

**THE EFFECT OF IMPLEMENTATION OF REGULATION GUIDELINE ON
EFFICIECY OF SACCOS IN KENYA**

BY

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**A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE
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DECLARATION

I declare that this is my original work and has not been presented in any other University or College for Examination or Academic purposes.

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This research project has been submitted for examination with my approval as the university supervisor

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ABSTRACT

Efficiency of SACCOs is affected by various characteristics such as membership, deposits, loans and advances, share capital, adoption of technology and managerial competency. This study therefore sought to establish the effect of implementation of regulation guideline on efficiency of SACCOs in Kenya. The main specific objective was to establish the effect of implementation of regulation guideline on efficiency of SACCOs. The study targeted thirty (30) SACCOS that are regulated by SASRA regulations for the period 2009 - 2013. DEA was used to compute efficiency with inputs being member deposits and borrowings; interest/dividend on member deposits and cost of borrowings; staff costs; and other operating expenses (such as rent payable, communication costs, office consumables). Outputs were loans to members and other earning assets (such as interest yielding bank deposits, treasury bills and bonds; investment in rental property; and shares); interest income; and other income (includes interest from bank deposits, treasury bills and bonds; rent from investment property; dividends from shares; money transfer and withdrawal charges). Multiple linear regression analysis between efficiency and regulation guidelines was carried out. From the study, it was found that the implementation of the SASRA regulation had positive effect on the operations and productivity of SACCOs. The immediate effect was increase in number of registered Deposit Taking Saccos membership and deposits. This is an indicator of growth in confidence in the SACCOs due to majority of them getting formalized and rebranded. The findings show that on average there was an increase in efficiency over the 2009 - 2013 periods under analysis. Addition, there was increase in average total factor productivity over this period. More specifically this increase was pronounced on 2011 suggesting that the implementation of regulations has a positive effect on the performance of the SACCOs. Decomposition of the efficiencies show that technical efficiency changes was below 1 suggesting that the contribution of innovations to growth of SACCO's was slow. This suggests that the implementation of the regulations guidelines did not compel SACCOs to adopt technology in their operations. This includes adoption of ICTs in service delivery and product development through research and innovations. In addition, the study found out increases in pure efficiency changes since the introduction of the SASRA regulations. The changes in pure efficiency are an indicator of the contribution of management and governance to the productivity of SACCOs. This indicates that the quality of management and governance systems improved during this period and had positive impact on the productivity of SACCOs. The major effect of the regulation is on governance and management of SACCOs which has seen efficiency of SACCOs rise. It is evident from the study that there is more room for SACCOs to improve on efficiency especially in the area of technical efficiency.

Key words: Regulation Guidelines, Efficiency, SACCOs.

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DEDICATION

This study is dedicated to my loving husband Mathias, My adoring baby boy Liam who continuously inspired me and supported my efforts throughout this study; they confirmed every step throughout my study and encouraged me. What I call my achievement today is actually yours.

ABBREVIATIONS

ATM	Automatic Teller Machine
DEA	Data Envelopment Analysis
DCO	District Co-operative Officers
DGF	Deposit Guarantee Fund
DMU	Decision Making Units
EFFCH	Efficiency Score
FOSA	Front Office Savings Activities
GOK	Government of Kenya
KUSCCO	Kenya Union of Savings and Credit Co-operative Organization
MOCD&M	Ministry of Co-operative Development and Marketing
PCO	Provincial Co-operative Officer
PECH	Pure Efficiency
SACCO	Savings and Credit Co-operatives Limited
SACCOS	Deposit Taking SACCOs
SASRA	SACCO Societies Regulatory Authority
SECH	Scale Efficiency
SMES	Small Medium Enterprises
TECHCH	Technical Efficiency
TFPCH	Total Factor Productivity
WOCCU	World Council of credit unions

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Cooperative Societies are good vehicles for assisting the people to improve their socio-economic situation. They derive their strength and validity from member solidarity cooperation and concern for each other. The Co-operatives are anchored on a well-established Cooperative philosophy based on seven principles formulated by the International Cooperative Alliance which include: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information, cooperation among co-operatives and finally concerned for the Community (Hans, 2009).

The rapid growth of co-operative societies has brought increasing calls for regulation, but complying with prudential regulations and the associated supervision can be especially costly for these SACCOs. The best empirical estimates of the costs of such regulation come not from SACCOs or other financial institutions operating in developing countries, but from banks in industrialized countries. For example, by one estimate, the costs of complying with regulation in the United States are sizable, equal to twelve to thirteen percent of banks' non-interest expenses (Thornton, 2011; Elliehausen, 1998). According to Christen, Lyman, and Rosenberg (2013), compliance with prudential regulations could cost a co-operative society (SACCO) five percent of assets in the first year and one percent or more thereafter.

Efficiency is the ratio between outputs and inputs; we can also describe it as a distance between the quantity of input and outputs, and the quantity of input and output that defines a frontier, the best possible frontier for a firm in its industry (Duncan, 2004).

The positive relationship between efficiency and financial performance suggests that financial institutions including SACCOs that pursue improved financial performance through the single-minded pursuit of lower costs may be fundamentally misguided.

The cooperative sector in the country plays a significant role in the economy currently contributing to over 31% of the savings and over 40% of the Gross Domestic product supporting over 60% of the nation's population either directly or indirectly. According to the SASRA regulatory requirements licensed deposit taking SACCOs are expected to maintain a liquidity ratio of not less than 15%. Another type of measure is the solvency measure which basically determines the amount of borrowed capital used in business relative to the owner's equity capital invested in the business. Solvency measures thus provide an indication of the firm's ability to repay all its debts if all the assets were sold, (Kibera, 2013).

1.1.1 Regulation Guideline

Since the enactment of SASRA regulations, there has been increased empirical attention on the effect of the regulation guidelines on the efficiency of SACCOs' in the country. (Sánchez, 2005). However, empirical studies have clearly avoided looking at specific aspects of these regulation guidelines particularly their effects on efficiency of the SACCOs.

If the effect of compliance of SACCOs regulation guidelines is not addressed then most SACCOs might not be able to meet the requirements for general operation of SACCOs. In addition, stakeholders are bound to loose in case any SACCO collapses. On the other hand, the government will also not be able to effectively monitor the operations of SACCOs specifically SACCOs which are intended to propel economic growth.

1.1.2 Efficiency

Efficiency is a level of performance that describes a process that uses the lowest amount of inputs to create the greatest amount of outputs. Efficiency relates to the use of all inputs in producing any given output, including personal time and energy (Elliot, 2004). Efficiency of SACCOs is affected by other factors like size, age, and bond of association, adoption and managerial competency (Mirrie, 2014).

Efficiency is used as a measure of a firm's overall financial stability over a given period of time and can be used to compare similar firms across the same industry or to compare industries or

sectors in aggregation. Efficiency is therefore a very important aspect of financial management and can thus not be ignored because it is central to the survival of any business enterprise. Without being efficient, a business organization may easily close down its operations (Mombo, 2013). The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide. Traditionally, the success of a manufacturing system or company has been evaluated by the use of financial measures (Tangen, 2013)

1.1.3 SASRA Regulation and Efficiency

In the 1970's managerial theories of the firm have developed in terms of principal-agent analysis. This analysis of the firm stems from two main sources. One is the work of Spence and Zeckhauser (1971) and Ross (1973) which were concerned with problems of arranging contracts with imperfect and asymmetric information. Another approach is known as "agency theory" as developed by Jensen and Meckling (1976) and Fama (1980). In principal-agent analysis the firm is considered as a nexus of contracts between a firm, the principal, and its subcontractor, the agent. SASRA regulates all SACCOS in Kenya which are currently 215 with 126 having been licensed. It's worth noting that SACCOs represent one of the most important sources of financing in developing countries and in the last few years, SACCOs have experienced tremendous growth all over the world. (Lapie & Périlleux, 2008; Armendariz & Morduch, 2005; Magill, 1994).

The role of the government was redefined from one that sought to control co-operative development, to one that now seeks to regulate and facilitate their autonomy. This allowed the co-operatives to compete with other private enterprises (Republic of Kenya, 1997a). The 1997 Act was amended in 2004 through the Co-operative Societies (Amendment) Act of 2004 which was enacted to re-enforce state regulation of the co-operative movement through the office of the Commissioner for Co-operatives Development, (WOCCU, 2006).

Today, there are more than 46,000 SACCOs, serving about 172 million people in 92 countries. In 1996 in Africa, Asia and Latin America, a total of 20,512 SACCOs were serving 16 million members; by 2006 the numbers had increased to 31,725 SACCOs, serving more than 59 million

members (WOCCU, 2006). Therefore, within 10 years, those regions have seen a growth rate of more than 54% in the number of SACCOs, and more than 268% growth in the number of members (WOCCU, 2006). Given the impact of SACCOS' on the economy and individual Kenyans, SASRA regulation guidelines could not have come at a better time than this.

A co-operative society is an autonomous association of persons united voluntarily to meet their common economic and social needs through a jointly owned and democratically controlled enterprise or business (PROCAUSER Africa, 2012). Co-operatives are divided into two broad categories. There are the financial co-operatives (Savings & Credit Co-operative Societies – SACCOs) and the non-financial co-operatives (including farm produce and other commodities co-operatives, housing, transport, and investment co-operatives, (Mbue, 2006).

The general objective of these organizations is to protect the economic interests and general welfare of members in accordance with cooperative values and principles. As at 31st December 2013 the number of SACCOs in the country stood at two hundred and fifteen (215), out of these one hundred twenty six (126) operate FOSAs and are therefore licensed and regulated by SASRA while the rest are supervised by the Ministry of Industrialization and Enterprise Development, (WOCCU, 2006).

SACCOs in Kenya just like their counterparts across the world predominantly rely on advance of credit to their members as the primary business accounting for over 90% of their income. Members contribute deposits on a monthly basis and the accumulated deposits enable the members to qualify for loans which are calculated using the formula of the accumulated deposits times three. Loans given out are secured using the member's shares and guarantors however sometimes the loans advanced are not recovered as expected giving rise to what is called nonperforming loans, (Kobia, 2011).

SACCOs in Kenya have witnessed significant growth over the past few years compared to other countries in Africa. This growth is partly attributable to the early adoption of the SACCO Societies Act of 2008 that placed licensing, supervision, and deposit taking under the umbrella of the SACCO Societies Regulatory Authority (SASRA, 2012).

These prudential regulations have played a major role in stimulating growth and development in the SACCO sector. This study concentrates on deposit taking (FOSA operating SACCOs) in Kenya. SASRA is thus a Semi-Autonomous Government Agency under the line ministry and is a creation of the SACCO Societies Act 2008. It was inaugurated in 2009 and was charged with the prime responsibility of licensing and supervising deposit taking SACCO Societies in Kenya. The establishment of SASRA falls within the Government of Kenya's reform process in the financial sector which has the dual objectives of protecting the interests of SACCO members and ensuring that there is confidence in the public towards the SACCO sector and spurring Kenya's economic growth through the mobilization of domestic savings, (Kobia, 2011).

1.2 Research Problem

Regulation remains a precondition for deposit mobilization in many countries thus more SACCOs seek to transform into regulated entities to access currency deposits. Regulation opens the door to a variety of funding opportunities and helps to reduce the overreliance on subsidies. Understanding how regulation affects performance matters. On one hand costs of designing and enforcing regulatory policies to address the specific challenges of microfinance are substantial (Hartaska and Mersland, 2009). On the other hand, complying with supervisory requirements is costly. Barth et al., 2004 have reviewed the implications of supervision on the performance of financial intermediaries.

The enactment of the SACCO Act of 2008 established SASRA as a legal authority to regulate the sector and subsequently the Kenya government introduced regulation guidelines on SACCOS' through SASRA in the same year. In Kenya, there are two types of SACCOS' namely; Deposit Taking SACCOs' (SACCOS) and Non-SACCOS. In broader terms, SASRA was charged with the prime responsibility to license and supervise SACCOS in Kenya. The regulation guidelines came in against a backdrop of losses and compromised profitability, loss of members to banks, incompetent staff and poor corporate governance. All licensed SACCOS were required to review and align their policies and systems to the regulatory standards to underscore the business risks attendant to them namely credit, operational, market and legal (SASRA,2012).

More specifically at operational level, SASRA regulation guidelines require SACCOS' to reconstitute their boards, improve on corporate governance and upgrade staff competence in order to improve profitability. In addition, despite the fact that SASRA regulation guidelines have been in operation for the last four years, the effects of compliance of the SACCOS to these regulation guidelines on their efficiency has not been established. Since the enactment of these regulations, there has been increased empirical attention on the effect of the regulation guidelines on the efficiency of SACCOS' in the country. However, empirical studies have clearly avoided looking at specific aspects of these regulation guidelines particularly their effects on efficiency of the SACCOS, (Kioko, 2010).

Much of the Empirical research has been limited to case studies of effect of SACCOs regulation in Asia, Africa and Latin America. These studies have tended to focus on micro-economic impacts and the relationships between SACCOs and their recipient credit clients (Hulme and Mosley, 1996; Wood and Sharif, 1997; Khandker, 1998 Coleman, 1999; Morduch, 1998). Locally, There has been very little research into the regulation and supervision of SACCOs and the impact of regulation and supervision on the development of the sector. What research has been done has tended to be in the form of descriptive case studies charting the experiences of selected SACCOs.

To the knowledge of the researcher, research has been conducted on the effects of nonperforming loans on the financial performance of SACCOs in Kenya yet the sector has a high growth rate and contributes significantly to the Kenyan economy. The research therefore intends to fill the knowledge gap by investigating the effects of regulation guideline on efficiency of SACCOs by providing answers to the question; what is the effect of implementation of regulation guideline on efficiency of SACCOs in Kenya?

1.3 Research Objective

To establish the effect of implementation of regulation guideline on efficiency of SACCOs in Kenya.

1.4 Value of the Study

This study is likely to benefit various stakeholders including the government of Kenya, current and potential investors, members of SACCOs and other financial institutions. The policy makers will obtain knowledge of the cooperative movements dynamics and thus obtain guidance from this study in designing appropriate practices that will regulate the stakeholders in the SACCOs' in Kenya.

The researcher anticipates findings of the study will also help SACCOS in Kenya in discovering new and better techniques of improving and running their operations in order to improve their financial performance.

The government through the line ministry can use this study to educate those SACCOs' that have not complied about the importance of being regulated. Finally, the study will identify the knowledge gaps and provide suggestions for further research. This will form a base for scholars who are interested in conducting research in this area in future.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are the theoretical review, empirical review, conclusion and conceptual framework.

2.2 Theoretical Review

2.2.1 The Theory of Economic Regulation

The theory of economic regulation was proposed by George Stigler in 1971. Stigler (1971) observed that the government, with its machinery and power, was a potential resource or threat to every industry in the society. The most important element of the theory of economic regulation is its integration of the analysis of political behavior with the larger body of economic analysis, Peltzman (2009). This means that interest groups can influence the outcome of regulatory processes by providing financial or other support to politicians. The central task of the theory, as propagated by Stigler, is to explain who will receive the benefits or burdens of regulation, what form regulation will take and the effects of regulation upon the allocation of resources. According to Stigler, there are two views of regulation that are widely held. First view is that regulations are instituted mainly to ensure protection and benefit of the public at large or a significant subclass of the public. Second view is that the political process defies rational explanation and that there are regulations that have a negative impact on the regulated industry.

The theory of regulation proposes four benefits that the state or the government can provide to an industry. The first benefit is a direct subsidy of money. However, an industry with power to obtain government favors will not usually use this power to get a direct subsidy of money. This is because unless the list of beneficiaries can be limited by an acceptable device, whatever amount of subsidy the industry can obtain will be shared among a growing number of rivals.

The second benefit the state can provide is control over entry by new rivals. There is considerable discussion in economic literature of the rise of peculiar price policies, vertical integration and similar devices to retard the rate of entry of new firms into oligopolistic industries. The general hypothesis given by the economists was that every industry or occupation that has enough political power would seek for control of entry.

The third benefit is the ability to affect substitutes and complementary products. An industry will seek to suppress the production of substitute products but seek to promote the production of goods that are complimentary to its own products. The fourth benefit that an industry would seek to derive is the ability to fix prices. Even the industry that has put in place barriers to entry will often want price controls administered by a body with coercive powers. If the number of firms in the regulated industry is even moderately large, price discrimination will be difficult to maintain in the absence of public support. Where there are no diseconomies of scale for the individual firm, price control is essential to achieve more than competitive rates of return.

However, these various political benefits are not obtained by the industry in a pure profit maximizing form. The regulation theory further notes that the political process erects certain limitations upon the exercise of cartel policies by an industry. First, the distribution of control of the industry among the firms in the industry is changed. In an unregulated industry, each firm's influence upon price and output is proportional to its share of industry output. Political decisions take account of the political strength of the various firms, so small firms have a larger influence than they would have in an unregulated industry. The second limitation is that procedural safeguards required of public processes are costly. The delays, which are dictated by both law and bureaucratic thoughts of self-preservation, can be large. Finally, the political process automatically admits powerful outsiders to the industry's council. In conclusion, Stigler emphasizes that these limitations upon political benefits are predictable and they must enter into the calculus of the profitability of regulation of an industry.

Posner (1974) defines economic regulation as government intervention in the market. He refers to economic regulation as taxes and subsidies of all sorts as well as explicit legislative and

administrative controls over rates, entry, and other facets of economic activity. Two main theories of economic regulation have been proposed. One is the ‘public interest’ theory. It holds that regulation is supplied in response to the demand of the public for the correction of inefficient or inequitable market practices. The second theory is the ‘capture’ theory. This theory states that regulation is supplied in response to the demands of interest groups struggling among themselves to maximize the incomes of their members.

According to Posner, two assumptions seem to have typified thought about economic policy. One is that economic markets were extremely fragile and apt to operate inefficiently if left alone and the other was that government regulation was virtually costless. However, if this theory was correct, we would find regulation of SACCOS imposed that generate substantial external costs or benefits, which is not the case. This theory is relevant to the study since it highlights the importance of regulatory frameworks of financial institutions.

2.2.2 Modern Portfolio Theory

MPT is an overall investment strategy that seeks to construct an optimal portfolio by considering the relationship between risk and return (Correia et al., 2013). This theory is “...generally perceived as a body of models that describes how investors may balance risk and reward in constructing investment portfolios.” (Holton, 2004: p. 21) as quoted in Wang (2008). MPT is otherwise known as portfolio management theory (Reilly, 1989). The main indicators used in MPT are the alpha and the beta of investment (Hobbs, 2001).

Beta is a measurement of volatility of an asset or a portfolio relative to a selected benchmark, usually a market index. A beta of 1.0 indicates that the magnitude and direction of movements of returns for an asset or a portfolio are the same as those of the benchmark. A beta value greater than 1.0 indicates a higher volatility, and a beta value less than 1.0 indicates a lesser volatility when measured against the benchmark (Yao et al., 2002).

Alpha calculates the difference between what the portfolio actually earned and what it was expected to earn given its level of systematic risk, beta value. A positive alpha indicates return of

the asset or the portfolio exceeds the general market expectation. A negative alpha indicates return of the asset or the portfolio falls short of the general market expectation (Yao et al., 2002).

According to Wang (2008), although the growth of MPT has been both normative and theoretical, there are some general issues associated with MPT (Compass Financial Planner Pty Ltd., 2007). One, volatility is a measure of risk in a historical period. One relies heavily on historical data when attempting to predict the future. It can also be understood as a measure of uncertainty that quantifies how much a series of investment returns varies around its mean or average. Volatility is represented by standard deviation (Yao et al., 2002). 2) Second, one should not put too much faith in an “efficient” portfolio performing well if world markets become unstable for a little while (Harvey et al, 2000). A study done by Merrill Lynch in 1979 showed that a typical diversified investment portfolio eliminates so much of the specific risk, that roughly 90 percent of all the portfolio risk is market risk, therefore if market is unstable, an investor should not be disappointed if the portfolio is not performing (Derby Financial Group, 2008).

Further to the issues that are associated with MPT, the implementations of this theory have also been limited. The three major reasons for the limited implementation of MPT are (Elton et al., 2009: p. 1341) the difficulty in estimating and identifying the type of data necessary for correlation matrices, the time and expenses needed for generating efficient portfolios i.e. the costs associated with solving a quadratic programming problem (the input data requirements are voluminous for portfolios of a practical size (Renwick, 1969)) and finally the difficulty in educating portfolio managers to express the risk-return trade-off in terms of co-variances, returns and standard deviations (Renwick, 1969). This theory offers an overall investment strategy that seeks to construct an optimal portfolio by considering the relationship between risk and return in SACCOS.

2.2.3 Efficient Market Hypothesis

This hypothesis is relevant to the study in relation to how the investment portfolios of investment schemes are managed in SACCOS. The results of the study will help understand whether these

investments should be regulated or whether investment managers were more efficient before the guidelines came into effect. An efficient market is assumed for the concept of passive management approach (Hobbs, 2001). The “Efficient market hypothesis (EMH) is the set of arguments leading to the assertion that market prices fully reflect available information.” (Tucker et al., 1994: p.580) as quoted in Wang (2008). EMH is a set of implications that are associated with each different form of the market.

There are three forms of the EMH. One is the weak form which assumes that current security prices fully reflect all security market information, including the historical sequence of prices, price changes, trading volume and any other market information such as odd lot transactions (Reilly, 1989). Therefore, technical analysis is of no use when attempting to outperform the market; it is merely an approach that is used in the hope of predicting future trends (Hobbs, 2001). Yet, this form of the EMH suggests that future security prices cannot be predicted by the use of historical prices, this means that future cannot be predicted by using historical data, that further suggests that whatever happened in the past is unlikely to happen in the future, thus stock prices behave according to a random walk (Malkiel, 1999).

The second form of EMH is the semi-strong one which asserts that security prices adjust rapidly to the release of all new public information; thus security prices fully reflect all public information (Cuthbertson et al., 2004). Thus, fundamental analysis is of no use in outperforming the market, instead it is used in the hope of identifying new information (Correria et al., 2013). Finally, the strong-form of the EMH contends that security prices fully reflect all information, whether it might be public or private (Reilly, 1989). In other words, not even insider information can be used in the quest to outperform the market.

2.2.4 Stakeholder Theory

Pioneering work in the area of stakeholder management was provided by Freeman in 1984, who outlined and developed the basic features of the concept in a book entitled *Strategic Management: A Stakeholder approach* (Cole et al. 1984). Abdullah & Valentine (2009) indicate

that a stakeholder can be defined as any group or individual who can affect or is affected by the achievement of the organization's objectives. Stakeholder theorists suggest that managers have a network of relationships to serve, which include the suppliers, employees and business partners. Sundaram & Inkpen (2004) contend that stakeholder theory attempts to address the group of stakeholder deserving and requiring management's attention. Donaldson & Preston (1995) suggest that all groups participate in a business to obtain benefits. Nevertheless, Clarkson (1995) concludes that the firm is a system, where there are stakeholders and the purpose of the organization is to create wealth for its stakeholders.

Freeman (1984) reveals that the network of relationships with many groups can affect decision making processes as stakeholder theory is concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders. Donaldson & Preston (1995) argue that this theory focuses on managerial decision making and interests of all stakeholders have intrinsic value, and no sets of interests is assumed to dominate the others. This theory will enable the researcher the importance of allowing all stakeholders play their role since they support each other in enhancing the well being of SACCOS.

The origin of the ideas shaping shareholder theory is more than 200 years old, with roots in Adam Smith's *The Wealth of Nations*. In general, shareholder theory encompasses the idea that the main purpose of business lies in generating profit and increasing shareholders wealth. Modern proponents of shareholder theory espouse three tenets from Smith, namely the importance of "free" markets; the "invisible hand of selfregulation;" and the importance of "enlightened self-interest." Shareholder theorists call for limited government and regulatory intervention in business, believing markets are best regulated through the mechanism of the invisible hand that is, if all firms work in their own self interest by attempting to maximize profits, society at large will benefit. Some proponents of the shareholder view even believe that the invisible hand checks illegal activity, arguing that the market will punish, or weed out, firms that engage in illegal or unethical behavior. Therefore, they conclude that, in general, excessive oversight and regulation of industry is unnecessary. According to Berle and Means, 1932; and Friedman, 1962, shareholders' theory defines the primary duty of a firm's managers as the

maximization of shareholder wealth (Cunliffee, A and Luhman, J 2013). The theory enjoys widespread support in the academic finance community and is a fundamental building block of corporate financial theory. However, the shareholder model has been criticized for encouraging short-term managerial thinking and condoning unethical behavior. According to Smith (2013) most critics believe shareholder theory is geared toward short-term profit maximization at the expense of the long run.

On the other hand, Freeman et.al (2004), asserts that shareholder theory involves using the prima facie rights claims of one group shareholders to excuse violating the rights of others. Many proponents of shareholder theory, in a stylized version of the model, exhort managers to maximize the firm's current stock price (Keown et. al, 2008; Lasher 2008; Jordan et.al 2008; Brealey and Myers 2013; Cornett et al. (2007); Melicher and Norton, 2008). By focusing on the current stock price which can be manipulated in the short-term by unscrupulous managers. This theory helps the researcher articulate the importance of shareholders, management and Board of Directors taking the fore-front and ensuring that the going concern of the SACCO is considered and that the interests of all the stakeholders are taken catered for.

2.2.5 Stewardship Theory

A steward protects and maximizes shareholders wealth through firm performance, because by so doing, the steward's utility functions are maximized (Davis et al., 1997). In this perspective, stewards are managers working to protect and make profits for the shareholders. Therefore, stewardship theory emphasizes on the role of management being as stewards, integrating their goals as part of the organization (Davis et al., 1997). The stewardship perspective suggests that stewards are satisfied and motivated when organizational success is attained. The theory recognizes the importance of governance structures that empower the steward and offers maximum autonomy built on trust (Donaldson & Davis, 1991). It stresses on the position of employee to act more autonomously so that the shareholders' returns are maximized. Indeed, this can minimize the costs aimed at monitoring and controlling employee behaviour (Davis et al., 1997). Daily et al. (2013) assert that in order to protect their reputations as decision makers in organizations, managers are inclined to operate the firm to maximize financial performance as

well as shareholders' profits. In this sense, it is believed that the firm's performance can directly impact perceptions of their individual performance. This theory helps the researcher articulate the importance of management and Board of Directors taking the fore-front and leading by example as far as the running of SACCOS is concerned.

2.3 Determinants of Efficiency of SACCOS

A number of factors influence the efficiency of organizations. These determinants include the following:-

2.3.1 Loans and advances

Lending is one of the main activities of SACCOs and any other financial institution in Kenya as evidenced by the size of loans that form SACCO assets and the annual substantial increase in the amount of credit granted to borrowers in the country. Loan portfolio is naturally the largest asset and the largest source of income for SACCOs. In view of the significant contribution of loans to the financial health of SACCOs through interest income generated, these assets are considered the most important assets of SACCOs. As a result of SACCOs and financial institutions business, they expose themselves to the risks of default from loan borrowers.

When the level of nonperforming loans is high, the assets provisions made are not adequate protection against default risk. Mombo (2013) found out that nonperforming loans in deposit taking microfinance institutions in Kenya accounted for the greatest percentage of the variance in profitability of these institutions. Studies have also showed that nonperforming loans can fuel banking crisis and result in the collapse of institutions and have repercussions in the entire economy. Kane and Rice (2001) stated that at the peak of the financial crisis in Benin, 80% of total bank loans portfolio which was about 17% of GDP was nonperforming in the late twentieth century.

2.3.2 Asset base

The Asset base of the firm affects its financial performance in many ways. Large firms can exploit economies of scale and scope and thus being more efficient compared to small firms. In addition, small firms may have less power than large firms hence they may find it difficult to compete with the large firms particularly in highly competitive markets. Previous studies on bankruptcy models indicate that larger SACCOs are more solvent than the smaller ones even if the numerical values of their financial ratios are the same (Beaver, 1966). This implies that the probability of failure is more likely to strike a smaller company in recessionary times. Empirical evidence supports this view (Mitchell, 1994).

Smaller SACCOs tend to experience higher volatility in their rate of return than their larger counterparts (Baumol, 1962). This implies uneven comparison and unfair predictions or results that are generated when comparing different asset size SACCOs with the same financial ratios (Beaver, 1966). Earlier research papers such as Sharma and Kesner, (1996) Mitchell, (1994) strongly support the effect of firm size on business survival and variance in operating performance. They argue that firm size is a basis of competitive advantage in the sense that larger SACCOs tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns. Opler and Titman (2011) argue that lost sales in the time of financial distress are not only a function of leverage but also a function of the firm's size.

For instance small SACCOs tend to have higher volatility of earnings in the sense that they are more affected by the competitor and customer driven losses in sales (Opler and Titman, 2011). On the contrary larger firms tend to be disciplined by manager driven reductions in sales and could well benefit from an event of financial distress caused by the economic contraction (Titman and Wessel, 1988). The size of a firm can be measured using the asset base, branch network, number of employees and membership (for SACCOs). For this research asset base was used as the measure for size.

2.3.3 Member deposits and borrowings

Leverage occurs when firms borrow money to finance the purchase of assets. The other way to purchase assets is through use of owner funds or equity. Member deposits form the largest part in the SACCOS owners funds and equity. Borrowing is not necessarily a bad thing as it can be useful to fund company growth and development through the purchase of assets. However if the company has too much borrowing, it may not be able to pay back all of its debts.

Debt leverage is measured by the ratio of total debt to equity (debt/equity). It shows the degree to which a business is utilizing borrowed money. SACCOS that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt they may also be unable to find new lenders in the future. The trade-off theory (TO) (Bradley, Jarrell and Kim, 1984; Harris and Raviv, 1991) suggests that every firm has a specific optimal debt-to-equity ratio determined by balancing the present value of expected marginal benefits of leverage (ex. tax savings due to paid interests) against the present value of expected marginal costs of leverage.

2.4 Review of Empirical Studies

In Kenya, several studies have been done on the effect of corporate governance on efficiency and financial performance.

Mirrie (2014) did a study on the influence of members' income and conduct of SACCOS in the relationship between characteristics and efficiency of SACCOS in Kenya.

Muriithi (2004) investigated the relationship between corporate governance mechanisms and performance of firms and found that the size and the composition of the board of directors together with the separation of the control and the management have the greatest effect on the performance.

Ngugi (2007) did a study on the relationship between corporate governance structures and the performance and found that inside directors are more familiar with the firm's activities and they can act as monitors to top management especially if they perceive the opportunity to advance

into positions held by incompetent executives. The study also found that the effectiveness of a board depends on the optimal mix of inside and outside directors concluding that an optimal board composition lead to better performance of the companies.

Locally Ndebele (2008), studies on how the Kenyan banking sector is dominated by a few large firms, which focus mainly on short-term lending. Of the 56 commercial banks operating in the country, the largest four control 81% of the deposits. The short-term nature of their lending and their policies of concentrating on a small corporate clientele has implied indifference to small savers and borrowers. This has meant that they exclude a large number of potential borrowers and investors from their services.

Makori, et al (2013) revealed that political interference, high investment in non-earning assets and inadequate managerial competencies hindered the profitability of SACCOS in Kenya. Mwau (2013) found out that 88.9% of the SACCOS in Kenya had received external funding and hence concluded that financing diversification positively affects the performance of SACCOS.

Mosongo et al (2013) affirmed that high financial performance of the SACCOS depended on adopting institutional, product and process innovations respectively. Chahayo et al (2013) found out that financial shortage negatively affects the SACCOS' performance. They noted that the financial mismatch was caused by poor leadership, poor record keeping, outdated cooperative laws, lack of cash flow management and low interest loans. Similarly, Orlando et al (2012) found out that growth of SACCOS' wealth depended on financial stewardship, capital structure and funds allocation strategy.

Orlando et al (2013) narrated that the growth of SACCOS' wealth depended on loans management, institutional strengths and innovativeness of SACCO Products. Auka and Mwangi (2013) revealed that despite SACCOS were not effective and competitive in providing financial products and customer relations; large number of SACCOS' members took loans because they provided low- interest loans. Mwangi and Wanjau (2013) found out SACCOS contributed to the growth of capital, entrepreneurship and business management skills among youth in Kenya.

A number of empirical studies have been carried out in the US with providence of the nexus between corporate governance and a firm's financial performance (Gompers et al., 2013; Black et al., 2013 and Sanda et al. (2013) with inconclusive results. Bebchuk and Cohen (2004) have shown that well regulated firms have higher firm performance. The main characteristic of regulation that Sasra requires and can be identified in these studies include board size, board composition, and whether the Chief Executive Officer is also the board chairman. Bhagat and Black (2002) found no significant relationship between board composition and financial performance. Yermack (1996) also showed that, the percentage of directors does not significantly affect firm financial performance.

Agrawal and Knoeber (1996) suggest that boards expanded for political reasons often result in too many outsiders on the board, which does not help financial performance. Some recent empirical papers appear to focuses on the relationship between corporate governance ratings and firm financial performance: Gompers et al. (2013), Brown and Caylor (2004), for the USA; Drobetz et al. (2013) and Bauer et al. (2004) for Europe; Foerster and Huen (2004) for Canada. Ricart et al. (2005) considered the relationship between corporate governance systems and sustainable development of leading companies.

Empirical evidence on the association between outside independent directors and firm financial performance is mixed. Studies have found that having more independent directors on the board improves financial performance (Daily and Dalton, 1994), while other studies have not found a link between independent directors and improved firm financial performance (Hermalin and Weisbach, 1991). The point that can be made from these studies is that there is no clear benefit to firm financial performance provided by independent Directors.

Petra (2005) argues that the mixed results may be reflective of a corporate culture wherein corporate boards are controlled by management and the presence of independent directors has no discernable impact on management decisions. As for the association between role duality and financial performance, Rahman and Haniffa (2013) documented that companies with role duality

seem not to perform as well as their counterparts with separate board leadership based on accounting performance measurement.

2.5 Summary of the Literature Review

According to the above reviews, much has not been touched on regulation guideline though the factors have been analyzed but in banks context. For instance, a study by Kioko (2010) aimed to establish the impact of SASRA regulations on the financial performance of SACCO's in Kenya. The study targeted the 98 SACCOs registered by SASRA. The researcher limited himself to investigating the capital requirements and management efficiency but did not investigate the quality of board of directors, staff competence and corporate governance which is the object of this study. This gap is addressed by the objective of this study. Another study by Odera (2012) aimed to establish Corporate Governance Problems of Savings, Credit and Cooperative Societies. The researcher examined both the corporate governance theories and conflicts of governance associated with SACCOs. The problems that frequently occur in SACCOs due to some reasons like lack of clear and proper rules separating management from decision making, inadequate managerial competitiveness, failure of membership and boards to exercise fiduciary responsibility and the one member one vote system were investigated. The researcher limited himself to corporate governance and did not investigate staff competence and quality of board of directors which is the subject of the object of this study. This gap is addressed by the objective of this study. Another study by Muriuki and Ragui (2010), aimed to establish the impact of the SASRA Legislation on Corporate Governance in Cooperatives in Kenya. These researchers limited themselves to investigating the impact of the legislation on the corporate governance specifically gender imbalance among top management staff but did not investigate corporate governance as far as the board of directors are concerned which is the object of this study. This gap is addressed by the objective.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the research design that was used, the target population, sampling design and sample size, data collection method, data analysis and presentation, validity and reliability of research instruments.

3.2 Research Design

This study adopted descriptive design. According to Kombo and Tromp (2006), descriptive research is the description of the state of affairs as it exists. They further point out that descriptive studies are not only restricted to fact findings but may often result in the formulation of important principles of knowledge and solution to significant problems.

They involve measurement, classification, analysis, comparison and interpretation of data. The aim of the study is to establish the effect of implementation of regulation guideline on efficiency of SACCOs in Kenya. This method is preferred because the research is extensive; covering several SACCOs and it also enabled rapid data collection.

3.3 Target Population

According to Ngechu (2004), a population is a well defined set of people, services, elements, and events, group of things or households that are being investigated. The population of interest of this study was the SACCOS in Kenya one hundred twenty six (126) of which was complied with SASRA regulations by December 2013.

3.4 Sample Design

The study targeted thirty (30) SACCOS out of the one hundred twenty six (126) SACCOS that are regulated by SASRA regulations for the period 2009 - 2013. Kothari (2005) indicates that where members of a target population are considered, it becomes more representative of the

population of interest. It fulfills the requirements of efficiency, representativeness, reliability and other factors like nature of units, size of the population and the time available for completion of the study.

3.5 Data Collection and Procedures

Secondary data was used in this study. The data was collected from publications at the SASRA offices for the variables under study. Secondary sources of data were also used to collect data which includes: efficiency, member deposits, loans and advances and capital.

3.6 Data Analysis and Presentation

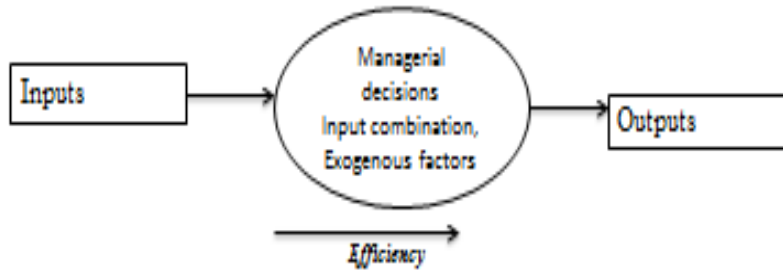
The study makes use of data envelopment analysis to determine the effect of implementation of regulation guideline on efficiency of SACCOS in Kenya. Multiple linear regression models were applied.

3.6.1 Analytical Model

The study targeted thirty (30) SACCOS that are regulated by SASRA regulations for the period 2009 - 2013.

To determine efficiency changes the study used the Malmquist index in the DEA model to calculate efficiency changes during the period of study. Efficiency was measured using the Data Envelopment Analysis (DEA) model on a scale of 0 to 1, where a value of 1 indicated the unit is relatively efficient, and a value less than 1 indicated the unit is inefficient. The efficiency score of a unit varied according to the factors and SACCOS included in the analysis.

3.6.2 Conceptual framework



In computing the Efficiency, Inputs was member deposits and borrowings; interest/dividend on member deposits and cost of borrowings; staff costs; and other operating expenses (such as rent payable, communication costs, office consumables).

Outputs was loans to members and other earning assets (such as interest yielding bank deposits, treasury bills and bonds; investment in rental property; and shares); interest income; and other income (includes interest from bank deposits, treasury bills and bonds; rent from investment property; dividends from shares; money transfer and withdrawal charges).

The choice of efficiency score as the preferred financial performance measure was guided by the fact that it clearly brings out the ability of an organization in utilizing its cost/effectiveness. Additionally, it's easy to calculate and its definition is agreed worldwide.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the analysis of efficiency in 30 SACCOS in Kenya. This covers the period 2009 and 2013. The analysis then compares results of the data envelopment analysis over the period to determine the effect of the SASRA regulations on efficiency scores.

4.2 Data Presentation

4.2.1 Preliminary analysis of data

The study examined 30 SACCOS over a period of 5 years (150 observations). It is observed that the SACCOS average membership is at 20,630 with average members' deposit of Kshs 1,500,000,000. It is also noted the least membership is 1,109 while the highest is 129,903. This demonstrates the widespread variation that exists in the size of the SACCOs in Kenya. This is also observed in loans portfolios and turnovers. An analysis of the descriptive statistics is presented in Table 1.

Table 1: Descriptive statistics for Input and Output variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Membership	150	20360.73	28045.71	1109	129903
Assets	150	119,000,000.00	180,000,000.00	14,400,000.00	748,000,000.00
Deposits	150	1,500,000,000.00	2,450,000,000.00	26,200,000.00	12,500,000,000.00
Loans advances	150	304,000,000.00	640,000,000.00	3,755,629.00	6,710,000,000.00
Turnover	150	1,600,000,000.00	2,770,000,000.00	29,200,000.00	14,500,000,000.00

Table 2: Trends in performance on Selected Indicators

Year	Membership	share capital (kshs M)	Deposits(kshs M)	Loans and advances(kshs M)	Turnover (kshs M)
2009	18,656	63.8	1240	191	1290
2010	18,555	66.1	1290	223	1320
2011	19,471	61.8	1470	241	1570
2012	21,812	208	1670	290	1760
2013	23,789	202	1880	583	2120

Table 2 shows that there was increase in all the indicators of performance on all the selected indicators. Total membership of the SACCOS in the sample recorded increase in membership from 18,656 in 2009 to 23,789 in 2013. Significant increase was noted in the year 2011 to 2013. A similar trend was observed for share capital, deposits, loans and advances and turnover. Deposits increased from Kshs 1,240M to Kshs 1,880M in 2013 suggesting enhanced resource mobilization in the Sacco sector. This also coincides with the coming in force of the SASRA regulations .

4.2.2 Technical Efficiency scores

The analysis of data to achieve efficiency scores was performed using the DEAP program Coelli, T (1996). The program is run under the output orientation Malmquist DEA instruction for 30 DMUs over the 5 year period from 2009 to 2013. The summary of changes in efficiency scores are presented in Table 2.

Table 3:Malmquist Index Summary of Firm Means

Firm	Effch	Techch	Pech	Sech	Tfpch
1	0.739	0.925	0.665	1.11	0.683
2	1.779	1.086	1.817	0.979	1.932
3	0.966	0.925	0.984	0.982	0.894
4	0.859	0.974	0.869	0.989	0.837

Firm	Effch	Techch	Pech	Sech	Tfpch
5	0.916	1.046	1.041	0.881	0.958
6	1.146	1.059	0.938	1.222	1.214
7	1.17	0.965	1	1.17	1.129
8	1	1.016	1	1	1.016
9	1.092	1.062	1.018	1.073	1.159
10	1.014	0.99	0.881	1.151	1.004
11	1.786	1.016	1.737	1.028	1.814
12	1.08	0.92	1.039	1.04	0.994
13	1.013	0.942	0.959	1.057	0.955
14	1.267	0.912	1.312	0.966	1.156
15	0.887	1.026	1.294	0.685	0.91
16	2.155	1.011	1.635	1.318	2.178
17	1.077	0.958	0.957	1.126	1.031
18	0.574	0.988	0.904	0.634	0.567
19	1.659	0.95	1.366	1.214	1.575
20	0.806	0.975	0.762	1.059	0.787
21	0.847	1.027	0.778	1.09	0.87
22	1.301	1.174	1.232	1.056	1.527
23	1.062	1.197	0.966	1.1	1.271
24	1.607	0.985	1.362	1.181	1.583
25	0.748	0.99	1.071	0.699	0.74
26	1.789	1.023	1.221	1.466	1.83
27	0.99	0.955	1	0.99	0.946
28	0.98	0.941	0.99	0.99	0.922
29	0.881	0.988	0.796	1.108	0.87
30	1.392	0.982	1.024	1.359	1.367
Mean	1.1	0.998	1.056	1.041	1.098

The study finds that the average change in efficiency score for the SACCOS is 1.1. This implies that SACCOS improved in efficiency by 10% over the period under review. Out of the 30 institutions 19 are found to have positive changes in efficiency imply that they operated more efficiently when compared with their peers in the sample. 11 SACCOS found to have had negative changes in efficiency over this period.

To determine total factor productivity is assessed by computing the Malmquist Index (MI). The results of the Malmquist Index (MI) indicate that the mean efficiency change improved from 0.967 in 2010 and declined marginally to 1.217 in 2013.

The results also show that pure efficiency with a mean change of 1.056 and scale efficiency with a mean of 1.041 contributed to the overall improvement in efficiency while technical efficiency change was marginally negative at 0.998.

The decline in technical efficiency suggests that the three has been slow adoption of innovations by SACCOS over the period of analysis. The pure efficiency change indices measure the contribution of management and improved operations to total productivity which increased marginally from by 1.056 over the period under review. The results suggest that the quality of managers and the management system in SACCOs improved from the year 2011. The summary results for the Malmquist index are presented in Table 4.

Table 4: Malmquist Index Summary of Annual Means

year¹	efficiency ch	tec hch	pech	sech	tfpch
2010	0.967	1	0.988	0.978	0.967
2011	1.288	0.687	1.031	1.249	0.885
2012	0.966	1.673	1.165	0.829	1.616
2013	1.217	0.863	1.049	1.161	1.051
Mean	1.1	0.998	1.056	1.041	1.098

4.3 Summary and Interpretation of Findings

From the analysis of data in the preceding section shows increased performance in membership, deposits, loans and advances and share capital. The analysis shows that there was significant increase in the 2011 with the positive trend being sustained up to 2013. It is clear that this improvement coincides with the implementation of SASRA regulations. This is an indicator that the regulations had positive effect on the sector. The regulations can be inferred to have boosted confidence in public participation in SACCO's thus leading to increased membership. In addition, the increased registration of Deposit Taking Sacco's enhancing the collection of deposits thus boosting the deposit base of SACCO's over this period.

¹ Note that t-1 in year 1 and t+1 in the final year are not defined

4.3.1 Efficiency changes

The study sought to determine the effect of SASRA regulations on efficiency of SACCOs in Kenya. The results of show mean efficiency changes score of 1.1 suggesting that Sacco's and an overall 10 per cent increase in efficiency during this period. In 2011, efficiency change grew to 1.288 for 0.967 in 2010 recording a 33.2% growth. This growth occurred at the time when the regulations came into effect. This indicates a growth I efficiency attributable to improved governance in the sector.

To further understand the changes in efficiency the study decomposed the efficiency score into technical efficiency, pure efficiency and in addition measured changes in factor productivity for the SACCOs.

i. Technical efficiency changes

Technical efficiency measures the efficiency of a decision making unit attributed to adoption of innovations and technology in production. The study found an average technical efficiency score of 0.998 suggesting that during the period under review there was marginal decline in technical efficiency. The general inference is that the implementation of the regulations did not directly compel SACCOs to adopt innovations in service delivery immediately. In addition, adoption of technologies is expensive and takes time and therefore the immediate impact on efficiency and productivity was not instant.

ii. Total factor productivity

Mean Total factor productivity change was found to be 1.098 with productivity change from 0.885 in 2011 to 1.051 in 2013. The findings show that productivity increased in the period when the regulations were in effect. This suggests that the enforcement of regulations led to increased productivity of the SACCOs. However, this may be explained by enhanced disclosure of information by SACCOs on their performance and increased observation of prudential guidelines.

4.3.2 How the findings compare with various findings.

From the findings, credit risk and capital employed by the SACCOs induced high efficiency of SACCOs in Kenya in the period under study. The study findings concur with Das and Ghosh (2006) who concluded that medium-sized public sector banks performed reasonably well and are more likely to operate at higher levels of technical efficiency. He also observed a close relationship between efficiency and soundness as determined by bank's capital adequacy ratio. Credit risk has a strong positive effect on the efficiency of the SACCOs as shown in the study findings. The findings disagree with Altunbas et al. (2000) who posited that the levels of non-performing loans by banks were positively related to bank inefficiency. The findings are in agreement with Tesfay and Tesfay (2013) who deduced that geographical location and the size of a Sacco determine its efficiency. The study found out that size was not an important factor in determining efficiency of SACCOs in Kenya. This finding contrasts Gitonga (2013) who found that large banks in terms of assets were found to be relatively more efficient than small and medium sized banks. From the study findings, we can therefore deduce that regulation guidelines have a positive impact on the efficiency of SACCOs in Kenya. This finding concur with Kenya Bankers Association (2013) who concluded that capital requirements and regulations indeed contributes to and is positively correlated to profitability and stability in the banking sector.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter provides a detailed summary of the major findings of the actual study; it then draws conclusions and discusses implications emanating from these findings. Finally, it makes some recommendations and suggestions on areas of further study. The general objective of this study was to examine the effect of compliance to SASRA regulations on the financial performance of the Deposit Taking Saccos in Kenya.

5.1 Summary of the findings

From the study, it was found that the implementation of the SASRA regulation had positive effect on the operations and productivity of SACCOs. The immediate effect was increase in number of registered Deposit Taking Saccos membership and deposits. This is an indicator of growth in confidence in the SACCOs due to majority of them getting formalized and rebranded. In fact some the SACCOs have since changed their names to get a national and corporate outlook. The findings suggest the there is a growing trend in the sector.

The study sought to determine the effect of implementation of the regulations on efficiency of SACCOs since the enactment of the Cooperative act 2008. The findings show that on average there was an increase in efficiency over the 2009 - 2013 periods under analysis. Addition, there was increase in average total factor productivity over this period. More specifically this increase was pronounced on 2011 suggesting that the implementation of regulations has a positive effect on the performance of the SACCOs.

Decomposition of the efficiencies show that technical efficiency changes was below 1 suggesting that the contribution of innovations to growth of SACCO's was slow. This suggests that the implementation of the regulations did not compel SACCOs to adopt technology in their operations. This includes adoption of ICTs in service delivery and product development through research and innovations

In addition, the study found out increases in pure efficiency changes since the introduction of the SASRA regulations. The changes in pure efficiency are an indicator of the contribution of

management and governance to the productivity of SACCOs. This indicates that the quality of management and governance systems improved during this period and had positive impact on the productivity of SACCOs.

5.2 Conclusions

The study concludes that the implementation of SASRA regulations has positive effect on the efficiency and productivity of SACCOs. The major effect of the regulation is on governance and management of SACCOs which has seen efficiency of SACCOs rise. In addition the regulations have not had big effect on innovation and adoption of technology thus not stimulating technology driven growth in the saving cooperatives sector. It is evident from the study that there is more room for SACCOs to improve on efficiency especially in the area of technical efficiency.

5.3 Recommendations

The study recommends that SACCOs should build their technological and research capacity to enable them drive growth through innovations. Whereas this is not purely regulatory, SASRA, in the course of enforcing the regulations should embed adoption of innovations in the development of SACCOs. Secondly, the capacity development of SACCO management staff is critical for increasing the productivity of sector. Therefore the development of management and governance capacity of the SACCOs is critical for their performance.

5.4 Limitations of the study

This study is based on secondary data collected from annual reports from SASRA. These are compiled from Sacco's financial statements; even if audited, they may not be strictly accurate and comparable. This could somehow affect the findings.

Also the measures and accounting policies were not uniform in all the SACCOs since they operated in different sectors of the economy. The researcher had to standardize the data gathered so as to ensure similarity in comparison and computation.

Some SACCOs were also unwilling to disclose amounts in profits earned as a direct result of innovations embraced. The researcher assured them that the information was to be used purely for academic purposes only and that it would not be disclosed to any third party whatsoever.

The level of variation in disclosure across the sample is also a limitation. Hence, the sufficiency, reliability and validity of data are subject to the above limitations.

Further, this study focused on only SACCOS operating FOSAs those licensed and regulated by SASRA. No attempt has been made to assess the efficiency of the rest of cooperative operating in Kenya under the supervision of the Ministry of Industrialization and Enterprise Development.

5.5 Suggestions for further studies

This study was to establish the effect of implementation of regulation guidelines on efficiency of SACCOs in Kenya. To allow thorough comparison, this study recommended that future studies be conducted on effect of Regulation guideline on Financial Performance of SACCOs.

Other future researches recommended are on effect of innovation and various competitive strategies on the efficiency of SACCOs. Other studies recommended are on examining the relationship between the financial innovation and financial performance of SACCOs. This study also recommended that further studies be conducted on customer perceptions towards SACCOs in Kenya and the various products they offer to distinguish themselves from other financial service providers, this will add the literature on SACCOs in the country.

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APPENDICES

Appendix 1: Deposit Taking SACCO Society Licensed by SASRA as at 31st December 2013

1. Afya SACCO society ltd
2. Airports SACCO society ltd
3. Asili SACCO society ltd
4. Bandari SACCO society ltd
5. Baraka SACCO society ltd
6. Baringo farmers SACCO society ltd
7. Biashara SACCO society ltd
8. Bingwa SACCO society ltd
9. Borabu SACCO society ltd
10. Boresha SACCO society ltd
11. Bungoma Teachers SACCO society ltd
12. Bureti SACCO society ltd
13. Busia Teso Teachers SACCO society ltd
14. Capital SACCO society ltd
15. Centenary SACCO society ltd
16. Chai SACCO society ltd
17. Chemelil SACCO ltd
18. Chepsol SACCO society ltd
19. Chuna SACCO society ltd
20. Comoco SACCO society ltd
21. Cosmopolitan SACCO society ltd
22. County SACCO society ltd
23. Daima SACCO society ltd
24. Dhabiti SACCO society ltd
25. Dimkes SACCO society ltd
26. Egerton SACCO society ltd
27. Embu Teachers SACCO society ltd
28. Enea SACCO society ltd
29. Fariji SACCO society ltd
30. Fortune SACCO society ltd
31. Fundilima SACCO society ltd
32. Githunguri Dairy & Community SACCO society ltd
33. Gusii Mwalimu SACCO society ltd
34. Harambee SACCO society ltd
35. Hazina SACCO society ltd
36. Imenti SACCO society ltd
37. Irianyi Tea SACCO society ltd
38. Isiolo Teachers SACCO society ltd
39. Jamii SACCO society ltd
40. Jijenge SACCO society ltd
41. Kakamega Teachers SACCO society ltd

42. Keiyo Teachers SACCO society ltd
43. Kenpipe SACCO society ltd
44. Kenversity SACCO society
45. Kenya Bankers SACCO society ltd
46. Kenya Cannery SACCO society ltd
47. Kenya Police Staff SACCO society ltd
48. Kenya Highlands SACCO society ltd
49. Kenya Midland SACCO society ltd
50. Kiambaa Dairy Rural SACCO society ltd
51. Kilifi Teachers SACCO society
52. Kingdom SACCO society ltd
53. Kipsigis Edis SACCO society ltd
54. Kipsigis Teachers SACCO society ltd
55. Kite SACCO society ltd
56. Kitui Teachers SACCO society ltd
57. KMFRI SACCO society ltd
58. Konoin SACCO society ltd
59. K-Unity SACCO society ltd
60. Kuria Teachers SACCO society ltd
61. Laikipia Teachers SACCO society ltd
62. Lengo SACCO society ltd
63. Magadi SACCO society ltd
64. Magereza SACCO society ltd
65. Maisha Bora SACCO society ltd
66. Marakwet Teachers SACCO society ltd
67. Marsabit Teachers SACCO society ltd
68. Mentor SACCO society ltd
69. Meru South Farmers SACCO society ltd
70. Metropolitan Teachers SACCO society ltd
71. MMH SACCO society ltd
72. Mombasa Ports SACCO society ltd
73. Mombasa Teachers SACCO society
74. Mudete Tea Growers SACCO society
75. Muhigia SACCO society ltd
76. Mumias Outgrowers SACCO society ltd
77. Murata SACCO society ltd
78. Mwalimu National SACCO society ltd
79. Mwito SACCO society ltd
80. Nacico SACCO society ltd
81. Nafaka SACCO society ltd
82. Naku SACCO society ltd
83. Nandi Hekima SACCO society ltd
84. Narok Teachers SACCO society ltd
85. Nassefu SACCO society ltd
86. Nation SACCO society ltd

87. Ndege Chai SACCO society ltd
88. Ndosha SACCO society ltd
89. NRS SACCO society ltd
90. Nyambene Arimi SACCO society ltd
91. Nyamira Tea farmers SACCO ltd
92. Nyeri Teachers SACCO society ltd
93. Safaricom SACCO society ltd
94. Samburu Traders SACCO society ltd
95. Sheria SACCO society ltd
96. Siaya Teachers SACCO society ltd
97. Simba Chai SACCO society ltd
98. Siraji SACCO society ltd
99. Solution SACCO society ltd
100. Sot Tea Growers SACCO society ltd
101. Sotico SACCO society ltd
102. Stima SACCO society ltd
103. Sukari SACCO society ltd
104. Tai SACCO
105. Taifa SACCO society ltd
106. Taita Taveta Teachers SACCO society ltd
107. Tembo SACCO society ltd
108. Tenhos SACCO society ltd
109. Thamani SACCO society ltd
110. Tharaka Nithi Teachers SACCO society ltd
111. Thika District Teachers SACCO society ltd
112. Times U SACCO society ltd
113. Tower SACCO society ltd
114. Trans Nzoia Teachers SACCO society ltd
115. Ukristo na Ufanisi wa Anglicana SACCO society ltd
116. Ukulima SACCO society ltd
117. Unaitas SACCO society ltd
118. United Nations SACCO society ltd
119. Universal Traders SACCO society ltd
120. Wakenya Pamoja SACCO society ltd
121. Wakulima Commercial SACCO society ltd
122. Wanaanga SACCO society ltd
123. Wananchi SACCO society ltd
124. Wanandegde SACCO society ltd
125. Waumini SACCO society ltd
126. Yetu SACCO society ltd.