The results of OECD countries has shown that very narrow limitations on foreign ownership are required to address specific national security and public interest concerns. Government however may put in place provisions and arrangements at the time of sale in order to retain some degree of control over privatized SOEs and to protect newly privatized companies from the rigours of competition for corporate control. Such "post-privatization control devices" have typically been adopted where the government has sought to prevent foreign takeover of companies in sectors that are deemed to be of national interest such as defense or the protection of public interest (EOCD, 2003)

5.5.2 Suggestions for further Research

For future research on the effect of privatization, the following may be considered:

The population may be expanded to include the privatized companies not listed at the Nairobi Securities Exchange thus increased sampling hence larger sample size.

Future research may consider using market values rather than the book values in measuring dependent and independent variables through market values such as Tobin's Q

Ratio analysis is useful, but analysts should be aware of their limitations and make adjustments as necessary. Ratio analysis conducted in a mechanical, unthinking manner may be dangerous, but used intelligently and with good judgment can be of use in providing insights into the organization's operations.

A more complex model that takes into account more factors affecting financial performance should be explored. These factors include company structure, market structure, international competition (imports and exports), industry growth and many others. Future analysis will minimize challenges experienced by companies in determining the effect of privatization hence improved financial and operational efficiency.

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APPENDICES

Appendix 1: Listed privatized companies at the NSE

No	Company	Sector	Year Privatized	Govt. Share (%)		Method of Privatization
				Before	After	
1	Safaricom	Telecommunication	2008	60	35	IPO
2	Kenya Reinsurance Corporation	Insurance	2007	100	60	IPO
3	Kenya Electricity Generating Company	Energy	2006	100	70	IPO
4	Mumias Sugar Company (1st Offer)	Manufacturing	2001	70.76	38.13	IPO
5	Kenya Commercial Bank Ltd**	Banking	1998	100	35	Public Floatation (Partial Divestiture)
6	Eveready Batteries Kenya Ltd	Manufacturing	1997	24.87	20.87	Pre-emptive Rights
7	Stanbic Kenya Ltd	Banking	1997	40	23	Pre-emptive Rights
8	Kenya Airways	Commercial	1996	100	20	Public Floatation
9	Firestone (EA) Ltd.	Automobile	1994	20	0	Pre-emptive Rights
10	National Bank of Kenya	Banking	1994	100	42.5	Public Floatation
11	BAT Development (K) Ltd.	Manufacturing	1993	20	0	Liquidation
12	E.A. Oxygen Ltd- BOC	Manufacturing	1993	15	0	Public Floatation
13	CMC Holdings	Automobile	1993	20	0	Public Floatation
14	Uchumi Supermarkets Ltd.	Commercial	1992	90	44	Public Floatation (Partial Divestiture)
15	Housing Finance Company of Kenya	Investment	1992	50	30	Public Floatation (Partial Divestiture)
16	Bamburi Portland Cement Co. Ltd.**	Construction	1991	26	0	Public Floatation

** Companies with subsidiaries

Source: http://www.pc.go.ke

Appendix 2: CPI and IR from 1986-2013; *Base Period is 2009 = 100

Year	CPI*(%)	IR*(%)	Year	CPI*(%)	IR*(%)
1986	7.25	10.56	2000	49.89	9.93
1987	7.87	8.64	2001	52.75	5.87
1988	8.85	12.36	2002	53.79	1.96
1989	10.04	13.43	2003	59.06	9.81
1990	11.60	15.57	2004	66.03	11.78
1991	13.81	19.05	2005	72.57	10.13
1992	17.58	27.13	2006	76.95	6.06
1993	25.66	45.40	2007	80.24	4.26
1994	33.06	31.15	2008	92.36	15.09
1995	33.57	1.60	2009	102.10	10.62
1996	36.55	8.84	2010	106.26	4.10
1997	40.68	11.39	2011	121.17	13.98
1998	42.89	5.45	2012	132.53	9.63
1999	45.37	5.79	2013	140.11	5.72

Source: http://www.knbs.or.ke/index

Appendix 3: Testable Predictions of Performance Indicators

Characteristics	Proxies	Predicted Relationship
P(1) Profitability	Return on Sales (ROS) = Net Income ÷ Sales	$ROS_A > ROS_B$
	Return on Assets (ROA) = Net Income ÷ Total Assets	$ROA_A > ROA_B$
	Return on Equity (ROE) = Net Income ÷ Equity	$ROE_A > ROE_B$
P(2) Operating Efficiency	Sales Efficiency (SALEFF) = Sales ÷ Number of Employees	$SALEFF_A > SALEFF_B$
	Net Income Efficiency (NIEFF) = Net Income ÷ Number of Employees	$NIEFF_A > NIEFF_B$
P(3) Capital Investment	Capital Expenditure to Sales (CESA) = Capital Expenditure ÷ Sales	$CESA_A > CESA_B$
	Capital Expenditures to Assets (CETA) = Capital Expenditures ÷ Total Assets	$CETA_A > CETA_B$
P (4) Output	Real Sales (SAL) = Nominal Sales ÷ Consumer Price Index	$SAL_A > SAL_B$
P (5) Employment	Total Employment (EMPL) = Total Number of Employees	$EMPL_A < EMPL_B$
P (6) Leverage	Debt to Assets (LEV_1) = Total Debt ÷ Total Assets	$LEV_{1A} < LEV_{1B}$
	Long-Term Debt to Equity (LEV_2) = Long-Term Debt ÷ Equity	$LEV_{2A} < LEV_{2B}$
P (7) Payout	Dividends to Sales (DIVSAL) = Cash Dividends ÷ Sales	$DIVSAL_A > DIVSAL_B$
	Dividend Payout (PAYOUT) = Cash Dividends÷ Net Income	$PAYOUT_A > PAYOUT_B$
P (8) Earnings per Share gains (loss)	Profit (Loss) before tax and unrealized exchange ÷ number of shares in issues as at date of prospectus	$EPS_A > EPS_B$

Appendix 4: Financial Performance Indicators Analysis

VARIABLES	N POST (PRE)	POST Mean Median	PRE Mean Median	Mean Median Change	Post- Privatization		Pre- Privatization		Z-stats	% of companies changing as expected
					Mean SE	SD	Mean SE	SD		
PROFITABILITY										
ROS	69 (64)	0.60	0.14	0.45	0.05	0.42	0.01	0.12	1.948	**42.86**
		0.11	0.14	(0.02)						
ROA	74(60)	0.89	0.81	0.08	0.01	0.09	0.01	0.04	-1.005	**42.86**
		0.88	0.41	0.47						
ROE	74(64)	0.04	0.22	(0.18)	0.11	0.93	0.02	0.19	2.239	**50.00**
		0.16	0.16	(0.01)						
LEVERAGE										
LEV_1	74(60)	0.25	0.32	(0.07)	0.03	0.30	0.04	0.31	0.422	**53.85**
		0.13	0.21	(0.08)						
LEV_2	75(65)	0.17	0.17	(0.00)	0.04	0.38	0.04	0.36	0.246	**30.77**
		0.00	-	0.00						
DIV. POLICY										
EPS	74(64)	4.74	47.35	(42.61)	1.00	8.59	17.92	143.36	-1.586	**85.71**
		3.36	7.05	(3.69)						
PAYOUT	74(60)	0.44	0.23	0.20	0.06	0.54	0.03	0.25	0.473	**78.57**
		0.37	0.20	0.16						
DIVSAL	69(60)	0.06	0.03	0.02	0.01	0.05	0.00	0.04	-0.336	**42.56**
		0.04	0.02	0.02						

Appendix 5: Company changes in Profitability

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Safaricom	ROS	0.146	0.273	(0.127)	0.010	0.035	0.022	0.077	3.530	0.017
		0.141	0.253	(0.112)						
	ROA	0.123	0.180	(0.057)	0.007	0.014	0.017	0.030	3.645	0.011
		0.117	0.192	(0.075)						
	ROE	0.206	0.435	(0.229)	0.012	0.042	0.027	0.093	5.285	0.003
		0.205	0.382	(0.177)						
Kenya RE	ROS	0.390	0.230	0.160	0.024	0.035	0.054	0.077	-3.794	0.007
		0.384	0.217	0.167						
	ROA	0.101	0.049	0.052	0.006	0.006	0.013	0.014	-6.160	0.000
		0.100	0.051	0.049						
	ROE	0.167	0.110	0.057	0.010	0.011	0.021	0.025	-3.870	0.005
		0.166	0.103	0.063						
KENGEN	ROS	0.268	0.189	0.079	0.066	0.022	0.149	0.048	-1.117	0.315
		0.220	0.185	0.035						
	ROA	0.027	0.030	(0.003)	0.007	0.003	0.016	0.007	0.376	0.723
		0.022	0.031	(0.009)						
	ROE	0.047	0.061	(0.014)	0.010	0.006	0.023	0.013	1.222	0.268
		0.038	0.055	(0.017)						
Mumias Sugar	ROS	0.064	0.050	0.014	0.032	0.011	0.071	0.026	-0.413	0.697
		0.081	0.058	0.023						
	ROA	0.067	0.043	0.024	0.032	0.011	0.072	0.024	-0.714	0.507
		0.087	0.054	0.033						
	ROE	0.106	0.074	0.032	0.051	0.020	0.114	0.045	-0.583	0.585
		0.147	0.087	0.060						
KCB	ROS	(0.105)	0.181	(0.286)	0.104	0.031	0.233	0.070	2.622	0.047
		(0.053)	0.204	(0.257)						
	ROA	(0.011)	0.040	(0.051)	0.008	0.002	0.019	0.005	5.988	0.002
		(0.007)	0.041	(0.048)						
	ROE	(0.133)	0.420	(0.554)	0.102	0.033	0.228	0.073	5.158	0.004
		(0.072)	0.451	(0.523)						
Stanbic Kenya	ROS	0.164	0.209	(0.046)	0.019	0.007	0.043	0.015	2.248	0.074
		0.151	0.213	(0.062)						
	ROA	0.033	0.036	(0.003)	0.005	0.005	0.012	0.011	0.425	0.682
		0.029	0.040	(0.011)						
	ROE	0.160	0.294	(0.134)	0.017	0.024	0.038	0.054	4.580	0.003
		0.153	0.290	(0.137)						
Kenya Airways	ROS	0.114	0.252	(0.138)	0.014	-	0.032	-	9.728	
		0.113	0.252	(0.139)						
	ROA	0.096	0.263	(0.167)	0.011	-	0.024	-	15.531	
		0.098	0.263	(0.165)						
	ROE	0.239	0.530	(0.291)	0.048	-	0.108	-	6.005	
		0.189	0.530	(0.341)						
Sameer (Firestone)	ROS	0.186	0.200	(0.014)	0.014	0.013	0.030	0.029	0.731	0.486
		0.191	0.196	(0.005)						
	ROA	0.255	0.316	(0.060)	0.036	0.035	0.080	0.078	1.209	0.261
		0.264	0.289	(0.025)						
	ROE	0.385	0.592	(0.207)	0.060	0.029	0.134	0.066	3.093	0.021
		0.398	0.606	(0.208)						
National Bank	ROS	(0.778)	0.285	(1.063)	0.587	0.082	1.313	0.182	1.794	0.147
		0.092	0.313	(0.221)						
	ROA	(0.040)	0.010	(0.050)	0.036	0.001	0.080	0.002	1.402	0.233
		0.013	0.010	0.003						
	ROE	(1.753)	0.138	(1.891)	1.482	0.021	3.315	0.047	1.275	0.271
		0.116	0.149	(0.033)						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	T -Stat	ρ–Value ρ(T<=t)
BAT (K)	ROS	0.066	0.083	(0.016)	0.008	0.003	0.018	0.007	1.858	0.122
		0.058	0.083	(0.025)						
	ROA	0.116	0.147	(0.030)	0.017	0.009	0.037	0.020	1.600	0.161
		0.103	0.142	(0.039)						
	ROE	0.186	0.235	(0.049)	0.028	0.010	0.063	0.023	1.638	0.162
		0.167	0.226	(0.059)						
CMC Holdings	ROS	0.038	0.015	0.023	0.001	0.002	0.002	0.004	-12.157	1.9E-05
		0.038	0.017	0.021						
	ROA	0.206	0.066	0.140	0.022	0.015	0.050	0.035	-5.180	.001
		0.220	0.053	0.167						
	ROE	0.312	0.079	0.233	0.033	0.016	0.075	0.037	-6.278	0.000
		0.315	0.073	0.242						
Uchumi Supermarket	ROS	0.073	0.066	0.007	0.011	0.004	0.021	0.008	-0.1617	0.571
		0.072	0.065	0.006						
	ROE	0.416	0.366	0.050	0.025	0.009	0.050	0.018	-1.905	0.129
		0.403	0.369	0.034						
Housing Finance	ROS	0.135	0.033	0.102	0.010	0.007	0.023	0.014	-8.097	8.44E-05
		0.146	0.032	0.115						
	ROA	0.029	0.007	0.022	0.001	0.002	0.002	0.005	-8.997	0.000
		0.029	0.006	0.023						
	ROE	0.183	0.044	0.140	0.007	0.013	0.016	0.026	-9.473	0.000
		0.183	0.042	0.142						
Bamburi Cement	ROS	0.079	(0.017)	0.096	0.010	0.014	0.023	0.032	-5.416	0.000
		0.088	(0.005)	0.093						
	ROA	0.049	(0.007)	0.055	0.007	0.008	0.015	0.017	-5.388	0.001
		0.043	(0.003)	0.046						
	ROE	0.057	(0.007)	0.064	0.009	0.012	0.021	0.028	-4.119	0.004
		0.049	(0.005)	0.054						

Appendix 6: Company changes in Leverage

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Safaricom	LEV1	0.145	0.335	(0.189)	0.008	0.071	0.018	0.159	2.638	0.058
		0.157	0.274	(0.117)						
	LEV2	0.140	0.798	(0.658)	0.015	0.285	0.034	0.638	2.303	0.083
		0.150	0.446	(0.296)						
Kenya RE	LEV1	0.028	0.003	0.025	0.028	0.002	0.063	0.003	-0.903	0.418
		-	0.001	(0.001)						
KENGEN	LEV1	0.281	0.318	(0.037)	0.053	0.056	0.119	0.124	0.483	0.642
		0.251	0.232	0.019						
	LEV2	0.543	0.618	(0.076)	0.143	0.105	0.319	0.234	0.427	0.682
		0.407	0.526	(0.119)						
Mumias Sugar	LEV1	0.043	0.169	(0.126)	0.009	0.021	0.020	0.047	5.545	0.003
		0.036	0.186	(0.150)						
	LEV2	0.071	0.128	(0.058)	0.021	0.033	0.047	0.073	1.493	0.179
		0.062	0.154	(0.092)						
KCB	LEV1	0.814	0.599	0.215	0.018	0.111	0.040	0.247	-1.920	0.127
		0.825	0.772	0.053						
	LEV2	0.071	0.466	(0.395)	0.047	0.294	0.104	0.657	1.327	0.255
		0.005	-	0.005						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
Stanbic Kenya	LEV1	0.616	0.809	(0.194)	0.051	0.021	0.114	0.047	3.496	0.017
		0.642	0.787	(0.145)						
	LEV2	0.019	-	0.019	0.009	-	0.020	-	-2.127	0.100
		0.017	-	0.017						
Kenya Airways	LEV1	0.284	0.139	0.145	0.030	-	0.066	-	-4.853	
		0.292	0.139	0.153						
	LEV2	0.694	0.267	0.427	0.113	-	0.253	-	-3.777	
		0.853	0.267	0.586						
Sameer (Firestone)	LEV1	0.056	0.042	0.014	0.014	0.022	0.032	0.049	-0.526	0.615
		0.063	0.037	0.026						
National Bank	LEV1	0.793	0.840	(0.047)	0.018	0.022	0.041	0.021	2.275	0.063
		0.789	0.037	0.752						
	LEV2	0.967	0.841	0.126	0.412	0.010	0.920	0.021	-2.350	0.079
BAT (K)	LEV1	0.106	0.008	0.099	0.030	0.006	0.066	0.013	-3.269	0.031
		0.117	-	0.117						
CMC Holdings	LEV1	0.489	0.473	0.016	0.144	0.112	0.321	0.250	-0.089	0.931
		0.282	0.577	(0.295)						
	LEV2	0.030	-	0.030	0.030	-	0.068	-	-1.000	0.374
Housing Finance	LEV1	0.005	0.017	(0.012)	0.003	0.008	0.007	0.017	1.340	0.251
		-	0.016	(0.016)						
	LEV2	0.001	0.013	(0.012)	0.000	0.005	0.001	0.010	2.373	0.098
		0.001	0.010	(0.009)						
Bamburi Cement	LEV1	0.013	0.144	(0.131)	0.006	0.039	0.014	0.087	3.315	0.030
		0.010	0.114	(0.104)						
	LEV2	-	0.190	(0.190)	-	0.103	-	0.230	1.848	0.138
		-	0.102	(0.102)						

Appendix 7: Company changes in Shareholders rates

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Safaricom	EPS	0.163	480.391	(480.229)	0.014	116.098	0.032	259.602	4.136	0.014
		0.153	422.228	(422.075)						
	PAYOUT	0.529	0.240	0.289	0.044	0.103	0.099	0.229	-2.587	0.049
		0.528	0.333	0.195						
	DIVSAL	0.076	0.068	0.009	0.006	0.029	0.014	0.065	-0.284	0.791
		0.075	0.084	(0.009)						
Kenya RE	EPS	3.288	5.087	(1.799)	0.433	0.737	0.969	1.648	2.104	0.080
		2.932	5.082	(2.150)						
	PAYOUT	0.150	0.242	(0.093)	0.027	0.030	0.061	0.067	2.285	0.052
		0.142	0.205	(0.063)						
	DIVSAL	0.058	0.055	0.004	0.011	0.008	0.024	0.018	-0.270	0.795
		0.068	0.054	0.014						
KENGEN	EPS	1.682	11.507	(9.825)	0.194	1.759	0.434	3.934	5.552	0.005
		1.661	9.530	(7.869)						
	PAYOUT	0.490	0.079	0.411	0.072	0.056	0.161	0.124	-4.515	0.002
		0.528	-	0.528						
	DIVSAL	0.118	0.013	0.105	0.019	0.009	0.043	0.021	-4.915	0.003
		0.100	-	0.100						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Mumias Sugar	EPS	1.995	9.196	(7.201)	0.930	2.719	2.080	6.079	2.549	0.051
		2.232	9.084	(6.852)						
	PAYOUT	1.252	0.408	0.843	0.790	0.143	1.766	0.319	-1.050	0.353
		0.593	0.432	0.161						
	DIVSAL	0.049	0.021	0.028	0.014	0.006	0.032	0.013	-1.838	0.126
		0.057	0.024	0.033						
KCB	EPS	(8.400)	35.057	(43.457)	5.392	3.300	12.058	7.379	6.874	0.000
		(6.535)	36.056	(42.591)						
	PAYOUT	0.016	0.239	(0.223)	0.070	0.046	0.156	0.104	2.663	0.032
		-	0.242	(0.242)						
	DIVSAL	0.013	0.045	(0.032)	0.008	0.012	0.018	0.027	2.234	0.061
		-	0.055	(0.055)						
Stanbic Kenya	EPS	3.021	9.409	(6.387)	0.344	3.772	0.768	8.433	1.687	0.167
		2.982	6.918	(3.936)						
	PAYOUT	0.344	0.166	0.178	0.027	0.024	0.060	0.053	-4.934	0.001
		0.358	0.181	0.177						
	DIVSAL	0.057	0.035	0.022	0.009	0.005	0.020	0.010	-2.228	0.067
		0.052	0.039	0.013						
Kenya Airways	EPS	0.004	0.014	(0.010)	0.001	-	0.002	-	14.892	
		0.003	0.014	(0.011)						
	PAYOUT	0.208	-	0.208	0.058	-	0.130	-	-3.575	
		0.211	-	0.211						
	DIVSAL	0.024	-	0.024	0.007	-	0.015	-	-3.574	
		0.027	-	0.027						
Sameer (Firestone)	EPS	4.200	3.017	1.183	0.697	0.561	1.558	1.254	-1.322	0.222
		5.053	2.708	2.345						
	PAYOUT	0.704	0.326	0.378	0.074	-	0.165	-	-6.487	0.000
		0.794	0.326	0.468						
	DIVSAL	0.128	0.081	0.047	0.010	-	0.023	-	-5.805	0.000
		0.123	0.081	0.042						
National Bank	EPS	(2.434)	6.792	(9.227)	3.735	0.727	8.352	1.625	2.425	0.072
		3.167	7.005	(3.838)						
	PAYOUT	0.237	0.115	0.122	0.156	0.051	0.348	0.114	-0.833	0.442
		0.173	0.143	0.030						
	DIVSAL	0.091	0.048	0.043	0.044	0.022	0.099	0.049	-0.879	0.413
		0.040	0.054	(0.014)						
BAT (K)	EPS	14.236	13.986	0.250	2.328	1.750	5.205	3.913	-0.086	0.934
		12.507	14.293	(1.786)						
	PAYOUT	0.721	0.644	0.077	0.116	0.206	0.260	0.461	-0.325	0.756
		0.700	0.651	0.049						
	DIVSAL	0.046	0.054	(0.009)	0.005	0.019	0.012	0.043	0.444	0.675
		0.041	0.053	(0.012)						
CMC Holdings	EPS	19.080	5.505	13.575	2.908	0.363	6.503	0.812	-4.635	0.010
		19.317	5.259	14.058						
	PAYOUT	0.150	0.375	(0.225)	0.009	0.041	0.020	0.092	5.352	0.006
		0.157	0.324	(0.167)						
	DIVSAL	0.006	0.005	0.000	0.000	0.000	0.001	0.001	-0.779	0.466
		0.006	0.005	0.001						
Uchumi Supermarket	EPS	9.052	3.698	5.354	0.839	0.728	1.678	1.456	-4.818	0.003
		9.477	3.513	5.965						
	PAYOUT	0.782	0.320	0.462	0.074	0.020	0.147	0.039	-6.057	0.009
		0.793	0.323	0.470						
	DIVSAL	0.056	0.021	0.035	0.008	0.001	0.015	0.003	-4.450	0.021
		0.051	0.020	0.031						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Housing Finance	EPS	4.536	27.808	(23.272)	0.462	11.472	1.034	22.945	2.027	0.136
		4.153	20.300	(16.147)						
	PAYOUT	0.186	-	0.186	0.009	-	0.020	-	-21.198	2.93E-05
		0.191	-	0.191						
	DIVSAL	0.025	-	0.025	0.003	-	0.007	-	-8.608	0.001
		0.028	-	0.028						
Bamburi Cement	EPS	12.354	0.969	11.384	6.280	0.448	14.042	1.002	-1.808	0.145
		6.296	1.221	5.075						
	PAYOUT	0.349	(0.035)	0.384	0.117	0.032	0.261	0.072	-3.181	0.025
		0.408	-	0.408						
	DIVSAL	0.024	0.002	0.022	0.007	0.002	0.015	0.004	-3.121	0.026
		0.020	-	0.020						

Significance at 5%

Appendix 8: Operating Performance Analysis

VARIABLES	N POST (PRE)	POST Mean Median	PRE Mean Median	Mean Median Change	Post- Privatization		Pre- Privatization		Z-statistics	% of companies changing as expected
					Mean SE	SD	Mean SE	SD		
OPERATING EFFICIENCY										
SALEFF	27(25)	19,146.85	12,525.69	6,621.15	4,176.10	21,699.64	2,385.04	11,925.19	0.477	**83.33**
		7,272.34	6,622.81	649.53						
NIEFF	27(25)	5,110.44	2,904.30	2,206.14	1,527.51	7,937.20	627.10	3,135.50	0.089	**66.67**
CAPITAL INVES.		1,309.88	1,184.56	125.31						
CESA	69(56)	0.15	0.15	(0.01)	0.03	0.29	0.04	0.27	0.400	**80.00**
		0.06	0.04	0.02						
CETA	69(56)	0.06	0.06	0.00	0.01	0.07	0.01	0.09	-0.405	**80.00**
		0.04	0.02	0.02						
OUTPUT SAL	69(64)	149,632.00	147,152.00	2,480.00	23,351.36	193,971	16,051.66	128,413.30	1.072	**46.15**
		99,313.20	107,146.00	(7,832.80)						
EMPLOYMENT	27(25)	1,895.78	2,283.12	(387.34)	235.56	1,224.00	380.44	1,902.18	-0.403	**60.00**
		1,992.00	1,534.00	458.00						

Significance at 5%

Appendix 9: Company changes in Operating Efficiency

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
Safaricom	SALEFF	36,810.022	29,369.269	7,440.753	924.242	3,527.743	2,066.668	7,888.274	-2.040	0.097
		36,378.110	31,693.521	4,684.589						
	NIEFF	5,350.540	7,626.890	(2,276.350)	326.393	523.549	729.836	1,170.691	3.690	0.008
		5,195.641	8,187.070	(2,991.429)						
Kenya RE	SALEFF	51,838.656	21,898.754	29,939.901	8,644.875	1,936.216	19,330.530	4,329.510	-3.380	0.028
		45,956.054	21,268.513	24,687.541						
	NIEFF	19,874.374	5,053.674	14,820.700	3,128.574	806.107	6,995.704	1,802.509	-4.588	0.006
		16,574.097	5,211.029	11,363.068						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
KENGEN	SALEFF	7,619.818	6,954.621	665.197	340.085	445.147	760.452	995.378	-1.187	0.274
		7,537.974	6,622.809	915.165						
	NIEFF	1,997.685	1,290.599	707.086	480.627	114.102	1,074.714	255.140	-1.431	0.226
		1,596.388	1,184.562	411.826						
Mumias Sugar	SALEFF	3,909.034	1,753.440	2,155.595	674.956	331.211	1,509.248	740.610	-2.867	0.029
		3,511.116	1,433.307	2,077.809						
	NIEFF	331.048	92.132	238.916	165.949	26.870	371.074	60.084	-1.444	0.222
		283.776	92.129	191.647						
KCB	SALEFF	1,982.415	2,652.384	(669.969)	231.201	346.660	516.982	775.155	1.608	0.152
		1,867.360	2,675.008	(807.648)						
	NIEFF	(200.216)	458.222	(658.438)	162.203	73.545	362.698	164.451	3.697	0.010
		(135.810)	501.970	(637.780)						
Stanbic Kenya	SALEFF	3,082.584	-	3,082.584	349.461	-	494.212	-		
		3,082.584	-	3,082.584						
	NIEFF	607.408	-	607.408	36.503	-	51.623	-		
		607.408	-	607.408						

Significance at 5%

Appendix 10: Company Changes in Capital Investment

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(*T*<=t)
Safaricom	CESA	0.259	0.454	(0.195)	0.024	0.036	0.054	0.080	4.522	0.003
		0.240	0.467	(0.227)						
	CETA	0.218	0.302	(0.084)	0.014	0.017	0.032	0.037	3.822	0.005
		0.211	0.294	(0.083)						
Kenya RE	CESA	0.070	0.142	(0.072)	0.055	0.037	0.124	0.083	1.079	0.316
		0.016	0.083	(0.067)						
	CETA	0.016	0.030	(0.014)	0.013	0.008	0.028	0.017	0.957	0.370
		0.004	0.029	(0.025)						
KENGEN	CESA	0.973	0.720	0.253	0.277	0.242	0.618	0.541	-0.689	0.511
		0.691	0.557	0.134						
	CETA	0.088	0.108	(0.020)	0.019	0.033	0.043	0.075	0.517	0.623
		0.075	0.091	(0.016)						
Mumias Sugar	CESA	0.032	0.099	(0.067)	0.012	0.054	0.027	0.121	1.204	0.295
		0.020	0.047	(0.027)						
	CETA	0.032	0.077	(0.045)	0.013	0.042	0.028	0.093	1.033	0.349
		0.016	0.034	(0.018)						
KCB	CESA	0.065	0.033	0.032	0.007	0.005	0.016	0.011	-3.662	0.008
		0.071	0.031	0.040						
	CETA	0.007	0.008	(0.001)	0.001	0.001	0.003	0.002	0.576	0.580
		0.007	0.007	-						
Stanbic Kenya	CESA	0.153	0.083	0.070	0.053	0.057	0.118	0.128	-0.903	0.393
		0.075	0.030	0.045						
	CETA	0.040	0.015	0.025	0.019	0.011	0.042	0.024	-1.155	0.292
		0.014	0.006	0.008						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
Kenya Airways	CESA	0.162	0.007	0.155	0.046	-	0.102	-	-3.399	
		0.168	0.007	0.161						
	CETA	0.136	0.007	0.129	0.034	-	0.076	-	-3.770	
		0.161	0.007	0.154						
Sameer (Firestone)	CESA	0.081	0.036	0.045	0.015	-	0.035	-	-2.891	
		0.087	0.036	0.051						
	CETA	0.106	0.066	0.040	0.020	-	0.044	-	-1.995	
		0.093	0.066	0.027						
National Bank	CESA	0.085	0.107	(0.022)	0.020	0.037	0.045	0.082	0.532	0.614
		0.081	0.079	0.002						
	CETA	0.008	0.004	0.004	0.003	0.001	0.007	0.001	-1.383	0.239
		0.006	0.005	0.001						
BAT (K)	CESA	0.030	0.038	(0.008)	0.007	0.004	0.015	0.008	1.068	0.326
		0.027	0.037	(0.010)						
	CETA	0.054	0.068	(0.014)	0.013	0.007	0.029	0.015	1.007	0.353
		0.051	0.073	(0.022)						
CMC Holdings	CESA	0.014	0.009	0.005	0.005	0.002	0.012	0.005	-0.964	0.379
		0.011	0.006	0.005						
	CETA	0.071	0.034	0.037	0.021	0.008	0.046	0.018	-1.682	0.153
		0.064	0.031	0.033						
Housing Finance	CESA	0.047	0.017	0.029	0.014	0.007	0.031	0.015	-1.862	0.112
		0.053	0.013	0.040						
	CETA	0.009	0.004	0.005	0.002	0.002	0.005	0.004	-1.883	0.102
		0.010	0.003	0.008						
Bamburi Cement	CESA	0.059	0.020	0.039	0.016	0.003	0.036	0.007	-2.348	0.079
		0.060	0.023	0.037						
	CETA	0.034	0.013	0.021	0.008	0.002	0.018	0.005	-2.541	0.052
		0.031	0.015	0.016						

T-Test: Two-Sample Assuming Unequal Variances; 5% significance

Appendix 11: Company changes in Output

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
Safaricom	SAL	791,497	351,997	439,500	31,390	63,566	70,190	142,139	-6.199	0.001
		790,144	285,592	504,552						
Kenya RE	SAL	41,661	32,974	8,687	3,826	1,409	8,554	3,151	-2.131	0.086
		40,221	31,754	8,468						
KENGEN	SAL	122,012	179,493	(57,481)	5,698	21,481	12,742	48,032	2.586	0.049
		123,922	171,161	(47,239)						
Mumias Sugar	SAL	142,752	162,596	(19,844)	3,977	10,321	8,892	23,078	1.794	0.133
		145,886	160,137	(14,251)						
KCB	SAL	132,490	367,580	(235,090)	30,812	49,726	68,899	111,190	4.019	0.005
		107,971	327,295	(219,324)						
Stanbic Kenya	SAL	30,512	23,673	6,839	4,715	3,859	10,543	8,630	-1.122	0.294
		32,726	27,308	5,418						
Kenya Airways	SAL	317	259	58	28	-	62	-	-2.078	
		291	259	32						
Sameer (Firestone)	SAL	82,754	107,573	(24,819)	6,155	3,396	13,762	7,594	3.531	0.012
		84,795	108,244	(23,449)						
National Bank	SAL	69,857	33,761	36,095	23,838	11,412	53,303	25,518	-1.366	0.221
		39,576	27,039	12,537						

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
BAT (K)	SAL	267,635	303,323	(35,688)	5,252	4,300	11,743	9,615	5.528	0.001
		266,534	305,759	(39,225)						
CMC Holdings	SAL	108,583	125,513	(16,930)	9,525	7,023	21,299	15,704	1.431	0.196
		110,794	130,193	(19,399)						
Housing Finance	SAL	47,179	54,298	(7,119)	7,280	8,204	16,278	16,407	0.649	0.537
		35,793	53,542	(17,748)						
Bamburi Cement	SAL	144,736	100,167	44,569	8,787	1,948	19,649	4,355	-4.952	0.008
		139,518	99,258	40,260						

Significance at 5%

Appendix 12: Company changes in Employment

Company Name	Variables	Post-PRIV Mean Median	Pre-PRIV Mean Median	Mean Median Change	Post- PRIV Mean SE	Pre-PRIV Mean SE	Post- PRIV SD	Pre-PRIV SD	*T* -Stat	*ρ*–Value *ρ*(T<=t)
Safaricom	EMPL	2,598	896	1,702	207	183	464	409	-6.152	0.000
		2,701	696	2,005						
Kenya RE	EMPL	92	99	(7)	1	1	2	2	5.397	0.000
		93	98	(5)						
KENGEN	EMPL	1,593	1,530	63	29	19	65	42	-1.838	0.109
		1,581	1,534	47						
Mumias Sugar	EMPL	2,569	4,214	(1,645)	243	285	544	638	4.388	0.002
		2,789	4,531	(1,742)						
KCB	EMPL	3,248	4,676	(1,428)	271	219	605	491	4.010	0.003
		3,050	4,727	(1,677)						

Significance at 5%

Appendix 13: Effect of Privatization on Performance Variables

COMPANY NAME	VAR	*R Sqr*	*β1*	*β2*	*β3*	*β4*	*RES (SS)*	*ρ*	*SE*	Level of Success
Safaricom	ROS	78.00%	(0.332)	-	0.177	-	0.025	0.363	0.112	**64.29%**
	ROA	91.94%	(0.210)	-	0.153	-	0.001	0.063	0.022	
	ROE	99.93%	0.121	-	(0.303)	-	0.000	0.044	0.010	
	SALEFF	69.78%	20,124.237	-	(10,990.887)	-	1.884E+08	0.499	9,705.925	
	NIEFF	98.90%	(5,081.609)	-	2,430.900	-	3.350E+05	0.039	409.289	
	CESA	89.42%	(0.278)	-	0.072	-	0.023	0.410	0.106	
	CETA	93.54%	(0.108)	-	0.020	-	0.003	0.370	0.037	
	SAL	97.63%	177,663.458	-	226,894.742	-	2.368E+10	0.585	1.088E+05	
	EMPL	99.75%	1,865.051	-	(141.292)	-	3.659E+04	0.032	135.253	
	LEV1	96.13%	0.561	-	(0.650)	-	0.011	0.099	0.075	
	LEV2	93.37%	1.867	-	(2.188)	-	0.262	0.179	0.362	
	DIVSAL	63.61%	(0.231)	-	0.207	-	0.007	0.252	0.057	
	PAYOUT	94.79%	(0.260)	-	0.476	-	0.028	0.476	0.118	
	EPS	99.60%	(1,760.000)	-	1,108.953	-	5,656.701	0.006	53.182	

COMPANY NAME	VAR	*R Sqr*	*β1*	*β2*	*β3*	*β4*	*RES (SS)*	*ρ*	*SE*	Level of Success
Kenya RE	ROS	68.99%	(0.086)	-	0.434	-	0.059	0.887	0.141	**57.14%**
	ROA	85.50%	0.012	-	0.069	-	0.002	0.916	0.027	
	ROE	73.13%	(0.061)	-	0.208	-	0.006	0.755	0.046	
	SALEFF	82.79%	5,898.187	-	42,506.567	-	9.399E+08	0.938	1.770E+04	
	NIEFF	88.07%	(5,263.271)	-	35,510.202	-	1.524E+08	0.863	7,126.722	
	CESA	19.52%	0.177	-	(0.439)	-	0.123	0.838	0.203	
	CETA	18.10%	0.053	-	(0.119)	-	0.006	0.778	0.044	
	SAL	55.77%	(6,413.977)	-	26,699.329	-	3.112E+08	0.883	1.019E+04	
	EMPL	98.94%	(15.395)	-	14.136	-	2.985	0.029	0.997	
	LEV1	22.05%	0.156	-	(0.230)	-	0.015	0.618	0.072	
	LEV2	25.68%	0.159	-	(0.231)	-	0.015	0.604	0.070	
	DIVSAL	7.02%	0.068	-	(0.114)	-	0.004	0.684	0.039	
	PAYOUT	73.91%	0.422	-	(0.911)	-	0.021	0.292	0.085	
	EPS	68.56%	(10.703)	-	15.742	-	9.818	0.228	1.809	
KENGEN	ROS	91.12%	0.066	-	0.019	-	0.010	0.753	0.071	**28.57%**
	ROA	81.92%	(0.003)	-	(0.000)	-	0.000	0.911	0.009	
	ROE	69.36%	(0.010)	-	(0.008)	-	0.001	0.847	0.017	
	SALEFF	41.68%	1,191.534	-	(867.398)	-	4.087E+06	0.780	1,429.424	
	NIEFF	89.39%	1,013.584	-	(505.106)	-	7.264E+05	0.586	602.678	
	CESA	96.56%	(4.442)	-	7.738	-	0.139	0.023	0.264	
	CETA	94.17%	(0.521)	-	0.826	-	0.003	0.034	0.038	
	SAL	82.85%	(111,312.041)	-	88,713.002	-	3.747E+09	0.429	43,281.419	
	EMPL	78.56%	(284.375)	-	572.800	-	13,644.427	0.318	82.597	
	LEV1	79.02%	(0.659)	-	1.025	-	0.047	0.242	0.153	
	LEV2	85.85%	(1.349)	-	2.099	-	0.136	0.187	0.261	
	DIVSAL	95.96%	0.253	-	(0.244)	-	0.003	0.122	0.037	
	PAYOUT	86.93%	0.948	-	(0.885)	-	0.134	0.296	0.258	
	EPS	98.93%	(26.389)	-	27.297	-	5.764	0.027	1.698	
Mumias Sugar	ROS	4.86%	0.006	-	0.054	-	0.023	0.927	0.088	**42.86%**
	ROA	12.66%	0.030	-	(0.041)		0.021	0.642	0.083	
	ROE	11.97%	0.052	-	(0.139)	-	0.048	0.596	0.126	
	SALEFF	99.91%	(135,130.801)	-	-1.625E+05		1.138E+08	0.000	6,158.796	
	NIEFF	41.67%	146.794	-	660.424	-	4.562E+05	0.627	389.938	
	CESA	23.35%	(0.076)	-	0.060	-	0.075	0.541	0.158	
	CETA	17.13%	(0.049)	-	0.028	-	0.050	0.622	0.129	
	SAL	85.64%	(1,127.695)	-	-1.291E+05	-	5.342E+08	0.911	1.334E+04	
	EMPL	99.60%	(1,882.839)	-	1,642.327	-	5.449E+04	0.000	134.767	
	LEV1	97.46%	(0.158)	-	0.218	-	0.002	0.004	0.027	
	LEV2	53.81%	(0.046)	-	(0.081)	-	0.015	0.415	0.070	
	DIVSAL	43.24%	0.026	-	0.015	-	0.005	0.437	0.042	
	PAYOUT	19.97%	0.671	-	1.186	-	14.656	0.693	2.210	
	EPS	93.10%	(1.958)	-	(36.583)	-	26.760	0.417	2.987	
KCB	ROS	72.86%	(0.575)	(1.589)	0.124	-	0.174	0.269	0.295	**64.29%**
	ROA	93.08%	(0.071)	(0.132)	(0.011)	-	0.001	0.134	0.023	
	ROE	88.89%	(0.623)	(0.747)	(0.265)	-	0.198	0.264	0.314	
	SALEFF	92.17%	(459.356)	4,071.640	2,248.909	-	4.421E+05	0.527	470.148	
	NIEFF	85.20%	(1,054.166)	(2,014.148)	297.256	-	3.962E+05	0.207	445.098	
	CESA	81.61%	0.013	(0.130)	(0.011)	-	0.001	0.730	0.025	
	CETA	65.24%	(0.005)	(0.027)	(0.001)	-	0.000	0.241	0.002	
	SAL	98.85%	(73,304.406)	1,042,654.224	54,366.085	-	3.526E+09	0.308	41,987.218	
	EMPL	97.73%	(1,455.956)	410.787	462.892	-	2.392E+05	0.082	345.842	
	LEV1	82.02%	0.581	1.381	(0.658)	-	0.097	0.178	0.221	
	LEV2	79.26%	(1.500)	(4.590)	1.660	-	0.596	0.166	0.546	
	DIVSAL	89.20%	(0.067)	(0.109)	0.082	-	0.001	0.144	0.022	
	PAYOUT	91.46%	(0.217)	(0.077)	(0.092)	-	0.024	0.261	0.109	
	EPS	96.82%	(51.811)	(50.768)	(0.344)	-	312.033	0.084	12.491	

COMPANY NAME	VAR	R Sqr	*β1*	*β2*	*β3*	*β4*	*RES (SS)*	*ρ*	SE	Level of Success
CFC Stanbic	ROS	79.92%	0.047	(0.771)	(0.093)	-	0.003	0.590	0.041	**63.64%**
	ROA	96.10%	(0.020)	(0.513)	0.063	-	0.000	0.211	0.006	
	ROE	92.97%	(0.137)	(2.077)	0.149	-	0.008	0.362	0.064	
	CESA	80.86%	(0.114)	(4.072)	0.575	-	0.037	0.691	0.136	
	CETA	93.90%	(0.040)	(1.144)	0.182	-	0.001	0.429	0.022	
	SAL	98.63%	(35,568.788)	(100,240.179)	74,001.478	-	2.078E+07	0.026	3,223.643	
	LEV1	99.50%	0.074	2.369	(0.588)	-	0.001	0.271	0.027	
	LEV2	76.23%	0.061	(0.548)	(0.029)	-	0.001	0.239	0.020	
	DIVSAL	98.98%	0.061	0.006	(0.062)	-	0.000	0.015	0.004	
	PAYOUT	93.50%	0.236	0.912	(0.156)	-	0.012	0.232	0.076	
	EPS	83.27%	16.033	(262.430)	(17.209)	-	80.840	0.303	6.358	
Kenya Airways	ROS	97.92%	0.054	(0.273)	0.090	-	0.001	0.250	0.027	**27.27%**
	ROA	97.87%	0.064	(0.254)	0.043	-	0.001	0.174	0.024	
	ROE	95.51%	0.041	(0.505)	0.271	-	0.011	0.704	0.075	
	CESA	81.12%	0.244	(0.054)	(0.103)	-	0.032	0.267	0.127	
	CETA	86.66%	0.230	(0.019)	(0.129)	-	0.015	0.173	0.087	
	SAL	99.87%	220.715	(186.680)	115.505	-	478.650	0.008	15.470	
	LEV1	97.69%	0.170	(0.198)	0.176	-	0.008	0.171	0.064	
	LEV2	99.35%	0.126	(0.392)	0.835		0.015	0.367	0.086	
	DIVSAL	76.44%	0.026	0.004	(0.004)	-	0.001	0.437	0.021	
	PAYOUT	81.93%	0.355	0.096	(0.234)	-	0.051	0.221	0.160	
	EPS	98.90%	0.001	(0.014)	0.004		0.000	0.490	0.001	
Firestone (Sameer)	ROS	80.13%	(0.267)	0.053	0.299	-	0.003	0.455	0.038	**30.00%**
	ROA	72.17%	0.086	0.714	(0.064)	-	0.030	0.935	0.122	
	ROE	89.81%	(0.375)	0.526	0.270	-	0.032	0.734	0.127	
	CESA	84.89%	0.079	(0.050)	(0.013)	-	0.005	0.853	0.049	
	CETA	75.89%	0.210	0.125	(0.117)	-	0.014	0.769	0.083	
	SAL	93.42%	31,910.941	70,737.568	(54,788.194)	-	2.297E+08	0.732	10,715.842	
	LEV1	9.06%	0.219	0.207	(0.205)	-	0.021	0.806	0.103	
	DIVSAL	91.95%	0.165	0.183	(0.034)	-	0.006	0.725	0.054	
	PAYOUT	95.91%	1.256	0.543	(0.629)	-	0.087	0.511	0.209	
	EPS	83.33%	5.676	15.324	(2.922)	-	6.085	0.709	1.744	
National Bank	ROS	80.76%	(4.747)	0.390	3.490	-	2.121	0.160	1.030	**54.55%**
	ROA	91.58%	(0.349)	0.037	0.282	-	0.003	0.052	0.039	
	ROE	49.72%	(8.951)	8.712	5.755	-	31.050	0.394	3.940	
	CESA	65.53%	0.339	(0.038)	(0.342)	-	0.018	0.230	0.094	
	CETA	92.49%	(0.010)	0.065	0.006	-	0.000	0.271	0.003	
	SAL	99.32%	(235,806.579)	417,592.316	212,008.733	-	1.844E+08	0.007	9,601.881	
	LEV1	99.03%	0.069	0.363	(0.154)	-	0.000	0.081	0.010	
	LEV2	66.06%	2.280	(3.263)	(0.878)	-	2.738	0.453	1.170	
	DIVSAL	55.74%	0.264	(0.764)	(0.123)	-	0.029	0.404	0.119	
	PAYOUT	47.91%	(0.080)	(1.473)	0.376		0.197	0.915	0.314	
	EPS	94.65%	(42.154)	11.421	30.257		38.542	0.045	4.390	
BAT (K)	ROS	97.64%	0.057	(0.030)	(0.063)	-	0.000	0.083	0.005	**40.00%**
	ROA	96.29%	0.139	0.115	(0.201)	-	0.000	0.127	0.015	
	ROE	94.04%	0.290	(0.068)	(0.312)	-	0.002	0.118	0.030	
	CESA	96.92%	0.153	(0.275)	(0.074)	-	0.000	0.020	0.006	
	CETA	97.00%	0.271	(0.387)	(0.162)	-	0.000	0.020	0.011	
	SAL	96.48%	54,659.695	(137,053.943)	(46,527.057)	-	2.556E+08	0.313	11,304.709	
	LEV1	94.67%	(0.270)	0.254	0.283	-	0.004	0.218	0.042	
	DIVSAL	71.70%	(0.221)	0.044	0.195	-	0.003	0.239	0.037	
	PAYOUT	73.16%	(2.885)	0.883	2.630	-	0.448	0.234	0.473	
	EPS	94.47%	6.687	7.239	(8.521)	-	0.838	0.104	0.647	

COMPANY NAME	VAR	R Sqr	β1	β2	β3	β4	*RES (SS)*	*ρ*	SE	Level of Success
CMC Holdings	ROS	97.67%	0.021	0.010	0.000	-	0.000	0.034	0.006	**63.64%**
	ROA	95.44%	0.164	0.328	(0.056)	-	0.005	0.046	0.052	
	ROE	97.57%	0.258	0.535	(0.080)	-	0.008	0.027	0.061	
	CESA	90.39%	(0.001)	0.012	0.004	-	0.000	0.722	0.004	
	CETA	88.51%	0.015	0.136	0.004	-	0.001	0.482	0.025	
	SAL	98.36%	(18,739.868)	181,868.141	(18,387.951)	-	7.588E+07	0.050	6,159.517	
	LEV1	88.40%	(0.490)	1.868	0.232	-	0.140	0.121	0.265	
	LEV2	97.78%	(0.043)	0.086	0.054	-	0.001	0.063	0.016	
	DIVSAL	46.77%	(0.000)	0.001	0.000	-	0.000	0.717	0.001	
	PAYOUT	89.96%	(0.180)	(0.007)	(0.038)	-	0.029	0.170	0.120	
	EPS	99.73%	18.858	18.936	(6.637)	-	2.907	0.002	1.206	
Uchumi Supermarket	ROS	95.51%	0.015	0.796	(0.052)	-	0.001	0.367	0.019	**16.67%**
	ROE	97.64%	0.019	(1.247)	0.119	-	0.008	0.686	0.061	
	SAL	99.41%	4,146.016	-2.047E+06	154,438.747	-	1.127E+08	0.499	7.505E+03	
	DIVSAL	99.63%	0.028	0.032	0.001	-	0.000	0.010	0.004	
	PAYOUT	96.18%	0.226	(10.501)	0.806	-	0.056	0.183	0.167	
	EPS	92.23%	1.424	(215.252)	16.116	-	16.821	0.543	2.900	
Housing Finance	ROS	92.74%	0.096	-	0.003	-	0.005	0.020	0.040	**63.64%**
	ROA	98.09%	0.021	-	0.000	-	0.000	0.002	0.004	
	ROE	99.85%	0.137	-	0.003	-	0.000	0.000	0.008	
	CESA	52.54%	0.022	-	0.003	-	0.006	0.427	0.045	
	CETA	55.12%	0.004	-	0.001	-	0.000	0.439	0.008	
	SAL	94.35%	(6,189.358)	-	2,606.855	-	7.452E+07	0.102	4,983.993	
	LEV1	61.70%	(0.017)	-	0.002	-	0.001	0.135	0.016	
	LEV2	71.24%	(0.013)	-	0.001	-	0.000	0.072	0.009	
	DIVSAL	95.16%	0.024	-	0.000	-	0.007	0.008	0.007	
	PAYOUT	99.15%	0.183	-	0.001	-	0.001	0.001	0.022	
	EPS	59.47%	(24.795)	-	1.860	-	1,476.384	0.127	22.184	
Bamburi Cement	ROS	97.37%	0.188	-	(0.061)	-	0.001	0.056	0.026	**36.36%**
	ROA	98.24%	0.141	-	(0.056)	-	0.000	0.026	0.013	
	ROE	97.11%	0.190	-	(0.083)	-	0.001	0.033	0.020	
	CESA	92.20%	(0.060)	-	0.065	-	0.001	0.257	0.021	
	CETA	84.47%	(0.009)	-	0.020	-	0.000	0.778	0.000	
	SAL	95.02%	11,117.004	-	22,025.301	-	5.410E+08	0.744	16,446.405	
	LEV1	76.00%	(0.051)	-	(0.053)	-	0.028	0.834	0.118	
	LEV2	50.17%	(0.016)	-	(0.114)	-	0.195	0.979	0.312	
	DIVSAL	83.03%	(0.016)	-	0.025	-	0.001	0.661	0.017	
	PAYOUT	83.94%	0.214	-	0.112	-	0.169	0.723	0.291	
	EPS	99.21%	44.988	-	(22.125)	-	11.771	0.009	2.426	

Significance at 5%

Appendix 14: Descriptive Statistics

Descriptive Statistics						
	N	**Minimum**	**Maximum**	**Mean**	**SE**	**SD**
ROA (POST)	74	(0.138)	0.325	0.089	0.010	0.088
ROA (PRE)	60	(0.027)	0.454	0.081	0.012	0.097
LEV2 (POST)	75	-	2.595	0.172	0.044	0.380
LEV2 (PRE)	65	-	1.828	0.174	0.045	0.361
PRIV (POST)	69	1.000	1.000	1.000	-	-
PRIV (PRE)	68	-	-	-	-	-
DCOMP (POST)	69	-	1.000	0.637	0.046	0.384
DCOMP (PRE)	59	-	1.000	0.663	0.054	0.411
SIZE (POST)	69	9.323	18.897	15.712	0.271	2.247
SIZE (PRE)	60	9.029	18.171	15.410	0.241	1.867
STATE (POST)	69	-	0.700	0.282	0.027	0.221
STATE (PRE)	68	0.200	1.000	0.639	0.041	0.335

Appendix 15: Privatization and Financial Performance

VARIABLE	Mean Median Change	PRIV	DCOMP	SIZE	STATE	β_1	β_2	β_3	β_4	RES	*F*	R^2
PROFITABILITY												
ROS	0.45	1.00	(0.03)	0.30	(0.36)	**1.29**	2.87	(0.36)	3.32	0.02	0.54	**68.16%**
	(0.02)	1.00	(0.29)	0.39	(0.35)							
p						0.69	0.61	0.59	0.71			
ROA	0.08	1.00	(0.03)	0.30	(0.36)	**0.16**	0.14	(0.07)	0.35	0.00	11.72	**97.91%**
	0.47	1.00	(0.29)	0.39	(0.35)							
p						0.37	0.57	0.18	0.43			
ROE	(0.18)	1.00	(0.03)	0.30	(0.36)	**2.01**	6.00	(0.56)	5.24	0.13	0.42	**62.86%**
	(0.01)	1.00	(0.29)	0.39	(0.35)							
p						0.78	0.64	0.70	0.79			
LEVERAGE												
LEV_1	(0.07)	1.00	(0.03)	0.30	(0.36)	**(2.19)**	(3.24)	0.55	(5.24)	0.01	3.72	**93.70%**
	(0.08)	1.00	(0.29)	0.39	(0.35)							
p						0.30	0.33	0.24	0.33			
LEV_2	(0.00)	1.00	(0.03)	0.30	(0.36)	**(2.81)**	(4.97)	0.46	(7.12)	0.00	42.57	**99.42%**
	0.00	1.00	(0.29)	0.39	(0.35)							
p						0.06	0.06	0.07	0.06			
SHAREHOLDERS RATES												
EPS	(42.61)	1.00	(0.03)	0.30	(0.36)	**332.78**	590.00	(89.00)	930.88	142.45	17.50	**98.59%**
	(3.69)	1.00	(0.29)	0.39	(0.35)							
p						0.33	0.31	0.25	0.32			
PAYOUT	0.20	1.00	(0.03)	0.30	(0.36)	**5.07**	(0.33)	0.05	13.69	0.00	36.71	**99.32%**
	0.16	1.00	(0.29)	0.39	(0.35)							
p						0.09	0.84	0.80	0.09			
DIVSAL	0.02	1.00	(0.03)	0.30	(0.36)	**0.15**	0.07	(0.03)	0.32	0.00	243.84	**99.90%**
	0.02	1.00	(0.29)	0.39	(0.35)							
p						0.12	0.38	0.13	0.15			

Significance at 5%

Appendix 16: Privatization and Operational Performance

VARIABLE	Mean Median Change	PRIV	DCOMP	SIZE	STATE	β_1	β_2	β_3	β_4	RES	*F*	R^2
OPERATING EFFICIENCY												
SALEFF	6,621.15	1.00	(0.03)	0.30	(0.36)	**(21,711.26)**	(77,265.77)	9,603.84	(65,156.76)	1.38E+07	3.95	94.04%
	649.53	1.00	(0.29)	0.39	(0.35)							
p						0.77	0.57	0.56	0.75			
NIEFF	2,206.14	1.00	(0.03)	0.30	(0.36)	**7,489.11**	11,538.94	1,285.48	15,163.69	19.69	3.35E+05	100.00%
	125.31	1.00	(0.29)	0.39	(0.35)							
p						0.01	0.01	0.01	0.01			
CAPITAL INVESTMENT												
CESA	(0.01)	1.00	(0.03)	0.30	(0.36)	**0.02**	1.14	0.05	0.04	0.01	0.68	73.09%
	0.02	1.00	(0.29)	0.39	(0.35)							
p						0.99	0.68	0.87	0.99			
CETA	0.00	1.00	(0.03)	0.30	(0.36)	**(0.15)**	(0.03)	0.03	(0.40)	0.00	2.96	92.21%
	0.02	1.00	(0.29)	0.39	(0.35)							
p						0.36	0.87	0.39	0.37			
OUTPUT SAL	2,480.00	1.00	(0.03)	0.30	(0.36)	**(137,166.33)**	(454,419.12)	45,358.72	(319,426.63)	6.55E+06	12.50	98.04%
	(7,832.80)	1.00	(0.29)	0.39	(0.35)							
p						0.18	0.09	0.11	0.21			
EMPLOYMENT EMPL	(387.34)	1.00	(0.03)	0.30	(0.36)	**1,563.41**	4,571.52	(423.26)	4,716.91	6.55E+04	2.69	91.51%
	458.00	1.00	(0.29)	0.39	(0.35)							
p						0.76	0.62	0.69	0.74			

Significance at 5%