

**THE IMPACT OF PRIVATIZATION ON THE FINANCIAL  
PERFORMANCE OF STATE OWNED COMPANIES IN KENYA.**

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## **DECLARATION**

I declare that this project is my original work and has not been presented to any other university or institution for academic award.

Signed... ..... Date.....

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This project has been submitted for examination with my approval as the appointed University supervisor.

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## **DEDICATION**

This research paper is dedicated to my parents Mr. and Mrs. Bernard Ndisya for always standing with me and showing me the right way to follow. You are my source of strength and inspiration.

My dedication also goes to my sisters Caroline, Agnes and Eunice. Thank you for support.

God bless all of you abundantly.

## ABSTRACT

The main objective of this study was to investigate the effect of privatization on the performance of privatized companies in Kenya. Due to data limitations in the period prior to privatization, two companies namely, Kenya Electricity Generating Company Limited (KenGen) and Kenya Reinsurance Corporation (Kenya Re) were selected as case studies. Two methodologies namely, equality tests and regression analysis were adopted in data analysis. The data collected was for five years before privatization and five years after privatization. The data collected was leverage, liquidity, efficiency, return on assets and company size (proxied by logarithm of assets). The five variables were subjected to paired t-test and Wilcoxon sign rank test in order to establish whether there were any significant differences between these variables in the pre- and post-privatization period. In addition, a pooled regression model with return on assets as the dependent variable and dummy for privatization as the independent variable was estimated. The control variables in this model comprised leverage, size, liquidity, and efficiency. The equality tests indicated that the size of KenGen had significantly increased after privatization while the efficiency had significantly reduced after privatization. However, leverage and liquidity did not have significant changes after privatization. On the other hand, the equality tests indicated that the return on assets, efficiency and size of Kenya Re had significantly increased after privatization. The regression results indicated that privatization was positively related with the performance of the two companies, with the coefficient of this variable suggesting that privatization had increased the return on assets and hence financial performance by approximately 0.02%.

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## **LIST OF ABBREVIATIONS**

<b>EPS</b>	Earnings per Share
<b>ESTU</b>	Executives Secretariat and-Technical Unit
<b>NSE</b>	Nairobi Stock Exchange
<b>POCs</b>	Private Owned Companies
<b>ROA</b>	Return on Assets
<b>ROE</b>	Return on Equity
<b>SAPs</b>	Structural Adjustment Programs
<b>SOBs</b>	State Owned Banks
<b>SOEs</b>	State Owned Companies

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Since 1945, many countries in the world have attempted to use the State Owned Companies (hereafter referred to as SOEs) to achieve their economic and social objectives. Developing countries typically relied on the SOEs more than the developed countries in the hope that they would strengthen their economies and achieve efficiency in the operation of the SOEs. They also relied on SOEs for transfer of technology to strategic firms in mining, telecommunications, transport and heavy industry. However, the role of SOEs in improving economic growth of most developing countries has diminished because of mismanagement and competition by the private owned companies (POCs). According to Mwaura (2007), the lack of performance measurement by profitability is believed by economists to be one of the main causes of inefficiency in SOEs.

In the 1960s and 1970s, there was a big expansion in SOEs with the objective of achieving economic development, regional balance, local participation and control of the economy (Kikeri *et al*, 1994). Due to stagnation in economic growth and the failure of SOEs, many countries in Sub-Saharan Africa undertook far reaching economic reforms in the late 1980s and early 1990s against an unfavorable background of rapidly deteriorating economic and financial conditions. These reforms were done under the framework of the World Bank and IMF Supported Structural Adjustment Programs (SAPs), these countries were to restructure their economies in order to achieve private sector led growth through a market

based system (Reinhart and Tokarlidis, 2003). In this case, privatization of SOEs was one of the reforms under structural adjustment programs.

Privatization around the world generated a lot of concerns in the mid-20<sup>th</sup> century. For example, in Britain, it was viewed as a radical or perhaps even a desperate policy initiative of those closely associated with the Thatcher government. However, from 1979 onwards privatization has been accepted as an instrument of economic policy for governments throughout the world. In fact, an increasing tendency towards using of this technique shows no sign of slowing down in the 21st century (D'souza and Megginson 1999; Megginson and Netter 2001). Privatization has taken a global dimension originating from Chile, then the United Kingdom (UK) and New Zealand, turning into a major phenomenon for both developed and developing countries (Heracleuous, 1990).

### **1.1.1 Privatization**

Privatization can be defined as the transfer of assets and productive processes from the public to the private sector. The government disposes off entire or part of its shareholding in various SOEs and has no management control over them through a process of privatization (Aseto and Okelo, 1997). It has further been defined as the transfer of majority ownership of SOEs to private sector by the sale of on-going concerns or assets following liquidation (Kikeri *et al*, 1994). According to Nhema (2015), privatization is effected through the sale of equity of the enterprise to the public in developed capital markets whereas in underdeveloped capital markets, divesture is the main method of privatization. The main rationale for privatization is to improve the performance of the organizations. Ideally, the rationale for privatization comprises macroeconomic, social and enterprise-

specific microeconomic objectives (Oyieke, 2002). Usually, privatization can lead to job insecurity, layoffs of labor, and an increase in casual and temporary labor. However, it has been widely acknowledged that the net gain from privatization exceeds the net loss (Mwaura, 2007).

According to Megginson and Netter (2001), privatization has relatively more positive impact in case the SOEs are in competitive markets or potentially competitive markets. In such a case, an organization is more efficient under private ownership than under public ownership. In the case where competition is weaker (such as natural monopolies and public goods market), the essence of privatization is less compelling. The performance of SOEs is usually low than in private owned enterprises because of the multiple objectives in SOEs. These objectives include social welfare maximization, political goals as well as profit maximization. Megginson and Netter (2001) explain that private ownership is preferable under circumstances where the cost of intervention by the government is greater than benefits. Privatization minimizes the bureaucratic roles of government management of SOEs and in turn facilitates private and commercial sector responsibility in management of organizations (Manyaga *et al.*, 2016).

### **1.1.2 Financial Performance**

Financial performance is the measure of whether a company is able to use its assets to generate revenue. This is the ability of a company to make a return on its activities. This is also a measure of a company's policies and operations in a monetary way. A good financial performance ensures a company does not face any going concern issues. Through analysis of financial performance, an organization can identify its financial strength and weaknesses

(Pandian and Narendran, 2014). This is important as it is one of the main foundations of an organization's policy directions. Through analysis of financial performance, an organization can enhance its competitive position in the business environment. Analysis of financial performance generally involves the determination of the financial and operating characteristics of an organization from financial as well as accounting statements. Therefore, the basis of financial performance is the financial and accounting statements.

Financial performance is proxied by financial ratios. Specifically, financial ratios are indicators of financial performance of organizations. Thus, financial ratios are crucial tool for investors, managers, researchers, analysts, investors and creditors (Vintila *et al.*, 2015). Evaluating financial performance of organizations using financial ratios has been a traditional but useful tool for various stakeholders in business (Delen *et al.*, 2013). Financial ratios are usually categorized into four groups. These are Profitability, liquidity, asset utilization and solvency ratios. The widely used measure of financial performance however comprises return on assets (ROA) and return on equity (ROE).

### **1.1.3 Privatization and Financial Performance**

It is generally believed that privatization can lead to an improvement in performance of organizations. Megginson and Netter (2001) note that the besides profit maximization, governments have many objectives, including political motives and social welfare maximization. The conflicting roles of SOEs affect their financial performance and hence privatization is viewed as the viable alternative to improve the performance of these enterprises. It is theoretically expected that private firms have relatively higher performance than the SOEs and the privatization enhances the operating efficiency of

privatized firms (Megginson *et al.*, 1998). In addition, there exists empirical evidence of an improvement in financial performance after privatization. While assessing the performance of 61 companies in pre- and post-privatization period, Megginson *et al.* (1998) found that after privatization, there was an increase in real sales, profits, investment spending, and operating efficiency.

Guriev and Megginson (2005) indicate that the theoretical debate on privatization is anchored on profit maximization principle for private enterprises. In this regard the authors argue that privatization reinforces the incentive for maximization of profits thereby leading to an improvement in allocation and productive efficiency. Oyieke (2002) explain that the main theoretical issue surrounding the privatization is whether the transfer of ownership from the state to a relatively more independent management improves both financial and economic performance. In this perspective, it is argued that the dynamics within the product and capital market works in favor of the privatized firms as a result of efficiency gains. Therefore, it is theoretically expected that privatization leads to an increase in financial performance of organizations.

#### **1.1.4 State owned Companies in Kenya**

The origin of state owned enterprises in Kenya can be traced back to the colonial times. The main reason for the emergence of SOEs was to provide services that could not be provided efficiently by the private sector. After independence, the SOEs remained in operation in order to provide the services that private sector could not provide. However, as early as 1970s, the SOEs in Kenya had begun experiencing financial difficulties. According to Oyieke (2002), the gross inefficiency in resource use by these SOEs led to



the institution of the privatization program. The author explains further that the operation of these SOEs resulted in distortions in structure of incentives and allocation of resources thereby negatively affecting monetary and fiscal policy. This led to the implementation of the privatization reform program starting from 1979. This was part of structural adjustment programs (SAPs).

The main rationale for the privatization reform program in Kenya was to enhance the financial and economic condition in the country. It was believed that the privatization of the loss making SOEs could reduce the budgetary allocation by the government thereby shifting the financial resources to productive sectors of the economy. On the other hand, it was expected that the privatized firms could raise sufficient capital and operate efficiently under private ownership due to the less interference by the state and operation under the market principles.

## **1.2 Research Problem**

Most state owned enterprises in Kenya have faced financial constraints, thereby leading to diverse arguments on the case for the privatization. According to Mwaura (2007), most African governments including Kenya have focused on privatizing the state owned enterprises because of the losses emanating from inefficiency. A number of factors have been attributed to the poor performance of state owned enterprises in Kenya. For instance, Ireri (2007) cites politicization of the appointment of board of directors, poor legal framework and indebtedness, lack of diversity and gender balance in the board composition, supplementation of the private sector and strict conditionalities by the donors.

In view of this, it is imperative to establish whether privatization improves the performance of an organization.

There exists wide range of studies about the impact of privatization on the performance of organization in Kenya and other countries. Generally, most studies have found an improvement in performance of organizations after privatization although there is inconsistency and variation in parameters used (Mbuga and Okech, 2015). For instance, Mutugi and Ngugi (2013) found that profits, corporate governance, and organizational culture had significantly improved after privatization of public companies listed at NSE. Mbuga and Okech (2015) also found an improvement in some measures of performance by privatized companies. A lot of studies conducted internationally also support the idea that privatization improves performance of organizations. Perevalov *et al.* (1999) found that privatization had positive impact on operating profits and labor productivity in industrial sector in Russia. Torero (2002) found that privately owned firms were more efficient and hence more profitable than comparable state owned enterprises. D'Souza and Megginson (1999) found that privatization had improved the performance of privatized firms in 28 industrialized countries.

While there is the argument that privatization improves financial performance, some of the privatized firms in Kenya have recently witnessed financial problems thereby raising questions over the benefits of privatization. Most Kenyan studies have adopted matched pair methodology, with the comparison of performance made in the pre- and post-privatization period. In this regard, this study will fill the existing research gap by using

regression analysis as well as the matched pair methodology in order to draw reliable conclusions. By use of the two methods, the results will be more reliable. This study sought to answer one main question. Does privatization improve the financial performance of firms?

### **1.3 Objectives of the Study**

The general objective of the study was to establish the effect of privatization on the financial performance of SOEs in Kenya. The specific objectives were;

- i) To investigate the effect of privatization on return on assets of Kenya Re and KenGen
- ii) To compare the performance of Kenya Re and KenGen in pre- and post-privatization period.

### **1.4 Value of the Study**

Privatization of SOEs is a complex issue and consumes a lot of both material and non-material resources in addition to resultant far reaching social, economic and political repercussions. In particular, the immediate effect of privatization of SOEs is usually the financial position and financial performance of the privatized organization depending on the rationale and the process of privatization. Therefore, by assessing the performance of the privatized firms, future privatization policies should be done taking into account what has been achieved with regard to the already privatized firms.

This study aimed at unearthing the privatization in Kenya with specific focus on the financial impact of privatization. This study is also aimed at assessing whether there are any gains that have been realized in regard to privatization of SOEs in Kenya in terms of

financial performance. The research results will assist policy makers and managers to understand better target areas of low risks, during the process of transition from public to private ownership.

In addition, the study is important to the economy as a whole. This is because privatization enables general public to have a share of ownership and hence earn income and hence improve their economic well-being. Therefore, by assessing the impact of privatization on the performance of privatized firms, relevant privatization policies can be adopted. Successful privatization is very important because the funds used to support SOEs can be diverted to productive sectors of the economies and hence boost economic growth.

The study is also important to the academia field, especially in the finance and economics field. This is because the study adds to the existing literature related to the privatization and performance.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The literature related to this study was reviewed in this chapter. Both theoretical and empirical literature was discussed in this chapter. Specifically, theories on privatization and the effect it has on the performance of organizations were discussed. Empirical literature review focused on empirical evidence about the effect the privatization has on financial performance of organizations across the world.

#### **2.2 Theoretical Review**

A number of theories on privatization have been advanced. Most of these theories focus on the benefits of privatization. In addition, these theories have adopted different point of arguments but the authors seem to come into agreement that private ownership is desirable than public ownership due to gains from efficiency. The basic idea behind privatization is achievement of efficiency. Efficiency in this case applies to micro firm level as well as macro level. In addition, the efficiency in this respect refers to productive efficiency and not Pareto efficiency. In actual sense, theories advocating for privatization view market mechanism as an efficient way of allocating resources. Various privatization theories have been discussed in the section below. These theories advocate for privatization albeit on different points of view. All in all, these theories are important in that they provide a basis for development of a framework for empirical analysis. In addition, basing on these theories one can critically evaluate the rationale for privatization.

### **2.2.1 Property Rights theory**

Property rights theory was advanced by Coase (1960). The main argument behind this theory is that the choices that decision makers are confronted with are determined by the property rights. In turn, this impacts on the financial performance. Property rights theory asserts that the main role of the property rights is guidance of incentives for achievement of greater externalities internalization. Alchian and Demsetz (1973) point out three different ways in which property rights can be owned. These are private ownership, state ownership, and common ownership by the society. The authors explain how these different rights affect the allocation of the resources. For example, under communal ownership, it is not feasible to measure the cost of property use by an individual. People tend to disregard the consequences arising from their actions as they exercise their rights under communal ownership. For instance, overutilization of the communal properties is common. In addition, pollution is also common under communal ownership.

The state ownership also is not efficient because of the ownership and control is separated widely. This results in inefficiency in monitoring the actions of managers. According to Alchian and Demsetz (1973), the private owners and government respond greatly to the economic and political factors, a situation that can lead to different use of resources. However, the authors explain that usually, the private owners respond to these factors in a similar way. This is because the private owners have the incentive to use their property in the most efficient/profitable way. However, under the government ownership, this is not the case because the government has to balance between the welfare and economic gains. In addition, state ownership is subject to interference by government for political reasons.

For example in some cases government use SOEs to seek political support. This theory is important in the perspective of this study in that the choices and decisions confronting managers/decision makers depend on the property rights. In this regard, the managers in most state owned enterprises must balance between political, welfare and efficiency concerns in the state owned enterprises.

### **2.2.2 Agency Theory**

Agency theory explains the relationship between two parties and the manner in which problems are solved within this kind of relationship. In particular, the relationship between the two parties is principal-agent relationship. The arrangement in this kind of relationship is such that the agent acts on behalf of the principal. This implies that the principal delegates the duties to the agent. Jensen and Meckling (1976) explain that the agency theory elaborates the relationship between agent and principal, with contractual agreement being the main anchor of this relationship. Specifically, agency theory seeks to solve the issues that are inherent in the relationship between the principal and the agent. Firstly, there is conflicting goals between both parties, with the likelihood of the principal incurring high costs in the process of verifying agent's actions. Secondly, there is the problem of sharing the risk due to variation in the attitude towards risk between the principal and the agent.

Specifically, the differences in attitude towards risk can lead to differing courses of action between the two parties in the agency theory. In this regard, agency theory seeks to shed light on the efficient contract between the principal and the agent, taking into account the assumption by the people, organization and information. Therefore, this theory is more

applicable under private ownership because the principal-agent relationship is clearly defined in private ownership. Specifically, the agent/managers have clear contractual arrangements with performance expectations being provided in private enterprises.

### **2.2.3 Resource Based Theory**

This theory holds the view that continued competitive advantage is derived from the unique combination of the resources at the firm's disposal (Barney 1991). In particular, this theory explains how business enterprises develop their investments from the resources and capabilities at their disposal and also from what they can acquire. This theory explains how competitive advantage over other firms in the same market could be attained from acquisition and utilization of the resources that a firm has. Resource based theory is developed from Penrose (1959). According to Penrose (1959), a firm is composed of physical and human capital, with both types of capital/resources playing an important role in firm's growth and performance. The core idea behind the resource based theory is the assumption of capability by a business to influence the performance the firm. Due to the change in ownership structure after privatization, it is expected that there is improvement in the skills, financial performance and technological knowhow. This is because privatization implies that the firm is exposed to the competitive market environment and hence it has to re-strategize so as to survive in the market.

It should be noted that SOEs in most cases receives financial assistance from the government and hence there is less emphasis on the financial performance. In addition, privatization brings in new management and hence there is likelihood for an organization to acquire new skills. In addition, the shareholders assist in monitoring the management.



For instance, Thomsen and Pederson (2000) argue that large institutional shareholders from foreign countries improve the performance of the organizations because of their skills in monitoring.

#### **2.2.4 Transaction Cost Theory**

A number of approaches to study economic organization of the firms have been developed, with transaction cost theory being one of them. The transaction cost theory view costs of transactions as important to the organizations. In actual sense, transaction cost theory is one of the theories of the firm. This theory was developed by Coase (1937) and it attempts to theoretically explain the firm in respect to the market. Coase (1937) explains the reasons for the existence of the firm. In actual sense, the author believes that the production can be done by the markets and the firm's existence should be explained. According to this theory, the key reason for firm's establishment is the avoidance of the cost of transactions associated with the use of price mechanisms. The theory explains that the price cannot be eradicated but can be reduced by information purchase from specialists. In addition, the negotiation costs and developing contracts that are enforceable for wide variety of transactions are avoided when a firm exists. Transaction costs theory therefore defines a firm as the network of relationships that develops when the entrepreneur determines the direction of resources. In relation to the privatization, the resources are put into more productive use under the private ownership than in state ownership because the main objective under private ownership is profit maximization unlike in state ownership where government must balance between profits, welfare and politics.

## **2.3 Determinants of Firm's Performance**

A number of factors influencing the firm's performance have been discussed in a wide range of empirical and theoretical literature. Most of the studies have indicated that profitability, efficiency, liquidity, and leverage as the main factors that influence an organization's performance. In essence, these are the factors that most comparative analysis studies focus on. Therefore, it is important to look at each one of the factors. These factors are discussed in the section below.

### **2.3.1 Profitability**

Profitability is the ability to make a positive gain out of a business activity. Financial ratios that are commonly to represent profitability include; return on assets, return on sales, and return on equity. Therefore, an increase in these ratios after privatization is an indication of an improved performance. D'Souza and Megginson (1999) found a significant increase in profitability for a sample of 28 firms from industrialized countries after privatization. Siddiqui and Lodhi (2015) also found that return on assets and return on equity for privatized banks were significantly higher than those for state owned banks. Profitability therefore can be viewed as very important aspect of performance. According to Mwaura (2007), the failure to measure profitability by state owned enterprises is a major source of inefficiency. This is because there is no incentive for increasing earnings, cutting costs and operating efficiently.

### **2.3.2 Leverage**

The leverage is a ratio between total liabilities and shareholder's equity. This ratio measures an organization's ability to meet its financial obligations. High level of debts by

state owned enterprises has been viewed as one of the reasons for privatization. The need to source capital in order to meet the debt obligations has led to privatization of many state owned enterprises around the world. In Kenya, publicly owned companies especially those in sugar sub-sector have experienced rising debts and low production volumes in the past. This has forced the government to privatize some of these companies. According to Omran (2002) firms that have been privatized are unable to borrow funds at lower rates but they get an opportunity to access domestic and international equity markets, a situation that improves their performance because they reduce reliance on debts.

### **2.3.3 Liquidity**

Liquidity is the ability by an organisation to meet its short term financial obligations in due time without disruptions of its usual operations. The current ratio measures liquidity, with the measure being the ratio between the current assets and current liabilities. According to Kikeri and Nellis (2004), empirical evidence in developing countries suggests that liquidity improves after privatization of state owned enterprises. Ochieng and Ahmed (2014) found that the liquidity ratio for Kenya Airways had increased significantly after privatization. Similarly, Mbuga and Okech (2015) found that liquidity for the three companies that they had sampled had improved significantly after privatization. Therefore, after privatization, there is a reduction in current liabilities. State owned enterprises have low liquidity because of the need to cover their investment cost using the funds that have been accumulated thereby constraining net worth.

### **2.3.4 Efficiency**

Efficiency can be defined as getting more output from same resources. It can also be defined by the ability for the output to remain unchanged even when the resources are reduced. Asset turnover ratio is a widely used efficiency ratio. This ratio is a measure of an organization's ability to generate sales from its assets. This ratio is computed by dividing net sales by average total assets. According to Oyieke (2002) agency costs are more pronounced in state owned enterprises. Also the author argues that it is hard to measure the performance of managers in state owned enterprises because of conflicting objectives. The objectives in state owned enterprises are also not well defined. Also, the general public is unable to have a direct control over the agents in state owned enterprises leading to inefficiency. Megginson *et al.* (1994) using a sample of 64 enterprises from 18 countries found that there was an improvement in resource utilization efficiency after privatization of previously state owned enterprises.

### **2.4 Empirical Review**

The empirical evidence on the impact of privatization on the financial performance of SOEs is important because it will enable in testing the theories related to privatization. This is especially important because a lot of the theories were developed in the mid-19<sup>th</sup> century and since then there have been a lot of developments in respect to technology, globalization and innovation. Most empirical studies have used financial indicators to compare the financial performance of the privatized companies in pre-privatization and post-privatization period. The authors have developed different approaches. A number of such empirical studies have been discussed in this section.

D'Souza and Megginson (1999) studied about the financial and operating performance of companies privatized during 1990s period. Specifically, the authors compare the performance in the period before and after privatization using a sample of 85 countries from industrialized countries. Using the financial data for all the companies in the seven-year period (3 years for pre-privatization and 3 years for post-privatization), the authors compared the performance using the Wilcoxon signed-rank test as the main method for testing whether there were significant changes (significant differences in the mean between the two periods).

The results of the analysis indicated that there were significant increases in profits, divided payout, and operating efficiency after privatization. In addition, leverage ratios had significantly reduced after privatization. The difference in the performance indicators was for the entire sample as well as some of the sub-samples. The authors also found that there was significant increase in capital expenditure. However, this was in absolute terms and not in relation to sales. Basing on these results, the authors concluded that privatization leads to the significant improvement in performance of the firms.

Wanjugu *et al.* (2016) studied about the effects of the structure of ownership on financial performance of companies that had been privatized in Kenya. The authors used return on assets (ROA), cost efficiency, Tobin's Q ratio, and technical efficiency to proxy the financial performance. In addition, the authors used four fixed effect model regressions, with the four measures of financial performance as independent variables. Specifically, the authors used government ownership, institutional ownership, large individual ownership, dispersed ownership, firm size and leverage as independent variables. The ownership was

expressed in percentage. The analysis results indicated that government, institutional, and dispersed ownership had positive and significant influence on ROA. The three variables were significant at 1% level.

For the regression with Tobin's Q ratio as dependent variable, the authors found that the government ownership had positive and significant effects on the Tobin's Q ratio. The coefficient for this variable was significant at 1% level. The leverage was negatively related to Tobin's Q ratio and was significant at 10% level. The regression results with cost efficiency as the dependent variable indicated that government ownership, dispersed ownership, and firm size had negative relationship with the cost efficiency, with the first two variables being significant at 5% level. The firm size variable was significant at 1% level. The leverage variable was positively related to cost efficiency and was significant at 1%. The regression results with technical efficiency as the dependent variable indicated that only institutional variable was significant. This variable was significant at 5% level and was positively related with technical efficiency.

A study on the impact the privatization had on the Kenya Airways financial performance was conducted by Ochieng and Ahmed (2014). The authors used financial ratio analysis to assess the performance of Kenya Airways. The comparison was made for the period before demutualization and after demutualization. The authors used liquidity ratio, solvency ratio, profitability and asset turnover ratio in assessing the performance. The authors found that there was significant improvement in debt and liquidity ratios after privatization. In

addition, the authors found that financial efficiency (proxied by asset turnover ratio), and income efficiency, had significantly increased after privatization.

While studying about the effects of privatization on the performance of Pakistan Siddiqui and Lodhi (2015) adopts financial ratio analysis approach. Specifically, the authors used return on equity (ROE), ROA, and capital adequacy ratio to compare the performance of privatized and SOBs. The authors found that ROA and return on equity for the privatized banks was higher than for the SOBs. In addition, the earning per share (EPS) for privatized banks was higher than the EPS of SOBs. However, capital adequacy ratio for the SOBs was higher than capital adequacy ratio for privatized banks, implying that the SOBs were less risky. The authors concluded that privatized banks had higher performance than the SOBs.

Mutugi and Ngugi (2013) studied about the impact of the privatization of public companies listed at NSE. The authors used primary data to assess the performance of eight corporations listed at NSE. The variables used to assess the performance were; managerial skills, corporate governance, government policy and organization culture. The results of analysis in that study indicated that over 20% of gross profit for these firms could be attributed to privatization. In addition, the authors found a positive and significant relationship between management skills after privatization and the financial performance. Also, the authors found that corporate governance had improved significantly after privatization. Another key finding was that the organization culture after privatization was significant and positively related to financial performance. Lastly, the authors found that

government policy after privatization had improved the financial performance of the sampled firms.

A study about the effects of mode of privatization on financial performance of companies listed in NSE was conducted by Mbuga and Okech (2015). Specifically, the authors analyzed three types of privatization, mainly; public share floatation, competitive bidding, and sales by pre-emptive rights. The authors used four measures of financial performance to assess the performance of the sampled firms after privatization. These measures were; profits, productivity, liquidity and solvency. By use of paired t-test for measuring the differences in mean, the authors found that companies privatized by competitive bidding had significant increases in profits, solvency, productivity and liquidity. The paired sample t-test for the first company that had been sold by public floatation indicated that only solvency and liquidity had increased significantly after privatization. The results for the paired sample t-test for the second company that had been sold by public floatation indicated that profitability, liquidity, solvency and productivity had significantly improved after privatization. The paired sample t-test results for the third company that had been sold by issuance of shares indicated that profitability had increased significantly. However, the solvency, productivity, and liquidity for the same company were insignificant. Lastly, the authors found that out of the two companies that had been privatized by pre-emptive rights, only liquidity for one company had significantly increased after privatization.

Perevalov *et al.* (1999) studied about the effects of privatization on performance of industrial sector in Russia. The authors used fixed effect and random effect modeling



approach in their analysis of panel data for 198 companies. The authors found that transition was important in influencing performance (negatively). The authors also found that privatization had positive impact on operating profit and labor productivity, although the effect on labor productivity was minimal. However, on average, the authors did not find any significant effect of privatization on aggregate business profitability, growth of revenue, level of wages, and employment. In addition, the authors found that the type of privatization had significant influence on the performance of the sampled firms.

Omran (2002) studied about the performance of Egyptian privatized and state owned enterprises. The author used financial ratios to compare the performance of newly privatized firms with of state owned enterprises. The author used Mann-Whitney test and T-test to establish whether there was any significant difference in performance for privatized as compared to state owned enterprises. The author found that there was significant increase in profitability, efficiency and dividends after privatization. Also, the author found that the privatized firms experienced a significant decrease in employment, leverage, and risk after privatization. On the other hand, capital expenditure and employment showed insignificant decrease after privatization. After comparing the privatized firms with the state owned enterprises, the author concluded that the privatized firms did not record any significant improvements in their performance.

A different approach for assessing the relationship between ownership structure and the performance of privatized firms was taken by Le and Chizema (2011). Specifically, the main objective by the authors was to assess the extent by which the state ownership

influenced the performance of the privatized firms. The authors used two regression equations, with Tobin's Q ratio and ROA used as dependent variables. The Tobin's Q ratio was used as a firm value measure while ROA was used as a proxy for firm performance. The independent variables in that study were; state ownership (percentage of shares held by state), firm size, leverage (debt to equity ratio) and dummy for industries. The results of analysis indicated that state ownership and firm size positively and significantly influenced the performance of the sampled firms while the coefficient for leverage was significant and negative. The regression results with Tobin's Q ratio as the dependent variable had inconclusive results. The state ownership was negatively related to Tobin's Q ratio, although the coefficient for this variable was insignificant. The leverage was significant and negatively related to Tobin's Q ratio. In addition, the firm size was significant and negatively related to Tobin's Q ratio.

Oyieke (2002) studied about the privatization of Kenya Airways. The main objective of the study was to assess whether privatization of Kenya Airways had any effect on the company's performance. The author used data for the period 1989 to 1998, with six indicators. The indicators used included; resource utilization efficiency, leverage, profitability, and the fiscal effect. The results of the analysis indicated that there was a net gain from the government as a result of privatization. This was in form of savings on debt obligations, subsidies, interest obligations, sales proceeds, and annual tax revenues. Also after privatization, there was significant improvement in return on sales, return on assets, dividend payout, and dividend to sales ratios.

A number of conclusions can be made with regard to the studies reviewed above. First, a number of studies have adopted matched pair methodology (see D'Souza and Megginson, 1999; Ochieng and Ahmed, 2014; Mbuga and Okech, 2015; Omran, 2002). Specifically, these studies have used either Wilcoxon signed rank test or paired t-test. While these techniques are important in assessing the performance of organizations before and after privatization, a causal relationship is important in order to establish the magnitude by which privatization influences performance. Matched pair methodology only assesses whether there is significant difference between two datasets. Some Kenyan studies such as Ochieng and Ahmed (2014), and Oyieke (2002) have only studied the impact of privatization on only one organization and hence the conclusions made are only limited to one particular company. It is important to investigate the impact that privatization has on a sample of privatized companies in order to make well informed policy decisions.

## **2.5 Conceptual Framework**

A conceptual framework was important in order to realize the study objectives. This therefore implies that the independent variables should be linked to the dependent variables. Basing on the work by Boycko, Schleifer and Vishny (1993) the representation shown by figure 2.1 formed the basis of empirical analysis.

## Independent Variable

## Dependent Variable

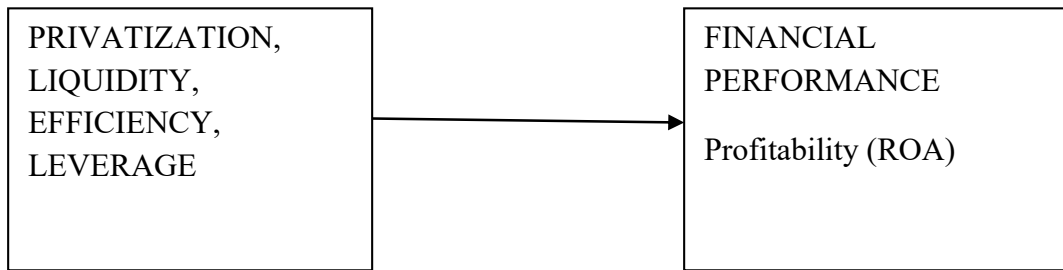


Figure 2.1 Conceptual Model

The above conceptual framework indicates that privatization is the dependent variable while the financial performance is the dependent variable. Specifically, return on assets (ROA) has been used as a proxy for financial performance. Apart from privatization, other variables (control variables) that influence the performance of organizations should also be incorporated in the conceptual framework. These comprise liquidity, efficiency and leverage measures.

## 2.6 Chapter Summary

From the reviewed literature, it is evident that in most cases, privatization leads to an improvement in the performance of organizations. Most theories on privatization provide diverse arguments on why privatization leads to an increase in performance of privatized companies. Public property theory, resource based theory, agency theory and transaction cost theory are important theories that provide basis for assessing the impact of privatization on formerly SOEs.

Most of the empirical studies on privatization have found privatization to be important in improving the performance of companies. Most of these studies have compared the

performance of the companies in pre- and post-privatization period using performance indicators such as profitability, leverage and efficiency. For instance, D'Souza and Megginson (1999) found significant increase in profits, dividend payout, and operating efficiency after privatization. Ochieng and Ahmed (2014) also found an increase in performance of Kenya Airways after privatization.

While the empirical literature on impact of privatization on the performance of organizations in respect to the Kenyan context is abundant, the research gap still exists. Most of the Kenyan literature has focused on the comparison of the performance of the companies in pre- and post-privatization period by adopting matched pair methodology by the use of Wilcoxon signed rank test or paired t-test. The major shortcoming with this method is that the magnitude of the impact of the privatization cannot be established. Also, there are a number of studies that have only focused on one company hence limiting the applicability of the findings for policy. In this perspective, this study attempted to fill the existing research gap by use of both Wilcoxon signed rank test and regression analysis. Regression analysis is important in this case in order to establish the effect of privatization on the performance of privatized companies.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter comprised methodology that was adopted in the study. Specifically, the chapter comprises research design, population and sample, data collection techniques and methods of data analysis. The methods adopted in the analysis of data have been provided in the data analysis section.

#### **3.2 Research Design**

The research was based on descriptive and explanatory approach. Ideally, the descriptive approach involved assessing features of the dataset in terms of statistics such as median, mean, standard deviation, kurtosis and skewness. Descriptive analysis was important because it helps in identifying important features of the dataset. In addition, the descriptive analysis can be used as a basis from which other research designs can be based. The explanatory research design on the other hand, involved establishment of causal relationship between explained and explanatory variables. In this respect, OLS method was used to estimate the influence of the identified independent variables on the dependent variable.

#### **3.3 Population and Sample**

The population refers to the complete set of individuals, objects or events that have common features. In simpler terms, research population is the broad collection of objects or individuals having the same features. In this respect the research population will comprise all the privatized SOEs in Kenya. Due to the bulky nature of studying the entire

population, sampling is important. Ideally, a sample is the population subset. The sample should represent the population in every aspect. Due to issues of data unavailability, two companies that were privatized from year 2000 were used as the sample of the population (See appendix I for the list of companies privatized from year 2000-2009).

### **3.4 Data Collection**

Secondary data was used in this study. The data was financial data and was collected from the financial reports of the listed firms. The financial reports were obtained from the internet sources, Capital Markets Authority as well as from the respective companies. Specifically, the data for ten-year period was collected. The data covered 5 years period prior to privatization and 5 years post privatization of the sampled companies. The year of privatization differs by the company because the floatation of shares was done at different times. Because of issues with data availability, the study will be based on the companies that were privatized from 2000 to 2009.

### **3.5 Data Analysis**

Two main techniques were used in data analysis. The first technique of data analysis was matched pairs methodology while the other one was regression analysis. The former involved the use of equality tests while the latter involved estimation by ordinary least squares method.

#### **3.5.1 Equality Tests**

This section discusses the data analysis techniques. Specifically, Wilcoxon sign rank test, paired T-test were used in testing the equality of the matched data. Basing on the work by Megginson *et al.* (1994), matched pair methodology was used to assess whether there is

any significant difference between the performance of the sampled companies in the pre- and post-privatization period. This implies the data is for the mean values 5 years before privatization and 5 years after privatization for the sampled companies. In this case, the year of privatization was excluded. The Wilcoxon sign rank test and T-test was applied to the distributions comprising pre- and post-privatization performance measures. Specifically, Wilcoxon rank test assesses the equality of matched pair of observations. In this case, the null hypothesis is that the median of the differences between the two distributions is equal to zero. The significance of the z-statistic is computed in this test. If the significance of the z-statistic is less than 0.05 (5% level of significance), then there is significant difference between the medians of the two distributions. An alternative way of assessing the significance of the calculated z-statistic is to assess its absolute value. If the absolute value of the z-statistic is greater than 1.96, there is significant difference between the medians of both distributions (in our case the distributions are the values in pre- and post-privatization period).

On the other hand, the paired t-test is used to test whether the mean difference for two distributions is equal. In this test, the null hypothesis is that the mean difference is zero while the alternative hypothesis is that the mean difference is statistically different from zero. Therefore, if the absolute p-value of the t-statistic is greater than 0.05 (5% level of significance), the null hypothesis is rejected.

Both the Wilcoxon sign rank test and the paired t-test are non-parametric tests. Both tests do not assume normal distribution for the dataset. In the case of t-test, the assumption for



normal distribution in differences is crucial, otherwise the test becomes invalid. This implies that tests for normality of the differences in distribution are important. For instance, Jarque-Bera test can be carried out on the dataset. In this test, the null hypothesis is normal distribution while the alternative hypothesis is that the series is not normally distributed. Basically, this test is a joint probability test for the kurtosis and skewness of the dataset. In this respect, if the probability of the chi-square is greater than 0.05, the null hypothesis of normal distribution is not rejected. The Wilcoxon sign rank test does not require the assumption of normal distribution. This is because the test is based on the rank order of the differences instead of the actual differences in the values. However, the test makes an assumption that the distribution of a given variable is symmetric.

### 3.5.2 Regression Analysis

Regression analysis is also important in assessing whether privatization improves the performance of organizations. Privatization and other control variables were the independent variables while the dependent variable was the proxy for financial performance (return on assets). Following the work by Estrin *et al.* (2006) and Gitundu *et al.* (2017), the model used in estimating the effect of privatization on the performance of former state owned enterprises can take the following form.

$$Y = f(P, C) \dots\dots\dots 3.1$$

Where, Y represents return on assets (proxy for financial performance). The letter P represents privatization dummy (assumes the value of 1 in post-privatization period and value of 0 in pre-privatization period). Letter C represents control variables in the model.

The control variables are other variables that also have an impact on performance. The actual regression model took the following form

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \dots\dots\dots 3.2$$

Where:

Y = Performance = Return on assets

$$\text{ROA} = \text{Return on Assets} = \frac{\text{Net income}}{\text{Total assets}}$$

$$\text{Liquidity} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Efficiency} = \frac{\text{Net sales}}{\text{Total assets}}$$

$$\text{Leverage} = \frac{\text{Short term liabilities and longterm liabilities}}{\text{Total Assets}}$$

Size = logarithm of the value of total assets

$X_1$  = Liquidity,       $X_2$  = Efficiency,       $X_3$  = Leverage,       $X_4$  = Size,       $X_5$  =

Dummy for privatization

$\beta_1 - \beta_5$  = Regression coefficients

$\varepsilon$  = Error term/ Stochastic disturbance term

The importance of the linear model represented by equation 3.2 is that a causal relationship between the privatization and performance can be established. Equation 3.2 will be estimated by STATA software.

After the estimation, the diagnostic tests comprised heteroskedasticity and autocorrelation tests. Heteroskedasticity arises when the variance of the error term is not constant across

observations. If this is the case, the standard errors are incorrect, and hence hypothesis testing is affected. Therefore, heteroskedasticity will be tested by use of Breusch-Pagan test. In this test, if the P-value of the chi-square value is less than 0.05 (at 5% level of significance) then the null hypothesis of homoscedasticity is rejected. Autocorrelation on the other hand, arises as a result of correlation of error terms across the time period. This leads to biased standard errors, and consequently unreliable hypothesis test results. The autocorrelation is tested by use of Durbin Watson statistic. In most case a Durbin Watson value of 1.5-2.5 is the acceptable range for absence of autocorrelation.

## CHAPTER FOUR

### DATA ANALYSIS RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the results of data analysis and the discussion of the results. The data analysis involved discussion of descriptive statistics, Wilcoxon signed rank test and regression analysis. Descriptive statistics have been provided in section 4.2 while Wilcoxon sign rank test for the variables in the pre- and post-privatization has been provided in section 4.3. On the other hand, regression analysis has been provided in section 4.4.

#### 4.2 Descriptive Statistics

**Table 4.1: Descriptive Statistics**

<b>Pre-privatization</b>				
	ROA	Lev	Liq	Eff
Mean	0.406616	0.4565577	2.955251	0.1434076
Median	0.0379677	0.4914113	1.88133	0.1438323
Std. Dev.	0.146443	0.1133029	3.200012	0.0826288
Min	0.0225051	0.2897122	0.8768324	0.024793
Max	0.0631286	0.6064301	11.74358	0.2448956
Skewness	0.3328566	-0.2013173	2.33959	-0.1652573
Kurtosis	1.869915	1.49018	7.076538	1.596852
<b>Post-privatization</b>				

	ROA	Leverage	Liquidity	Efficiency
Mean	0.0612479	0.4300248	2.143006	0.1955818
Median	0.0674362	0.3941469	1.982955	0.1867068
Std. Dev.	0.0434214	0.0808811	0.9432119	0.0859375
Min	0.0129205	0.3632778	1.344506	0.0862554
Max	0.1177862	0.587646	4.677174	0.327179
Skewness	-0.0062887	1.292904	2.117577	0.1834862
Kurtosis	1.250281	2.968264	6.561944	1.621974

Table 4.1 above summarizes descriptive statistics for the two sampled companies in the pre- and post-privatization period. From the above results, it is evident that the mean return on assets (ROA) is higher in the pre-privatization period than in the post-privatization period. In addition, liquidity of the two sampled companies is slightly higher in the pre-privatization period than in the post-privatization period. The efficiency in the post-privatization period is higher than in the pre-privatization period. On the other hand, there is slight decrease in leverage after post-privatization hence signifying less dependency on borrowed capital after post-privatization.

The mean and the median of leverage and efficiency ratios are almost equal in the pre and post-privatization periods. This implies that the two variables are almost normally distributed. This can be verified by the kurtosis and skewness values for both variables in the two periods. The skewness values for the two variables in both periods (pre- and post-privatization) fall in the range -2 to 2. This is the acceptable range for a normally

distributed dataset. The kurtosis value for the two variables also fall into the acceptable range for a normally distributed series (-3 to 3). Kurtosis is a measure of the sharpness of a peak of a frequency distribution curve. The values of liquidity in the pre-privatization and post-privatization period are wide spread out from the mean as is evident from a standard deviation of 3.2. In addition, the skewness and kurtosis values for this variable fall outside the acceptable range for normal distribution. However, there is reduction in variability in the liquidity after privatization as is evident from relatively lesser difference between maximum and minimum values. In addition, the mean and the median are almost equal after privatization. The mean and the median of the ROA are unequal in pre-privatization period. However, in the post-privatization period the two measures of central tendency are almost equal. This implies the variability in profitability reduces after the privatization of the two companies.

### **4.3 Equality Tests**

Wilcoxon and paired t-test were used in assessing the significance of differences in the variables before and after privatization. Wilcoxon rank test assesses the equality of matched pair of observations. In this case, the null hypothesis is that the median of the differences between the two distributions is equal to zero. The significance of the z-statistic is computed in this test. If the significance of the z-statistic is less than 0.05 (5% level of significance), then there is significant difference between the medians of the two distributions. An alternative way of assessing the significance of the calculated z-statistic is to assess its absolute value. If the absolute value of the z-statistic is greater than 1.96, there is significant difference between the medians of both distributions (in our case the distributions are the values in pre- and post-privatization period).

On the other hand, the paired t-test is used to test whether the mean difference for two distributions is equal. In this test, the null hypothesis is that the mean difference is zero while the alternative hypothesis is that the mean difference is statistically different from zero. Therefore, if the absolute p-value of the t-statistic is greater than 0.05 (5% level of significance), the null hypothesis is rejected. Table 4.2 below summarizes the results for the Wilcoxon signed rank test and paired t-test for the two companies.

**Table 4.2: Wilcoxon sign rank test and paired t-test**

Company	Variable	Mean difference (Paired t-test)	P-value (t-test)	Wilcoxon test (z-statistic)	P-value
KENGEN	ROA	-0.0099996	0.2536	-1.214	0.2249
	Leverage	-0.0131026	0.8879	-0.405	0.6858
	Liquidity	0.1551694	0.7460	-0.674	0.5002
	Efficiency	-0.0505956	0.0267	-2.023	0.0431
	Logassets (size)	0.6255581	0.0007	2.023	0.0431
KENYA Re	ROA	0.0511721	0.0087	2.023	0.0431
	Leverage	-0.0399631	0.4381	-0.944	0.3452
	Liquidity	-1.779659	0.4294	-0.405	0.6858
	Efficiency	0.1549439	0.0073	2.023	0.0431
	Logassets (size)	0.5749432	0.0001	2.023	0.0431

From the results above, it is evident that there is significant growth in the size of the two companies. This is because the absolute p-values in paired t-test and Wilcoxon test are greater than 0.05 (at 5% level of significance). The mean difference in the log of assets (proxy for size of the company) in both companies is greater than 0.01, thereby implying that the mean difference in log of assets for both companies is significantly different than zero at a 1% level of significance. Therefore, the null hypothesis of no difference in size of the two companies before and after privatization is rejected. On the other hand, the Wilcoxon test results for the log of assets for the two companies indicates that the median differences of the log of assets for the two companies in both periods is significant at 0.05% level of significance. Therefore, the two companies have significantly grown in size after privatization.

The efficiency (sales efficiency) of KenGen was found to have significantly reduced after privatization. The mean difference between the efficiency in post-privatization and pre-privatization was negative, with the absolute p-value in the paired t-test being less than 0.05. In addition, the absolute p-value in the Wilcoxon sign test was less than 0.05 (at 5% level of significance). Hence, there was significant reduction in sales efficiency of KenGen after privatization. The above results also indicated that, there were no significant changes in return on assets, leverage and liquidity of KenGen after privatization. The absolute p-values in both the paired t-test and Wilcoxon test were greater than 0.05.

On the other hand, both the Wilcoxon test and paired t-test indicated that the return on assets, efficiency and size (proxied by log of assets) had significantly increased after privatization of Kenya Re. Specifically, the mean differences between these variables in



the post-privatization and pre-privatization period were significant at 1% level of significance. On the hand, the differences in the median of these variables between post-privatization and pre-privatization period were significant at 5% level of significance. This implies that the size, efficiency and return on assets for Kenya Re improved after privatization. No evidence of significant improvement in Kenya Re's leverage and liquidity was found. The absolute p-values in the paired t-test and Wilcoxon sign rank test were greater than 0.05.

#### **4.4 Regression Analysis**

While the equality tests are important in assessing the change in performance of the privatized firms, the real impact of privatization on performance cannot be analyzed by use of these tests. In this respect, it was important to estimate a linear model with ROA as the dependent variable and privatization dummy as the independent variable. The control variables in this model comprised measures of leverage, efficiency, liquidity and size. The model comprised the variables for both companies. The model estimated has been provided in section 3.5 of chapter 3. Table 4.3 below summarizes the OLS regression results.

**Table 4.3: Ordinary Least Squares Estimation**

Dependent Variable: ROA

Number of Observations: 20

Variable	Coefficients	Std. Error	t-statistic	Prob.
Privatization	0.0221554	0.0084634	2.62	0.020**
Liquidity	-0.0011677	0.0019312	-0.60	0.555
Efficiency	0.1586261	0.0559609	2.83	0.013**
Leverage	-0.0537392	0.0422984	-1.27	0.225
Logassets	-0.0203575	0.0045315	-4.49	0.001**
Constant	0.533396	0.1079411	4.94	0.000**
R-squared	0.8362	Mean(Dependent variable)	0.0509547	
Adjusted R-squared	0.7777	Durbin Watson statistic	2.00256	
F-Statistic	14.3			
Prob. > F	0.0000			

\*\* 1% level of significance

\* 5% level of significance

From the regression results above, it is evident that the slope of the entire model is statistically different from zero. This is because the probability value of the F-statistic is less than 0.01 and hence the null hypothesis of a slope that is not statistically different from zero is rejected. This implies that the slope of the entire model is significant at 1% level of significance and hence the model is valid for making inferences. The variation of the independent variable (ROA) is also adequately explained by independent variables as

indicated by adjusted R-squared of 0.7777. This implies that about 78% of the variation in return on assets is explained by the independent variables in the above regression. Therefore, the independent variables in this model have high explanatory power. Heteroskedasticity was not a problem in this regression as is evident from Breusch-Pagan test and White's test for heteroskedasticity. Heteroskedasticity arises when the variance of the error term is not constant across observations. If this is the case, the standard errors are incorrect, and hence hypothesis testing is affected. The p-value of the chi-square value was 0.3234 in Breusch-Pagan test while in White's test; the p-value of the chi-square was 0.3946. Therefore, the null hypothesis of constant variance/homoskedasticity cannot be rejected. Both tests for heteroskedasticity have been provided in appendix II. Also, the model does not have omitted variables as indicated by the Ramsey RESET test. The F-statistic in this test had a p-value of 0.1827, which is greater than 0.05. Therefore, the null hypothesis of no omitted variables in the model cannot be rejected at both 1% and 5% level of significance. Omitted variable bias can lead to heteroskedasticity thereby affecting hypothesis testing. The results of the Ramsey RESET test have been provided in appendix III.

Multicollinearity was also not a problem in the above regression as indicated by the variance inflation factors. The mean variance inflation factor was less than 10. In addition, all the variance inflation factors for the independent variables were less than 10 and hence there was no multicollinearity. Multicollinearity among the independent variables is problematic because it leads to biased hypothesis test results. The hypothesis test results have been summarized in appendix IV.

#### **4.4.1 Interpretation of the Regression Results**

From the regression results in Table 4.3, it is evident that privatization has led to an increase in the performance of the two sampled companies. This is because the coefficient for privatization is significant at 1% level of significance (the T-statistic of 2.62 is greater than 2.57). This implies that the return on assets in the post-privatization period is approximately 0.02% higher than in the pre-privatization period. Therefore, it can be concluded that privatization of the two companies has resulted in improvement in the financial performance.

The coefficients of two control variables namely; efficiency and size (proxied by log of assets) were also found to be significant at 1% level of significance. The coefficient of efficiency was positive while the coefficient of log of assets was negative. The results imply that an increase in efficiency by 1% would lead to an increase in return on assets by approximately 0.16% if all other factors are held constant. The coefficient for size had unexpected negative sign, implying that an increase in size by 1% would lead to a decrease in return on assets by approximately 0.02%. The coefficients of leverage and liquidity were found to be insignificant in influencing return on assets.

#### **4.5 Discussion of the Findings**

The study findings suggest that performance of Kenya Re in terms of return on assets, efficiency, and size have significantly improved in the post-privatization period. On the other hand, the performance of KenGen in terms of size has been increased significantly after privatization. These findings are in general agreement that privatization improves the performance of organizations. The regression results indicated that privatization had positive and significant impact on return on assets. This implies that privatization had

improved the financial performance of the two companies. In addition to privatization, sales efficiency (used as a control variable) was also found to have a positive and significant impact on the financial performance. These findings generally corroborate the findings from studies such as D'Souza and Megginson (1999) and Ochieng and Ahmed (2014). Contrary to the expectations, the coefficient of log of assets (proxy for size) was found to be negative and significant, implying that an increase in size of the two organizations had negative effect on financial performance. This could be attributed to the expansion policies after privatization.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the study summary, conclusions and the recommendations based on the study findings. Specifically, section 5.2 comprises the summary of the study while the conclusions are provided in section 5.3. The policy implications are provided in section 5.4, with the limitation of the study being the last section.

#### 5.2 Summary

The main objective of this study was to investigate the effect of privatization on the performance of privatized companies in Kenya. Due to data limitations in the period prior to privatization, two companies namely, KenGen and Kenya Re were selected as case studies. Two methodologies namely, equality tests and regression analysis were adopted in data analysis. The data collected was for five years before privatization and five years after privatization. The data collected was leverage, liquidity, efficiency, return on assets and company size (represented by logarithm of assets). The five variables were subjected to paired t-test and Wilcoxon sign rank test in order to establish whether there were any significant differences between these variables in the pre- and post-privatization period. In addition, a pooled regression model with return on assets as the dependent variable and dummy for privatization as the independent variable was estimated. The control variables in this model comprised leverage, size, liquidity, and efficiency.

The equality tests indicated that the size of KenGen has significantly increased after privatization while the efficiency had significantly reduced after privatization. The other

variables did not have significant changes after privatization. On the other hand, the equality tests indicated that the return on assets, efficiency and size of Kenya Re had significantly increased after privatization. The regression results indicated that privatization was positively related with the performance of the two companies, with the coefficient of this variable suggesting that privatization had increased the return on assets and hence financial performance by approximately 0.02%.

### **5.3 Conclusions**

From the study findings, it can be concluded that privatization has improved the performance of KenGen and Kenya Re. In addition, the return on assets, efficiency and size of Kenya Re has significantly increased after privatization. On the other hand, KenGen has achieved significant growth after privatization. However, leverage and return on assets has not significantly improved after privatization of KenGen. Generally, privatization has improved the performance of the two companies. These findings corroborate the findings by D'Souza and Megginson (1999) who found a significant increase in profitability and efficiency for a sample of 85 countries in 28 industrialized countries. In Kenyan context, these findings corroborate Ochieng and Ahmed (2014) who found an increase in profitability and financial efficiency after privatization of Kenya Airways.

### **5.4 Policy Recommendations**

From the study findings, a number of recommendations can be made. To begin with, the government should embark on privatization of the state owned enterprises in order to boost their performance. State owned enterprises in Kenya have suffered from mismanagement due to political and socio-economic factors. The involvement of state owned enterprises in

non-economic activities like welfare provision has led to poor performance. In order to bring corporate governance among the state owned enterprises, it is important to privatize these enterprises. The appointments of the board of directors of state owned enterprises in Kenya are done by the president. This has led to the directors serving the interests of the state to the detriment of these organizations. In addition, the state owned enterprises in Kenya engage in welfare activities that lead to financial constraints. For instance in the Moi era, Kenya Cooperative Creameries was providing primary school children with free milk, a situation that affected its profitability. Under private ownership, the main purpose of an organization is profit maximization, with welfare concerns only being undertaken under corporate social responsibility. In case of privatization, the hiring of chief executive officer is competitive and the top management is directly answerable to the shareholders.

There is also the need to lay emphasis on improvement of efficiency as it was found to significantly influence profitability of the sampled firms. This implies that as the privatization program is implemented, policies that seek to improve efficiency should be embarked by the management as they improve the performance of organizations. This is because efficiency is the basis of profitability as inefficiency of the state owned enterprises is one of the main causes of their poor performance. As revealed by the analysis results, it is expected that privatization would lead to growth of the companies. This is due to the greater access to debt and equity markets. In this respect, this growth should be aimed at increasing the performance of the privatized organizations. For instance, good financial management and policies for market expansion should be taken into consideration.



## **5.5 Limitations of the Study**

This study was limited in a number of ways. To begin with, the research findings are based on two companies and hence there could be possibility for different results for other privatized organizations.

The study findings are also subject to the time period of the analysis. In this study, five years pre-privatization data and five years post-privatization data was used. There could be different results for a longer time period.

Next is that return on assets was used as indicator of performance. Different results can arise as a result of using a different proxy.

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## APPENDICES

### Appendix I: Completed privatizations (2000-2016)

	COMPANY	YEAR	METHOD OF PRIVATIZATION	PUBLIC SHARE BEFORE (%)	PUBLIC SHARE AFTER (%)	SECTOR
1	Kenya Electricity Generating company (KENGEN)	2006	IPO	100	70	Energy
2	Telkom Kenya	2007	Strategic sale	100	49	Telecommu- nication
3	Kenya Railways Corporation	2006	Concessioneing	100	100	Transport
4	Mumias Sugar Company	2006	IPO	38.4	20	Manufacturin- g
5	Safaricom	2008	IPO	60	35	Telecommu- nication
6	Kenya Reinsurance Corporation	2007	IPO	100	60	Insurance

## Appendix II: Tests for Heteroskedasticity

### Breusch-Pagan Test for Heteroskedasticity

```
. estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of roa

```
chi2(1) = 0.98
```

```
Prob > chi2 = 0.3234
```

### White's General Test for Heteroskedasticity

```
. estat imtest,white
```

White's test for Ho: homoskedasticity

against Ha: unrestricted heteroskedasticity

```
chi2(19) = 20.00
```

```
Prob > chi2 = 0.3946
```

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	20.00	19	0.3946
Skewness	5.52	5	0.3558
Kurtosis	0.02	1	0.8768
Total	25.54	25	0.4322

### Appendix III: Ramsey RESET test

```
. estat ovtest
```

Ramsey RESET test using powers of the fitted values of roa

Ho: model has no omitted variables

F(3, 11) = 1.93

Prob > F = 0.1827

### Appendix IV: Variance Inflation Factors for the Independent Variables

Variable	VIF	1/VIF
efficiency	1.80	0.554780
logassets	1.71	0.584190
liquidity	1.57	0.637190
priv	1.46	0.686537
leverage	1.29	0.772361
Mean VIF	1.57	