

**INFLUENCE OF DEMUTUALIZATION ON THE RELATIONSHIP
BETWEEN MEMBER ECONOMIC PARTICIPATION AND FINANCIAL
PERFORMANCE OF CO-OPERATIVES IN KENYA**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or for any other award.

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DEDICATION

I wish to dedicate this thesis to my parents, Simon Mbugua and Catherine Wanjiku for their immense support, love and prayers throughout this journey.

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OPERATIONAL DEFINITION OF TERMS

Demutualization is a change in the structure of ownership of user owned and user controlled organizations from a co-operative mutual status to a for-profit, proprietary organization (Chaddad & Cook, 2007).

Financial performance is defined as a measure of the extent to which an organization utilizes its assets for revenue generation. It measures generally the financial health of an organization over a duration of time and can be used in comparison of similar firms across a sector (Business Dictionary, 2011).

Holding Co-operatives are organizations that safeguard interests of the co-operative so as to ensure they are fully represented in the management of hybrid co-operative organizations and entrench their focus in the direction of the co-operative movement (Ministry of Industry, Trade and Co-operatives, 2017).

Hybrid model is a new co-operative organizational structure that attempts to incorporate a number of the merits of investor-owned firms (IOFs) especially in aspects such as capital raising while preserving the cooperative identity (Nilsson 2001; Chaddad & Cook 2004; Bekkum & Bijman, 2006).

Member Economic Participation is a co-operative identity principle that states members should be the sole capital contributors and democratic controllers of the Co-operative's capital and they are to receive limited reward in proportion to their transactions with their co-operative (ICA, 1995).

LIST OF ABBREVIATIONS AND ACRONYMS

ACME	Association of European cooperatives and mutual insurers
CEGES	Council for enterprises, employers and social economy groups
CIC	Co-operative Insurance Company
EAM	Earnings Attributable to Members
ICA	International Co-operative Alliance
IOFs	Investor Owned Firms
ME	Member Equity
MT	Member Transactions
NGC	New Generation Co-operatives
RB-V	Resource Based View
ROE	Return on Equity
SDC	State Department of Co-operatives
UK	United Kingdom
USA	United States of America
USDA	United States Department of Agriculture

ABSTRACT

When facing capital constraints and in the absence of member equity injections, cooperatives are pressured to either take on more debt, demutualize or sell to investor-owned firms so as to maintain their financial performance. Demutualization alters the capital structure, member control and income rights. The third international co-operative principle of Member Economic Participation; calls for members to be the sole contributors and democratic controllers of a co-operative's capital and they are to receive limited reward in proportion to their transactions. The Kenyan hybrid model of demutualization, which strikes a balance between non-member capital raising aspects and preserving their co-operative identity, appears to be working although the influence of demutualization on the relationship between member economic participation and financial performance is not clearly known. This focus of this study was to establish the influence of demutualization on the relationship between member economic participation, specifically in terms of member reward, member transactions and member control, and financial performance. These variables were anchored on empirical literature and the resource based view, property right theory, transaction cost theory and agency theory. The target population was the two holding co-operatives in Kenya registered by the Ministry of Industry, Trade and Co-operatives as at 2017. Secondary data was obtained from published financial statements and annual shareholder reports of the respective co-operatives for twenty years from 1998 to 2017 and transformed into unbalanced panels. Time Series Cross Sectional research design was employed in analyzing the unbalanced panel data. Diagnostic tests results indicated that the data was normal, homoscedastic and had no multicollinearity, autocorrelation nor cross sectional dependence problems. Stata 13 software was utilized in analysis of the bivariate and multivariate regressions using the random effects model. The findings of the study revealed that demutualization had; A positive but not significant effect on the relationship between member reward and financial performance; A positive but not significant effect on the relationship between member transactions and financial performance; A negative significant effect on the relationship between member control and financial performance. The overall influence of demutualization was negative but not significant on the relationship between Member Economic Participation and Financial Performance of co-operatives in Kenya. The study recommends a revision of the International Co-operative Alliance principle of 'Co-operation among Co-operatives' so that it can be more comprehensive in relation to co-operative capital concept, establishment of a secondary market for co-operative securities to reduce member reward incentive for demutualization. Further, dual registration of co-operatives as also companies should be prohibited.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Over the past two decades financial institutions and financial markets all over the world have undergone radical change due to technological innovations, globalization of financial systems and regulatory changes (Meador & Chugh, 2006)(Chugh & Meador, 2006). These changes have affected both the financial strategies and organizational structures of co-operative enterprises (Battilani & Schroter, 2012). Problems such as higher leverage, reduced collateral guarantees and a higher rate of dependence on external finance have forced many of these types of enterprises to demutualize (Tortia, 2018). Demutualization is defined as “an alteration in the structure of ownership of user owned and user controlled organizations from a co-operative mutual status to a for-profit, proprietary organization.” There are three types of demutualization: conversion/full demutualization, hybrid/mutual holding co-operative and third party financed/sponsored demutualization (Chaddad & Cook, 2007).

After a number of years of demutualization in developed countries such as United Kingdom, Australia and United States of America the phenomenon caught up with other developing countries and also with the African region. The United Kingdom in the era of 1995 to 1999, 4 farmer cooperatives and 18 building societies demutualized. In Australia between 1990 and 1999, 60 general cooperatives (stock exchange, agriculture taxi and farmer cooperatives) and 10 building societies demutualized. In Japan between 2000 and 2010, 39 life insurance organizations demutualized. In Canada demutualization was witnessed in 1999, South Africa in 1998 in the insurance sector and in Socialist countries in the 1990's mostly in the agricultural co-operative sector. Demutualization seemed to be confined majorly to two sectors, finance and agriculture; all the same the international cooperative movement began to get worried as it put the co-operative identity in jeopardy (Cummins & Venard, 2007; Birchall, 1998; Cronan, 1994; Reserve Bank of Australia, Bulletin January, 1999).

After the market underwent structural adjustment that was when waves of demutualization were witnessed and this could be cited as one of the causes of demutualization. Other causes include deregulation of market and technological

advancement, which altered the rules of the game. Financial aspects contributing to demutualization include liquidity difficulties, financial incentives and capital limitations that increased the pressure already on the boards of management (Chaddad, 2002). In developed countries such as Australia demutualization was hastened when suitable legal frameworks facilitating demutualization were passed (Robb, 2006). In developing countries such as China, cooperatives were not able to sufficiently compete in terms of financial and human capital when compared with capitalistic firms due to their member patronage and member control features which were linked to their cooperative governance structures (Liang, Huang, Lu & Wang, 2015). In the African region, South Africa specifically, causes included the need for strategic investments based on an economic empowerment program within the country. This resulted in weakening of the capital base and hampered the restructuring processes of co-operative insurance organizations. Lack of adequate capital that was needed to facilitate expansion at an international landscape was another main decisive factor that further stimulated demutualization in the country (Keneley & Verhoef, 2010).

Locally in Kenya, the process was aided by the suitable legal framework. Certain co-operatives have operated on dual registration regimes as both co-operatives and companies. While this practice served its purpose operationally, it has caused regulatory challenges and infringed on members' rights of participating in decision-making. In addition, some co-operatives have already demutualized. Going forward the dual registration will be a thing of the past (Ministry of Industry, Trade and Co-operatives, 2017).

A majority of the cooperatives utilize when in need, undivided reserve funds and capital contributed by members. The reality is that members' shares are lacking financial value due to the unavailability of market prices (Galor, 2008). Furthermore, returns to members are limited by the third ICA principle of 'Member Economic Participation.' The principle calls for members to be the sole contributors and democratic controllers of a co-operative's capital. Moreover, it states that members are to receive limited reward as a form of compensation if any and it should be in proportion to their transactions with the co-operative (I.C.A, 1995). This principle guides how capital should be obtained and how

member control is to be practiced and on how members should be rewarded for their transaction with their society. The third co-operative principle and the unavailability of market prices hinder the cooperative's ability to mobilize the much needed external finance (Galor, 2008).

There is a general consensus that demutualization "frees" the concealed value of members' shares, especially for the inactive members (Cronan, 1994). Current members do not have the right to alter the existing relationship between themselves and the co-operative because the cooperative is protecting intergenerational accumulated co-operative property (Yeo, 2002). An argument is raised stated that hardly was demutualization an outcome of pressure made by the members themselves but mostly from the senior staff of the co-operative, management board and external advisers, most of who benefited from demutualization (Nadeau & Nilsestuen, 2004).

Waves of innovations including new forms of cooperatives worldwide have come up as a result of demutualization. In developed countries such as Canada and United States the new forms of co-operatives are referred as the New Generation Cooperatives (NGCs). In Spain and Italy as cooperative groups or network of cooperatives (Chaddad & Cook, 2007). In Kenya, as holding co-operatives (Ministry of Industry, Trade and Co-operatives, 2017). These new organization structures have one common feature in that they attempt to incorporate a number of the merits of investor owned firms (IOFS) such as in capital raising aspects while preserving their cooperative identity. The new structures and models of co-operatives also known as 'publicly listed cooperatives' could be considered as hybrids. At the turn of the 21st century, this innovation in organizational structures and models has been the most noticeable feature of cooperatives. These changes have been initiated to facilitate the growth of the enterprises abroad and in domestic market and also boost their financial performance (Nilsson 2001; Chaddad & Cook 2004; Bekkum & Bijman, 2006).

One of the results of demutualization is that the income and control rights are reassigned between stakeholders. This has an implication on firm performance and organization structure. A question that comes up is whether the structure of ownership in co-operative enterprises is a decisive determinant of financial performance (Kalogeras, Pennings, Dijk

& Lans, 2007; Benos Kalogeras, Verhees & Pennings, 2009). Demutualization also goes against the co-operative finance principle of member economic participation. It was only with the outbreak of the financial crisis in 2008 that interest in demutualization reduced. The crisis put for the new agenda issues of financial stability and sustainability of various enterprises. The cooperative business model proved most resilient in crisis times (Birchall & Ketilson, 2009). In countries such as UK, failure of demutualized societies, Northern Rock and Bradford & Bingley, led consumers to remutualization which is conversion from IOF status to the mutual holding co-operative society status (Bittilani, & Scroter, 2012). In Kenya demutualization has adopted the hybrid model and has been witnessed in the co-operative insurance and co-operative banking sector which was the focus of the current study.

1.2 Statement of the problem

When facing capital restrictions and in the absence of member equity injections, cooperatives are pressured to either take on more loans from creditors, demutualize or sell to investor-owned firms (Hailu & Goddard, 2009). Many co-operatives opt for demutualization due to encountering challenges in accessing debt as a result of their lower collateral guarantees (Tortia, 2018). An argument raised in favor of demutualization is that the market economy is minimizing the difference between IOFs and co-operative enterprises (Hogeland, 2006; Fitzgerald, 1990). The third ICA principle of member economic participation has three components. It states: Members should be the sole capital contributors and the democratic controllers of the co-operative's capital and they are to receive limited reward if any in proportion to their transactions with the co-operative (ICA, 1995). Demutualization results in the alteration of the capital structure where it separates member ownership control therefore changing member control rights. Further it results in market pricing of shares affecting member income/ reward rights which should ideally relate in a proportional way with member transactions. The new organization structure that is created may also affect financial performance of the organization. A question that comes up is whether the structure of ownership in co-operative enterprises is a decisive determinant of financial performance (Kalogeras, Pennings, Dijk & Lans, 2007; Benos Kalogeras, Verhees & Pennings, 2009). These changes that result from demutualization are utilized by those who argue against

demutualization (Battilani & Schroter, 2012; Galor, 2008; Chaddad, 2003). Co-operatives in Kenya that have demutualized have adopted the hybrid model which results in continuous duality state, conflict of goals and values and in organization structures that combine for-profit with non-profit organizational features (Battilana & Lee, 2014; Bacq & Janssen, 2011; Ashforth & Reingen, 2014; Brandsen & Karre, 2011). In an attempt to address these conflicts, Kenyan co-operatives have established holding co-operatives to safeguard interests of the co-operative and entrench the focus of these organizations in the direction of the co-operative movement. As need arises such co-operatives will continue to be formed however caution will be exercised to ensure such organizations remain true to their mission (Ministry of Industry, Trade and Co-operatives, 2017). This model appears to be working although the influence of demutualization on the relationship between member economic participation and financial performance is not clearly known. The study established this by focusing on co-operatives that had demutualized.

1.3 Objectives of the study

The general objective

The main objective of this study was to establish the influence of demutualization on the relationship between member economic participation and financial performance of co-operatives in Kenya.

Specific objectives

The study aimed specifically:

1. To determine the influence of demutualization on the relationship between member reward and financial performance of co-operatives in Kenya.
2. To establish the influence of demutualization on the relationship between member transactions and financial performance of co-operatives in Kenya.
3. To find out the influence of demutualization on the relationship between member control and financial performance of co-operatives in Kenya.

1.4 Research Hypothesis

The study sought to test the overall hypothesis that demutualization had no significant influence on member economic participation and financial performance and specifically tested the following hypotheses:

H01: Demutualization has no significant influence on the relationship between member reward and financial performance of co-operatives in Kenya.

H02: Demutualization has no significant influence on the relationship between member transactions and financial performance of co-operatives in Kenya.

H03: Demutualization has no significant influence on the relationship between member control and financial performance of co-operatives in Kenya.

1.5 Significance of the study

This study contributed to the vast knowledge gap of the influence demutualization on the relationship between member economic participation and financial performance of co-operatives that had not been explored before from a Kenyan context.

The Governments of Kenya and East African countries and other interested stakeholders could use the findings of this study in guiding and informing policy makers on the appropriate legal framework for or against demutualization, clearly showing the effects on members ‘who are the backbone of any co-operative’ and on financial performance. There is no standard law governing the demutualization process and currently some co-operatives have taken advantage as they have dual registration as such existing as both co-operatives and as companies.

The study informed co-operative organizations of the potential conflicts of interest that would be brought by pursuing ‘for service’ and ‘for profit’ objectives concurrently. This study also provided co-operatives with a clearer picture of the impact of demutualization and formed a critical guidance tool in the restructuring and reorganization of co-operatives.

1.6 Scope of the study

The study focused on holding co-operatives in Kenya which are co-operatives that have invested in the stocks of other organizations (companies or co-operatives). According to the national cooperative development policy drafted by The Ministry of Industry Trade and Co-operatives (2017) the existing holding co-operatives in Kenya are Cooperative Insurance Services Ltd (CIS) and Co-op Holding Co-operative Society Ltd and, which own Co-operative Insurance Company Ltd and Co-operative Bank of Kenya Ltd respectively. The study was a census as both holding co-operatives were studied covering a 20 year period ranging from 1998 to 2017.

1.7 Limitation of the study

The literature on demutualization of co-operatives in Kenya was quite limited. Globally, the phenomenon had been covered though not as widely, this was due to demutualization affecting different countries at different times. This limited the amount and recentness of literature that was available for discussion in the study and its integration into the Kenyan context. The scope of the study was limited to the two holding co-operatives recognized by the Ministry of Industrialization, trade and co-operatives. The study focused on the quantitative aspect of the data and there may be need to capture the qualitative aspect of the study which may include administration of questionnaires.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviewed theoretical and empirical literature on financial performance, demutualization and on member economic participation components of member reward, member transactions and member control. It discussed the variables, relationships between them and key theories underlying them. The aim was to develop a conceptual framework and address the research gaps on the influence of demutualization on the relationship between member economic participation and financial performance of co-operatives in Kenya.

2.2 Theoretical Review

A theory can be defined as is a rational and contemplative general thinking or type of abstract. It is regarded as a group of general propositions that have been tested, that may be used as a principle for predicting or explaining a group of phenomena (Kombo and Tromp, 2009). A theoretical framework aims to guide research, determine variable measurement, and the statistical relationships to search for to address the research problem (Trochim, 2006). Theoretical frameworks test and formulate theories and provide foundation for the study.

The study anchored its variables on four theories namely: Resource based theory and dynamic capabilities links demutualization and financial performance. Property rights theory links demutualization to member reward and financial performance. Transaction cost theory links demutualization to member transactions and financial performance and finally agency theory links demutualization to member control and financial performance.

2.2.1 Resource Based View

Resource-based View was proposed by Wemerfelt in 1984 where he explains that when different unimitatable resources are employed, the firm is able to succeed in having a sustainable competitive advantage. The resource-based view (R-BV) is defined as an economic tool applied to analyze a firm's resource position so as to explore its strategic options. It is applied particularly to the relationship between financial resources and profitability (an aspect of financial performance) as well as managing the firm's resource

position over a duration of time (Wemerfelt, 1984). The basic principle of is that the foundation of a firm's competitive advantage lies in the combined valuable resources owned by the firm are applied.(Eisenhardt & Martin, 2000)defined dynamic capabilities as: 'the processes where firms use their resources including financial resources to gain or reconfigure their resource position so as to adapt or create a change in the market or environment in which they operate in. Dynamic capabilities therefore are how organizations change their organization structures so as to achieve superior financial performance. They may need to die, evolve split or collide during this process. The resource-based theory and dynamic capabilities links directly with the demutualization decision that a majority co-operatives have undergone (Wemerfelt, 1984). Demutualization allows co-operative organization to access financial resources from beyond its members. The relevance of this theory to the study was that it provided the perspective that there was a positive relationship between the demutualization decision and financial performance variables employed by study. It provided information that demutualization decision occurs after the co-operative environment underwent changes and to maintain a certain level of financial performance, cooperatives had be flexible and innovative. Without this, the theory proposes that co-operatives would not have been able to compete effectively. Furthermore, the theory offered an impartial platform for empirical analysis of this relationship to be undertaken within the co-operative sector.

2.2.3 Property rights theory

This theory was proposed by (Coase, 1960)in the 'Social Cost' paper, where he argued that both negative and positive externalities stop the market from transact in an efficient manner with a theoretical significance where he cited problems in the display of private property rights which led to the alternative distribution and allocation of property rights. Demsetz, (1995) in relation to the property rights theory explains why a particular form of ownership takes place in a given organization as it's a result of the bargaining strength of the people affected. In order to alleviate the economic losses that are harmful effect of the common pool, decision makers in any organization may sometimes wish to modify economic property rights. It is argued that under the existing arrangement, production possibilities and new market prices cannot be achieved necessitating the new property rights need. The possibility of profits, lead to the formation of new institutional

arrangements that the existing arrangement structure cannot capture (Davis & North, 1971). The main reason for demutualization was linked to a new form of ownership where the former co-operative structures were not successful in responding to changes in the universal world market such as financing and the new advancements in technology. Members sort this new ownership structure which provided them with higher yields and improved the financial performance of their co-operative (Arwa, 2010; Libecap, 1989; Demsetz, 1988; North, 1971).

When the expected combined economic benefits of member reward were large due to organization change the higher the chance that new property rights would be chased and adopted (Mahoney, 2004). An important query as to the reason societies experience complete decline in economic welfare or stagnation in the long term was addressed by North (1990). Institutions were regarded as decisive factors in economic performance and relative price adjustments which were the main drivers of institutional change (Arwa, 2010). Adjustments in relative prices provided a motivation to improve efficiency in the management institutions (North & Thomas, 1973). The most notable change in organizational structure and ownership of the demutualized co-operative was largely driven by advances in technology and intense capital constraints (Mahoney, 2004).

Demutualization decisions typically happened when the previous member-owned structures failed to provide the finance and flexibility required to improve the performance of the co-operative, which in turn may motivate members to seek other organizations. Many small and large co-operatives look for ways to finance capital intensive investments such as updating trading platforms. Also, liquidity problems posed a threat and could lead to bankruptcy of smaller businesses. It was established that demutualization permitted the cooperative to raise capital though trading its shares in the public market. Furthermore was a source of motivation for management in seeking more business initiatives (Mendiola & Hara, 2004). The ability to raise capital through listing and the greater stakeholder responsibility were viewed as suitable ways of responding to the competitive pressures worldwide as they allows for the incentives and resources required for investment in information systems and competitive products (Hughes & Zargar, 2006).

The property rights theory assists in understanding of another question: Can members of the co-operative protect their economic rights of reward under the mutual structure? Legal rights are not sufficient for the presence of the economic rights (Barzet, 1989). This theory was relevant to the study as it provided the understanding as to why demutualization had a positive influence on the relationship between member reward and financial performance.

2.2.4 Transaction Costs Theory

The pioneer in this theory, (Coase, 1937) argue that firms exist so as to reduce transactions costs resulting in an increase in transactions and volume of trade consequently raising the financial performance. Coase (1937) points out that corporations exist wherever it's profitable to establish them. They exist where there are costs involved in conducting transactions in the market, the most apparent cost being uncovering what relevant prices are.

The transaction costs theory gives light to the global movement towards demutualization. Today's environment has initiated new changes that have resulted in the introduction of new forms of co-operative organizations. Changes that have emerged in the competitive environment today, led to the spring up of new electronic systems that have allowed for superior price determination, lowered transactions costs involved in serving members and reporting and improved transparency in corporate governance under the hybrid structure of co-operatives. Therefore the global move in the direction of demutualization is just but a natural response since the co-operative mutual structure is rendered unattractive and becomes more expensive due to new technological advances and changes in the market environment (Claessens, Djankov & Lang, 2000).

Williamson (1975) points out that under the previous mutual structure of ownership, the managers had to pay members who were their investors since they had knowledge about the co-operative enterprises and the price of services offered and furthermore they are the ones who could access these services. Technological advances and market changes have altered this structure and more especially the nature of the financial services offered.

This theory was relevant to the study because it provides for direct understanding of how transaction costs/prices affect the volume member transaction thus having an implication on financial performance. Demutualization reduces transaction cost thus having a positive influence on the relationship between member transactions and financial performance. This theory helped in determining the minimum and the maximum transaction costs or prices that should be borne by members otherwise demutualization would only raise this cost. Emphasizing what has already been stated by Coase (1937) as the reason for the existence of firms should be to reduce transaction costs and thereby increase economic value creation, increasing volume of member transactions and consequentially improving financial performance.

2.2.5 The Agency Theory

The agency relationship in this theory is viewed from the perspective where one party (the principle) assigns duties to another party (the agent). This necessitates delegating some decision making power to the agent. The relationship between the two is described through the metaphor of a contract (Jensen & Meckling, 1976). The theory explains how the relationship between the agent and the principle can be maximized (Clarke, 2004). It is argued that the importance of the agency theory is influence by only two factors. The theory is conceptually straight forward and it minimizes the cooperation into two participants: shareholders and managers (Daily, Dalton & Canella, 2003). Secondly, the theory suggests that managers or employees in a firm can have personal goals and self-interests (Daily, Dalton & Canella, 2003; Haslinda & Valentine, 2009). Shareholders who are the principals expect agents to work, act and make decisions in their interests. In contrast, the agents may not naturally or willingly make decisions in the principals' interests (Jensen & Meckling, 1976).

The Agency theory was developed further by the work of (Berle & Means, 1932) who explored the application of the agency relationship amidst changes in the environment in which organizations operate. They noted that ownership of a co-operative in our case without the appreciable control seems to be as a result of demutualization due to economic and regulatory changes that happen to foster development. The illustrate further that any organization should be run for the owners and shareholders benefit and

reduction in control equals a reduction in powers and subsequently an increase in power to the managers who are the agents. Thus, there is no assurance that an organization will work for the owner/ member interests post demutualization. Notably, the problem arising from separation of ownership and control that results from demutualization, has been corroborated in agency theory by several scholars including Davis, Schoorman and Donaldson (1997).

It is important for demutualized cooperatives to maintain an efficient cooperative governance system and increased transparency due to the separation of ownership and control which poses a serious management challenge. The demutualization decision is expected to lead to an organization that facilitates trading privileges and the ownership by the co-operatives' members. The co-operative can therefore achieve a larger degree of independence. It proposes that management should adopt courses of action that are in the best interests of the co-operative and essentially its shareholders who are its members and this may not always be the case due to conflicts of interest. Therefore, the interests of the members and those of the co-operative should be linked so as to try and achieve quality service provision and improved organization performance. Additionally, the demutualized structure of organization will permit greater efficiency (reducing costs) and transparency because co-operatives organizations will be obligated to report to their shareholders not only on the fundamental issues but also regarding cooperative governance matters (Hughes & Zargar, 2006). The theory provided anchorage that there was a negative influence of demutualization on the relationship between member control and financial performance and this could only be resolved through proper co-operative governance. Challenges in determining the level of control that should be delegated to management by members such that members (shareholders) do not loss control of their organization could be anticipated. The going concern of the organization instigates the question about the maximum percentage of shares that should be offered in the free market economy through listing and whether any initiative can be taken to attempt and control the potential shareholders. This is due to separation of ownership and control, so as to ensure control of the co-operative is retained by members of the co-operative movement.

2.3 Empirical Review

2.3.1 Financial Performance

For a long period of time co-operative were criticized for having constraints on capital and inefficient decision making processes (Cook, 1995; Karantinis & Nilsson, 2007). The former takes place due to adherence to sole member ownership through retaining patronage refunds and direct investments (Barton, 1989; Knoeber & Baumer, 1989). In order to adapt to competitive pressures and improve financial performance, co-operatives modified their convectional finance principle of member economic participation (Cook & Chaddad, 2004). The degree by which co-operatives modify this identity principle impacts the financial structure moving from the collective to the more individual like structure exhibited by IOFs (Kalogeras, Pennings, Dijk & Lans, 2007; Benos Kalogeras, Verhees & Pennings, 2009). A large number of co-operatives in the USA and UK list publicly a portion of their equity stock, engage in non-member financing and permit individualized equity shares (Bijman & Bekkum, 2006; Kalogeras, et al.2009).The question that came about was whether co-operative ownership structure was a driver or decisive determinant of financial performance (Kalogeras, et al. 2009)

In the comparison of financial performance of co-operative with IOFs, where competitive pressure was a leading cause of demutualization, two major approaches were employed; the neoclassical approach and the financial ratios approach. The former dealt with analysis of efficiency which impacts the financial performance of the IOFs and Co-operatives (Fulton & Giannakas, 2001). The later approach compares financial ratios of the two organization forms as determinants of financial performance superiority (Harris & Fulton, 1996). Superiority of the IOF-like model in terms of financial performance is emphasized, however the traditional co-operative model underwent restructuring processes that were dynamic(Kalogeras, *et al.* 2009). These processes were employed as ways of adapting to the changing environment (Chaddad & Cook, 2004). Attraction of non-member equity was enhanced by relaxation of co-operative financial restrictions linked to member economic participation which led to the emergence of new co-operative models (Chaddad & Cook, 2004; Bekkum & Bijman, 2006). The new models attempted

to strike a balance between the traditional co-operative model and IOF model (Iliopoulos, 1998).

Kalogeras, Pennings, Kuikman and Doumpos (2011) analyzed whether emergent ownership structures of Netherlands' agri-co-operatives impacted positively on financial performance. This was through a multi-criteria decision aid approach which permits ranking of the most salient ratios known as Preference Ranking Organization Method of Enrichment Evaluations (PROMETHEE II). Profitability (Return on Equity, ROE, Return on Assets, ROA) management (Inventory, Total Assets, Fixed Assets turnover) and solvency (Debt, Quick, and Current) were among the financial ratios utilized in analysis. The financial performance analysis of selected agri-cooperatives was done between 1999 and 2007. This analytical procedure reduced the dimensionality of large numbers of interrelated financial performance measures. Findings showed that there was not enough evidence to support that demutualization impacted positively on financial performance. This study suggested that ownership structure of co-operatives was not a decisive factor of a co-operatives financial success. This findings were put to the test from a Kenyan context.

McNamara and Rhee (1992) examined the 5 years pre- versus 5 years post-demutualization performance of 33 legal reserve life insurers in the United States following a time series cross sectional data estimation technique. Financial, management welfare and product variables were analyzed so as to provide efficiency and demutualization evidence of efficiency and expropriation. Demutualization did not have a significant effect on financial performance measured by net income, operating expenses or lapse rates, the combination of non-cash and cash polices and premium income. However, after demutualization, management turnover and capitalization increased, while member transactions decreased. The current study will adopt a similar methodology in analyzing the influence of demutualization on the relationship between member economic participation and financial performance from a Kenyan context.

Welch (2006) compared the co-operative financial performance that demutualized and those that did not from a United States perspective. The study further examined the quality of service provision to members. Findings showed that co-operatives that did not

demutualize exhibited superior financial performance compared to those that demutualized. Further, director compensation increased significantly in demutualized societies but financial performance did not improve. Additionally, results indicated members who voted for demutualization were not in a position to comprehend the impact of their vote and demutualization increased expenses swallowing benefits members were entitled to receive. This showed that demutualization had a negative effect on both financial performance and member economic participation. The current study explored this applying demutualization as a dummy variable in the methodology in evaluation of the relationship between member economic participation and financial performance.

The Association of European cooperatives and mutual insurers (ACME, 2001) examined the demutualization of co-operative insurance organization. A survey design was involved with a target population of 97 mutuals from 11 West European countries, and which occupy 24% of the West European insurance market. The major motivations for demutualization were to increase efficiency, access more capital for expansion, increase business flexibility and most importantly increase profits consequentially financial performance. The study established these propositions. Findings indicated that demutualization was more a matter of ideology than based on proven facts. Additionally, insurance co-operatives that did not demutualize were more consumer oriented and competitive in that they showed better financial performance compared with those that did. The current study differed in methodology where it included a time series cross sectional design to determine how and if financial performance was affected by demutualization.

The financial performance in the current study was measured as a dependent variable through the empirical model in terms of return on equity (ROE). The measure was also applied by Kalogeras, Pennings, Kuikman and Doumpos in 2011. The hypothesized direction from literature was that demutualization had a negative effect on the relationship between member economic participation and financial performance.

2.3.2 Member Economic Participation

The third ICA principle of 'Member Economic Participation' states that members should democratically control and contribute equitably to a co-operative's capital. A portion of

the capital contributed should be common co-operative property. As a membership condition, members were to from time to time receive limited reward. Any surplus generated was to be utilized in rewarding members in proportion to their transactions, set up indivisible reserve, for co-operative development and supporting activities that were approved by the members (ICA, 1995).

The capital needs of a co-operative organization differ from those of a non-co-operative even if they are similar in size, function and undertake their operations within the same market economy (Cobia, 1989). Cooperatives must surpass similar market forces that investor owned firms encounter therefore they cannot be considered immune to those forces (Ginder, 1999). However, the choice on how to meet their financing needs and their financial outcomes are different for a co-operative when compared to a non-co-operative organization. To be specific, cooperatives are limited in their capability of acquiring adequate risk capital required for investments by the third ICA principle of Member Economic Participation which ultimately affects their competitiveness and growth. This is a result the essential characteristic off user owner principle which states that co-operative society members' should provide equity (ownership financing) in proportion to their use of the society. This gives an implied obligation of paying out to members the accumulated unallocated equity. Co-operatives receive special tax benefits and consequences based on their use, financing and investment. Operational choices are not based on profit maximization as is the case with IOFs rather a for-service objective. Whether and to what extent this characteristic implies an increase or decrease in debt reliance for the co-operative organization is not clearly established. Historically cooperatives tend to play an economic role that was essential as illustrated by their market share, sales and asset ownership in Western Europe and North America (Bekkum & Dijk, 1997; Fulton & Gibbings, 2000; USDA, 2000).

A question is posed on whether members really own the co-operative. Based on the third ICA principle and on the current practice, ownership is common and collective. However, there is no relationship between the total real value of co-operative assets and the small value of the aggregate shares owned by members. A huge gap exists between the two and members seem to ignore it. This gap has been a catalyst for demutualization

where 'limited reward' gets a multiplier effect upon demutualization. The movement towards demutualization is brought much closer when members stop receiving the quality of services they were used to (Galor, 2001).

Taiwo and Okador (2014) examined the effects of members' participation on the performance of the multipurpose cooperative societies in Nigeria. Data were collected from 112 randomly respondents from 13 registered and active co-operatives in the study area. Study findings revealed a significant relationship existed between members' participation and co-operative performance. This study confirms that there exists a relationship between member participation and financial performance. The current study established the existence of this relationship from a Kenyan context and the effect of demutualization on such a relationship through analysis of secondary data.

Otaokpukpu, Ogbu and Okonkwo (2017) assessed the effect member participation and type of co-operative on the financial performance in Nigeria. This was through a descriptive survey design, with a random sample of 318 co-operatives. Data analysis was through tabular and descriptive analysis. Type of co-operative have a weak positive Pearson correlation of $r = 0.141$ with financial performance. Member participation had a weak negative Pearson correlation of $- 0.173$ with financial performance. The variables were measured through their gross margins. The findings confirm the hypotheses that there is a relationship between both variables and financial performance though the relationship is weak. This study took gross margin as a measure of performance and did not assess the moderating effect of type of co-operative on the relationship between member participation and financial performance. The current study assessed this gap by taking demutualization as the type of organization structure change that influences this relationship.

Member Economic Participation in the current study was measured as an independent variable through the empirical model. It was disintegrated into its measurable components which were member reward, member transactions and member control and each was measured as an independent variable. Galor (2001) confirms the above measures of member economic participation. The hypothesized direction from literature

was that demutualization had a negative effect on the relationship between member economic participation and financial performance.

2.3.3 Demutualization

Co-operatives face increased survival challenges in the growth process. Specifically, in relation to issues of financial management such as how to acquire and redeem equity capital of members. The two have been identified as the main factors constraining the sustainability and growth of co-operative enterprises (Vitaliano, 1983; Caves & Petersen, 1986; Staatz, 1987; Cook, 1995; Holmstrom, 1999). Co-operative financial constraints emanate from ownership rights restrictions and imperfect access to external finance. Empirical studies reveal that physical capital expenditures of co-operatives are limited by finance availability (Chaddad & Cook, 2002). There is low long term growth in co-operatives and at times even zero growth (Fulton, 1995). Cooperative physical capital expenditures are constrained by the availability of finance. Moreover, structural changes that have affected the financial system require large capital investments and as a result the competitive strategies co-operatives choose to pursue are a response to these changes (Cook & Iliopoulos, 1998). Co-operatives ameliorate their capital constraints through demutualization so as to obtain risk capital required to remain as organizational forms that are competitive and implement strategies that are growth oriented.

Hailu and Goddard (2009) examine the possible motivations for the organizational change of Lilydale's based in Canada. This is through a case study design approach, access to capital theory and sustainable growth model methodology. Findings indicated access to capital was the major motivation for the conversion of Lilydale because of over-reliance on debt finance. Demutualization was motivated by the following reasons: It created a financial structure that was stronger, enabled growth through access of new sources of equity capital, created an equity base that was permanent, improved the retention and employee performance by allowing employees to invest in the organization and lastly, created a variety of options for member equity management. Price Waterhouse Cooper's analysis concluded that the most suitable course of action by Lilydale was demutualization in the form of conversion. Growth in terms of financial performance is an important determinant of co-operative success. This suggests that demutualization

should be considered as the last resort after all other viable options have been explored. The findings of the study were limited in generalizability as only one co-operative was established; the current study explored more than one co-operative organization. This study did not consider implications of demutualization on the co-operative identity which was established in the current study through the member economic participation principle.

Hariyoga and Richard (2004) examined the closing up of the Tri Valley Growers Cooperative that is based in California through a case study design. It declared bankruptcy citing some of the causes as failure of the financial restructuring plan and high debt in relation to equity for the cooperative. Other reasons included non-active membership could not be revoked and unreasonable payments for the produce of members. This study confirms the findings of Hailu and Goddard (2009) that there is a relationship between financial leverage and financial growth of a co-operative. However, it also shows a case of a failed attempt at demutualization bringing us to the question as to whether demutualization is really the solution to financial difficulties for co-operatives. This will be assessed from a Kenyan context.

In advanced counties, cooperatives adapted to industrialization by way of organizational innovations. This experimentation led to emergence of non-conventional organization models having different institutional arrangements. Cooperative models have distinct organizational attributes that include voting scheme, ownership structure, governance structure, membership policy, competitive strategy, distribution of benefits and residual claimant characteristics (Cook, 1995; Nilsson, 1999; Chaddad & Cook, 2000; Bekkum, 2001; Hanson, 2001).

Bekkum and Bijman (2006) analyzed more than 50 cooperatives worldwide, where the problem of capital structure had been resolved by means of new solutions. Data was collected over a 20 year period. A key conclusion was that there were co-operatives that preferred to safeguard their co-operative identity and structure instead of fully converting to an investor oriented firm. A new co-operative model was proposed known as the publicly listed cooperative hybrid. Five essential solutions to the conflicts of interest that arise from demutualization were highlighted. First of all, the introduction of internally

tradable shares that could appreciate where members get to enjoy any increase in real share value. Secondly, subordinate bonds that were tradable externally to provide for a source of external capital. Thirdly, external corporate investors at a group or subsidiary level, who may obtain special membership and decision making capability but this, may lead to member and investor's conflict. Fourth, listing of preferred stock instead of common stock. Lastly, co-operative may convert into limited liability companies that are member owned. The findings of this study are quite significant and have informed the mutual holding type of demutualization in a number of co-operatives across the world. By focusing on the hybrid structure Bekkkum and Bijman are proposing a new model of doing co-operative business. However this study did not explore the effects that may arise from this duality state of co-operative organization which the current study addressed.

Fitzgerald (1990) suggests that the only practical way of obtaining additional capital is through demutualization. Chaddad (2003) found that conversion of cooperatives into stock traded company alleviated financial limitations and increased business efficiency.

Tremblay and Cote (2001) examined demutualization in the Belgium cooperative banking sector. They analyzed the case of Kredit co-operative merging with CERA co-operative which was motivated less by a financial need but by a strategic positioning need. This was due to consolidations in Belgium's banking system and a merger of two big private banks. CERA and Kredit merged into a new non-cooperative bank, creating an economic body controlling 10% of the insurance market and 25% of the Belgium banks. This Cooperative - Capitalistic formula is a call and simultaneously a challenge as it opens the door for demutualization. This study supports that demutualization is fast approaching and possible in the long and medium term. This is because, every instance a supplemental finance need arises the co-operative part of the fund will be diluted. This study brings a different perspective on demutualization. Its findings suggest demutualization is one of the strategic options available for co-operatives. Co-operatives are not capitalistic structures but rather socialist enterprises that exist to serve their members. This is a departure from the core principles guarding the co-operative identity and if other co-operatives were to follow suit the co-operative principles, values and ideals upon which the organizations are based upon would crumble. The study gives rise

to the question on the validity of the co-operatives principles and if they need to be reviewed. The current study will address this through focusing on the suitability of the third ICA co-operative principle of member economic participation.

Measurement of demutualization in the current study was through the empirical model where demutualization was considered as a dummy variable and a structural break conducted to test for its presence. McNamara and Rhee (1992) also measured demutualization as a dummy variable by looking at 5 years pre and post demutualization effect on financial performance of co-operatives. The hypothesized direction was that demutualization had a negative effect on the relationship between member economic participation and financial performance.

2.3.4 Influence of demutualization on the relationship between member reward and financial performance

It is possible for members to have personal financial incentives for demutualization because of the manner of distribution of savings. Savings are partly distributed into allocated or unallocated member equity or to indivisible reserves. There exists legal rules' governing how equity and reserves are to be distributed upon dissolution. There are special tax regulations applying to independent surplus allocations and members have different beliefs concerning individual and collective property within the co-operative. Demutualization entails modification and synthesis of these incentives. Keeping these issues at bay, involves viewing issues from the member's perspective. A question is posed, how do members perceive the costs and benefits of the regulations and rules guiding the functioning of the co-operative? Moreover, co-operatives should analyze how indivisible reserves can and will be of benefit to the co-operative (Fulton & Girard, 2015).

Indivisible reserves concept is an expression of two ideas, the limited return on capital and unallocated co-operative capital. Any surplus made through co-operative activities must be used in the development of the co-operative or donated to charity as a requirement (ICA, 1995). One of the merits of indivisible reserve is that it is an indefinite capital source, therefore strengths the financial position of the co-operative. However, its major demerit when it remains undistributed, it reduces the amount available for member

patronage payment thus reducing patronization. It may also have negative tax consequences (Fulton & Girard, 2015).

The economic incentive for demutualization can be understood through considering the partial sale of a cooperative to outside investors as is the case in hybrid/mutual holding and sponsored demutualization. If this happens, the revenue raised is first utilized in settling liabilities of the debt holders who are the first claimants. Any additional amount is used to pay equity holders and this depends on the type of equity ownership rights and revenue size in relation to debt and equity (Fulton & Girard, 2015)

In the first scenario, the case where available revenue is just enough to cater for debt and equity and that is no unallocated member equity was considered. The later means all the retained earnings were distributed to members. In such a case, the members receive simply the face value of their equity meaning their initial investment value and any unpaid patronage returns. Scenario two was where sale price is higher than sum of equity and liabilities. How this residual was allocated was dependent on the norms and rules in place. If the limited return on investment norm is adhered to due to legal restriction members would still receive the face value of their equity. The residual would be distributed according to the legal provisions such as in the form of charity, in education initiatives or utilized in co-operative development activities which form the indivisible reserve idea (Fulton & Girard, 2015)

Cronan (1994) in an Australian study identifies a groups of factors that facilitate the movement toward demutualization. His findings indicated structural factors were the most significant especially the property and capital components. The main motivation for demutualization was inadequate capital. He further argues that majority of the co-operative utilize when in need indivisible reserves and member capital. Additionally, members' returns are limited by the 3rd ICA principle and their shares lack financial value hindering the internal capability of mobilizing additional capital. There is a general consensus that demutualization process "frees" the hidden value of shares of members, especially for the inactive members. This study finds that demutualization increased member share value thus the reward that members get for participation post

demutualization is higher. The current study seeks to do a comparison so as to confirm if the findings of this study will be similar from a Kenyan context.

Woodford (2008) examined Fonterra in New Zealand which was the largest milk processing and marketing co-operative that demutualized. This was through a case study design. The problem explored was one of rise in co-operative assets value and subsequent increase in member share value but a decrease in member reward for milk supplied. The motivation for demutualization in this case was that members felt the need to receive a higher reward for the increase in members share value. This brings us to the question of the suitability of the third co-operative identity principle that limits the return on member transactions. The aim is to ensure the 'for service' incentive is protected and members do not join the co-operative to simply trade in its shares. Demutualization opens this door and to what extent may not be clear. The current study addressed this by looking at to what extent demutualization altered the member reward in relation to financial performance.

Fulton and Girard (2015) state that members can capture the difference between sale price and total liabilities if the norm of limited return on investment was not adhered to. This difference is referred to as shareholder or investor value. One way to capture the investor value is through market pricing of equity. For example, if sale price was twice the sum of equity and liabilities, members would receive double the book value of their shares. In the third scenario where a co-operative had some un-allocated equity then the value of member equity would change. Assuming member equity equals unallocated retained earning which is a common practice in a majority of co-operatives; then the residual value from the sale would be double the face value of total equity. In actual practice, members would be constrained to receive share face value due to restrictions on returns to members. In the case where there were no constraints on distribution of unallocated equity capital then members would get four times share face value. In the circumstance it is donated to charity still with no restrictions members would receive three times share face value. Unlocking investor value is main the motivator for mergers or takeovers for investor oriented firms.

Bekkum and Bijman (2006) state successive generations of members have regularly built the co-operative's capital but in recent times capital intensity has been rapidly growing. A number of cooperatives have introduced appreciable or internally tradable share mechanism to enable members enjoy rise in the value of the over time. The shares may or may not be tradable, dividend bearing, supply linked, interest bearing or voting shares. In the Netherlands, Campina co-operative introduced non-dividend bearing, supply-linked, non-voting and non-tradable shares in 1991 revalued annually. By 2006 the value had increased from € 4.54 to € 5.75. Woodford (2008) highlights the case of New Zealand's Fonterra which had had since its formation had interest bearing, fair value, supply linked and non-tradable shares. Share value increased from NZ\$ 3 in 2001 to NZ\$ 5.44 in 2005. New generation cooperatives in the United States have appreciable, production-linked and internally tradable shares. The obtainable depends on the value seen by purchasers of co-operative assets.

Stanford and Hogeland (2004) using a case study design explored the demutualization of Calavo based California whose objective was marketing of members' avocados. The main incentive was that outside investors recognized the value of the Calavo brand and were willing to purchase it at a high price. Members could now capture the residual value from sale and opted for demutualization. Bekkum and Bijman (2006) discuss Central Lechera Asturiana Co-operative that had 57% ownership of Capsa located in Spain. In December the year 2005, Capsa were presented with an aggressive bid of € 300m that resulted in unrest and member realization that the value of their investment was much more than what they would get upon retirement. The general consensus that demutualization raises member reward was tested from a Kenya perspective.

Member reward in the current study was measured through exploring the issue Earnings attributable to members (EAM) which was the difference between surplus and indivisible reserves divided by member equity. Fulton and Girard in 2015 also explored the issues of member reward from the indivisible reserves perspective. The hypothesized direction from literature was that demutualization had a positive effect on the relationship between member reward and financial performance.

2.3.5 Influence of demutualization on the relationship between member transactions and financial performance

Innovations in co-operative organizational forms have emerged in the past few decades (Hendrikse & Bijman, 2002; Bekkum & Bijman, 2006). As a reaction to competitive pressures, co-operative enterprises have relaxed residual claimant restrictions (Chaddad & Cook, 2004). Cooperatives are often limited in their competitiveness in relation to human and financial capital because of member control and member patronage features of co-operative organization structures in comparison to capitalistic firms (Cook, 1995; Lin & Ma, 2006; Royer & Smith, 2007; Tribl, 2009). Cooperative enterprises have adopted hybrid model of demutualization to accommodate its features however, in some circumstances pressures have resulted in full conversion into IOFs. (Bijman, Iliopoulos, Poppe, Gijssels, Hagedorn, Hanisch, Hendrikse, Kuhl, Ollila, Pyykkonen & Sangen, 2012). The main motivation for this is attraction of risk capital. Members who are also patrons on and control the co-operative enterprise. Unlike, investor owned firms where few investors have authority, co-operative in their nature have member benefit related to member transactions/patronage and also decision making involves a high level of member participation (Beugelsdijk & Schaik 2005). Organization structure choice is dependent on member perceptions. Members will opt for the structure that gives them the highest value for their patronization (Bijman et al., 2012).

Co-operatives conventionally exist as marketing channels, substitutes for market failures and off setters of power back to members (Sykuta & Cook, 2001; Hendrikse & Bijman, 2002). Through co-operative market access, members gain in terms of a lower transactional cost than would not be possible if they chose to access the market independently (Staatz, 1987). Modern co-operatives are also affected by transaction cost factors (Valentinov, 2007).

Factors affecting transaction cost include asset specificity, frequency and uncertainty of transactions (Menard, 2004). Large transaction members depend on the co-operative as an avenue for marketing. This is because of higher transaction cost and asset specificity if they were to negotiate independently with a variety buyers. However, they are thought to be less dependent on a co-operative because of their superior bargaining position. The co-

operative is a source of a safe transactional relation and better bargaining position for small transaction members therefore they are considered more dependent on the co-operative (Chechin, Bijman, Pascucci & Omta, 2013). Conflicting propositions have been given based on transaction size and extent of member dependence on the co-operative.

Pascucci, Gardebreek and Dries (2012) observed that member dependence on the co-operative increases with increase in their total deposits. Additionally, members who invest more are more devoted to transacting with the co-operative. Therefore, dependency of members on cooperatives increased in relation to the size of their total assets. Between price and transaction costs, the perceived significant factor in member satisfaction was transaction cost. The higher the transaction cost the lower the member transactions. The current study measured member transactions using a similar measurement methodology.

A new organization form is sort through demutualization so as to lower transaction costs (Hansmann, 1998). This new organization structure should retain the co-operative ideology but also allow for non-member equity capital (Bekkum & Bijman, 2006). Gaining from investor growth capital is a major motivation for pulling out from the convectional co-operative structure (Chaddad & Iliopoulos, 2013). The extreme opposite of the convectional co-operative is demutualization in the form of conversion into an IOF (Chaddad & Cook 2004).

Hazen (2004) confirms that the members who are recipients of high quality member transactions and who feel that their voice is heard in the influence of cooperative policy are highly loyal to their cooperative. Member involvement in the cooperative life in all its aspects reduces the chance for demutualization. Birchall (2002) also determines that when cooperative management and their directors encourage members to actively participate in the cooperative activities and transact with the co-operative, the chances of having success are higher than in other organizational structures. CEGES (1997) through a study conducted in France reported that financial co-operatives that did not demutualize served members at a lower transaction cost than those that demutualized. These studies show that high member participation can be used as a means of avoiding demutualization noting that demutualization raises transaction cost which consequentially reduced

member transaction. The current study established whether this was the same case for Kenya?

Pyykkonen (2012) compared dairy and meat co-operatives in Finland in terms of organization structure and impact on member patronization. Dairy co-operatives represented the tradition organization for that conforms to the co-operatives principles of unallocated capital, equal voting rights equal member treatment. The large meat cooperatives had demutualized hybrid structures that were vertically integrated and incorporated the separation of ownership and control rights from patronage. Demutualization resulted in members of the meat co-operative valuing capital benefits and transaction price more highly when compared with dairy co-operative members. This study showed that demutualization made members more sensitive to the transaction costs which had a negative impact on the volume of member transactions and ultimately financial performance. The similarity of findings with the Kenyan context was explored in the current study.

Alho (2015) studied the impact of demutualization on transaction cost benefits in Finland. This was through a survey of 682 agricultural co-operatives and analysis incorporated a multivariate ordered probability model. Findings indicated that demutualization led to complex co-operative structures that were highly market oriented than member transaction oriented. This resulted in capital linked member benefits being more superior to the traditional transaction/patronage linked member benefits. The current study explored this through a pre and post demutualization measurement of member transactions methodology and compared the findings.

Ciliberti, Frascarelli and Martino (2018) looked at what determined member participation in Italy through a transaction cost theory. This was through the Farm Accountancy Data Network (FADN) methodology and application of probability regression models. The model was used to analyze variables relating to member transaction asset specificity in terms of organization structure, size, human asset and specialization. Uncertainty was also established by focusing in market volatility, context and policy. A key conclusion transaction asset specificity was the main determinant of member participation and specifically aspects relating to organization structure and

specific characteristics of the product. A change in organization structure can be in the form of demutualization and the current study explored how such a change affected member transactions.

Liang, Huang, Lu, and Wang (2015) sought to classify and define capital aspect and examine its influence on member participation and also on economic performance in China. This was through examining a sample of 147 farmer co-operatives and via the application of a statistical model. The findings indicated that certain aspects of capital have a positive relationship with member participation and all the capital aspects have a positive influence on the co-operative's economic performance. The findings of a positive relationship between capital and member transaction is a departure from other empirical literature including for Alho in 2015 and this exposes a research gap which the current study sought by exploring the effect of demutualization on member transactions and financial performance from a Kenyan context.

Henehan and Anderson (2001) propose two key components that facilitate the success of a co-operative enterprise so as not to demutualize. Common recognition and understanding by members and leadership, concerning the economic problems the cooperative is facing. Secondly, the level and quality of member transactions and services rendered to members by the cooperative should be better than what each member may achieve when working individually.

Measurement of member transactions in the current study was through empirical models where it was measured in terms of member loans/premiums proportions. Pascucci, Gardebroek and Dries in 2012 explored member transactions in a similar manner. The hypothesized direction from literature was that demutualization had a significant effect on the relationship between member transactions and financial performance.

2.3.6 Influence of demutualization on the relationship between member control and financial performance

There are three key elements characteristics of a co-operative which include user ownership, user control and user benefit (Barton, 1989). Therefore, the convectional ownership of a co-operative is based on user transaction and not capital investment.

Exercise of control is based on membership applying the one member one vote practice regardless of their shareholding on the co-operative and at times it may for a restricted model of proportional voting (Bekkum & Bijman, 2006). This ownership arrangement is based on the logic of the controlling principles which pursues the interests of the owners. In a co-operative this is referred to as the user value while in IOF it is the shareholder value. All co-operative members are brought together by a need to accomplish their individual entrepreneurial interests. Conflicts of interest emerge when members shift from common user interest to hidden or open non-entrepreneurial personal benefits (Bekkum & Bijman, 2006). Over the past two decades, there has been technological development, globalization, consumer behavior change and power shifts in the chain structure. This has resulted in co-operatives shifting from production based to market led strategies which tend to be capital intensive. Consequentially, requirements for member investments have increased at a considerable rate. The market led strategies attempt to strike a balance between produce and capital content, nonetheless they tilt in the direction of the later. Investment incentive and member production signal have become more difficult to communicate through the convectional user relationship (Bekkum & Bijman, 2006).

Marinakos, Daskalaki and Ntrinias (2014) in a Greece study based on pharmaceutical co-operative examined how change unfolded. This was through the application of a constructivist conceptual framework. Findings revealed that the gradual demutualization in the co-operative sector indicated that change was not inevitable. However, it was part of the autopoietic process in which the decision making member capacity guides the processes and direction of financial performance of the co-operative enterprise. Therefore, decisions that concern change must consider the particularity of the co-operative organization structure. This study focuses of the element of member decision making ability and if it is well guided especially in a radically changing environment demutualization can be avoided. Member democratic control of capital in the current study was measured in a terms of member shareholding proportions in the current study.

Novkovic and Miner (2013) state that due to changing environment co-operatives engaged in a spin off model that focused on mergers and organic growth which

necessitated growth strategies that were capital intensive. This increased the uncertainty, risk and complexity of the organization structure which was guided by common purpose and co-operative values. Member democratic control suggests that the role of capital is simply supportive. Large co-operatives tend to go beyond the traditional member capitalization restrictions and they demutualize so as to gain access to capital markets. Consequentially, posing a danger of capital having undue influence over co-operative decisions. This means that rules and systems are adopted to avoid conversion into an IOF and secure member control. The rules aim at preventing members from focusing on return on investment, ensuring intergenerational co-operative business transfer and restricting control to only user members. This study showed demutualization had a negative effect on member control of the co-operative and highlights the importance of securing member control post demutualization to foster the success of the co-operative. The current study established to what extent the influence of demutualization was on member control.

Co-operative solutions to demutualization are two: The introduction of member delivery rights that can be adjusted based on the capital to produce ratio depending on member investment. Secondly, the introduction of market based pricing system of capital invested by members to facilitate production-linked distribution of residual earnings rewards. This safeguards the primary entrepreneurial focus of members and investments as considered as secondary opportunities. The investment, control and transaction relationships between members and their co-operatives continue to be bundled and key attributes of the co-operative (Bekkum & Bijman, 2006).

Chaddad and Cook (2000) examined a balancing problem between fund mobilization and preservation of member control of dairy co-operatives in Australia. The study developed an equilibrium model that had two steps. Creation of a fully member owned supply co-operative with every share valued at one Australian dollar and it was non-tradable. It was named 'Dairy Farmers Supply.' The second simultaneous stage established a Trading co-operative. Upon demutualization and listing in the stock exchange, the ownership structure was adjusted to 75% control in the first co-operative and 25% in the later co-operative. This is a good proposition; however the member's lost control of the second

co-operative, the proposed ownership in the second should not be below 51% so as to at least secure member control. Member control was measured in a similar methodology in the current study, through shareholding proportions.

Co-operative options to demutualization include, first of all the introduction of internally tradable or appreciable shares so as to permit members capture any increase in co-operative value over time while at the same time securing control. Friesland Foods in Netherlands has non-voting, dividend bearing, bimonthly, formally and internally tradable class B shares. Issued in 1995 at € 45 rose to trade at € 61 by 2006. Second option was through the issue of subordinate bonds. In 2003 Friesland Foods issued cumulative perpetual subordinated notes that were permanently valued at € 125m. (Bekkum & Bijman, 2006).

The third option was through having external investors as special shareholders or special members and their participation limited to group or subsidiary level. Conflicts of interest emerged because of member preferred benefit through use and shareholder preference was benefit was through investment. Cobego Group in Netherlands in 1997 issued € 67m dividend bearing participation units to NIB investment bank as capital accommodating them as special 'K' members but limited their voting rights to 16% (Bekkum & Bijman, 2006).

The fourth option was through listing of preference non common stock to secure member control. Preference stocks have fixed dividend thus they do not have a negative effect on incentives that are based on financial performance. Westfleisch in Germany in 2006 obtained mezzanine capital which was considered as a special class of capital, that had a fixed interest, non-voting, was subordinate to bonds and had a maturation period that was limited (Bekkum & Bijman, 2006).

Co-operatives may convert from member owned form into an investor owned firms and still retain their member control and ownership. Reasons for this include legal reforms, attraction of outside capital, decision making flexibility and tax issues. Premium Beef based in the US in 2004 converted citing tax issues and investor orientation. Their

production-linked, internally tradable shares and share structure was not altered in any way (Bekkum & Bijman, 2006).

Hybrid co-operative stock listing combines capital access and co-operative objectives. Invitation of outside investors as a class of member prevents full demutualization into an IOF (Chaddad & Cook, 2004). The Irish model of hybridization entails establishment of a publicly traded subsidiary. The cooperative continues representing interests of the members as it remains as a shareholder in the subsidiary (Harte, 1997; Nilsson, 1999; Chaddad & Cook, 2004).

Boland and Cook (2013) described the evolution of control and ownership dynamics of Glanbia based in Ireland. This was through application of a qualitative generated life cycle that employed interviews and secondary data. Glanbia Society for the last two decades owned 51% of Glanbia PLC and outside investors owned 49%. A capital expenditure to construct largest plant for milk processing in the country was proposed so as to process the projected additional 20% member milk that would be produced. This was after the European Union repealed milk quotas. Members declined to finance their portion of the project and voted to reduce their shares in PLC from 51% to 41% leaving them as minority shareholders. They further reduced majority decision making vote from 75% to 66.66%. This resulted in tension as there is no proportional balance between residual claimant rights and the de facto control. In this study non-members were granted control and residual claimant rights making their difference with original members almost negligible. Bringing the issue of whether there is adherence to the principle of 'members contributing to and controlling the co-operative's capital.' Is it about time the principles were reviewed or should they be retained as they have been?

In the Finland, the Finnish model of hybridization, subsidiaries are listed in the stock exchange but they have exclusive member shares characterized by stronger voting rights thus retaining a controlling stake in the organizations. LSO Cooperative has 37% shareholding in HK Ruokatalo nonetheless controls 84% in terms of voting rights while Metsaliitto co-operative has 38% shareholding in its subsidiary M-real but retained 60% voting rights (Zwanenberg, 1997).

Non-co-operative solutions are two: The separation of transaction and investment relationship. Secondly, the issuance of performance based returns on non-member shares. Both solutions consider non-members and members as share trader and not as entrepreneurs. Additionally, they breach the co-operative value of solidarity even if members are 100% owners of the co-operative. (Bekkum & Bijman, 2006). This results in Converted listed cooperatives (CLCs) which often fall prey to takeovers. American Rice Co-operative based in the USA fell prey and was taken over in 1988 by ERLY and due to financial problems in 2003 it was taken over by Spanish Grupo SOS (Bekkum & Bijman, 2006).

Nilsson and Lind (2015) gave a theoretical explanation on the demutualization Swedish Meats Co-operative. The hypothesis was that vaguely defined property rights led to increased agency costs borne by members and as such that the costs were greater than perceived member benefits. Primary data was collected through interviews. Findings showed that unclearly defined property rights made it difficult to improve the financial performance and profitability of the organization. Persistent low profitability due to poor member governance led to the final exit of members. The study shows that demutualization was sort to be a solution to the negative impact democratic control capital on financial performance. The current study also explored the relationship between member control and financial performance but from a Kenya context.

Woodford (2008) examined the demutualization of Fonterra's one of the world's prime dairy co-operative based in New Zealand. Fonterra members made a 66.45% vote for trading of shares among farmers scheme resulting in demutualization the segregation of control and ownership rights of the co-operative and allowed for the redemption of shares by members. Fonterra Shareholders Fund (FSF) was created as a second class of shares to be publicly traded in the stock exchange. The long term success of Fonterra may continue but whether it shall remain a true co-operative is subject to debate. The current study examined the true co-operative nature of the demutualized co-operatives through analysis of adherence to the member economic participation principle which includes aspects of member control.

Nadeau and Nilsestuen (2004) examined the motivations of demutualization across various co-operative sectors in USA. Conclusions were that member benefit was in the short term and in real terms members lost control over their co-operative. Co-operatives that had high member participation especially in the aspects of democratic life could fight against pressures to demutualize. Demutualization was witnessed most in the co-operative insurance sector where in the 1980's more than 50% of the insurance market was held by them but by 2004 it had dropped to 17%. Electricity and Communication Co-operatives were most resistant to demutualization because their by-laws provided that delicate decisions such as demutualization could only be passed in high quorum general meetings. Members were highly involved and were up to date with co-operative activities and these co-operatives were supported by strong apex organizations. This current study explored this by approaching it from a co-operative insurance and co-operative banking perspective.

Gijssels and Develtere (2008) examine the co-operative trilemma. This is the condition where financial co-operatives which are economic enterprises with a civic mission must reposition their processes in regard to the state, the civil society and the market. A qualitative analysis of five financial co-operatives was undertaken. They include The Co-operative Group based in the United Kingdom, Rabobank based in Netherlands, Le Credit Cooperatif based in France, Group ARCO and Cera based in Belgium. The organizations have undergone major transformations in light of difficulties in the financial-economic market (Gijssels, Develtere & Raymaekers, 2007). The organizations did not demutualize and nor did they depart from their co-operative values, principles and strategies while pressures from the market for demutualization intensified. They developed innovative mechanisms to secure shareholder ownership and control pioneered by the social responsible investment and consumer use. In this study demutualization was not sought and the organizations managed to find non conflicting answers to the contradictory demands from the state legislations, competitive market pressures and the civil society getting accustomed to the trend of demutualization. The current study determined the effect of demutualization on member control and financial performance and gave solutions that would retain the control within the members of demutualized co-operative organizations.

Measurement of member control was through the empirical models where it was measured in terms member shareholding proportions. This measurement was informed by Woodford who used a similar measure in 2008. The hypothesized direction from literature was that demutualization had negative effect on the relationship between member control and financial performance.

2.4 Summary of literature and research gaps

Kalogeras, Pennings, Kuikman and Doumpos (2011) analyzed whether emergent ownership structures of Netherlands' agri-co-operatives impacts positively on financial performance. McNamara and Rhee (1992) examine the 5 years pre versus 5 years post-demutualization performance of 33 legal reserve life insurers in the United States following a time series cross sectional data estimation technique. Welch (2006) compared the financial performance of co-operatives that demutualized and those that did not in the USA. ACME (2001) examined the demutualization of co-operative insurance organizations in 11 West European countries.

Taiwo and Okador (2014) examined the effects of members' participation on the performance of the multipurpose cooperative societies in Nigeria. Otaokpukpu, Ogbu and Okonkwo (2017) assessed the effect member participation and type of co-operative on the financial performance in Nigeria. Hailu and Goddard (2009) examined the possible motivations for the organizational change of Lilydale co-operative based in Canada. Hariyoga and Richard (2004) examine the reasons behind closing up of the Tri Valley in California. Bekkum and Bijman (2006) analyzed more than 50 cooperatives worldwide, where the problem of capital structure had been resolved by means of new solutions. Tremblay and Cote (2001) examine demutualization in the Belgium cooperative banking sector triggered by a strategic positioning need. Cronan (1994) in an Australian study identifies a groups of four factors that facilitate the movement toward demutualization. Woodford (2008) examines the financial incentive for the demutualization of Fonterra in New Zealand. Stanford and Hogeland (2004) explored the demutualization of Calavo based California incentive where outside investors recognized the value of the Calavo brand and were willing to purchase them at a high price.

Pyykkonen (2012) compared dairy and meat co-operatives in Finland in terms organization structure and impact on member patronization. CEGES (1997) in a France study reported that financial co-operatives that did not demutualize served members at a lower transaction cost than those that demutualized. Alho (2015) studied the impact of demutualization on transaction cost benefits in Finland. Ciliberti, Frascarelli and Martino (2018) analyzed what determined member participation in Italy through a transaction cost theory. Liang, Huang, Lu, and Wang (2015) sought to classify and define capital aspect and examine its influence on member participation and also on economic performance in China.

Marinakos, Daskalaki and Ntrinas (2014) in a Greece study based on pharmaceutical co-operative examined how change unfolded focusing the decision making member capacity that guides the processes and direction of financial performance of the co-operative enterprise. Chaddad and Cook (2000) examine a balancing problem between fund mobilization and preservation of member control of dairy co-operatives in Australia. Boland and Cook (2013) described the evolution of control and ownership dynamics of Glanbia based in Ireland. Nilsson and Lind, (2015) gave a theoretical explanation on the demutualization Swedish Meats Co-operative. Nadeau and Nilsestuen (2004) examined the motivations of demutualization across various co-operative sectors in USA. Gijssels and Develtere (2008) examine the co-operative trilemma.

Most researchers around the world have focused on the motivations and reasons behind demutualization. A good number focus on the effects of demutualization either on financial performance or on member economic participation but few examine the three variables concurrently. Additionally, from survey of relevant literature, there are no studies that have addressed demutualization from a Kenyan context. A good number of these studies applied net income, return on assets and gross margins as a measure of financial performance and not return on equity which will be utilized in the current study. Therefore this study, intends to fill these appurtenant literature gaps by analyzing the influence of demutualization on member economic participation and financial performance of co-operatives in Kenya.

2.5 Conceptual Framework

Member Economic Participation

Financial Performance

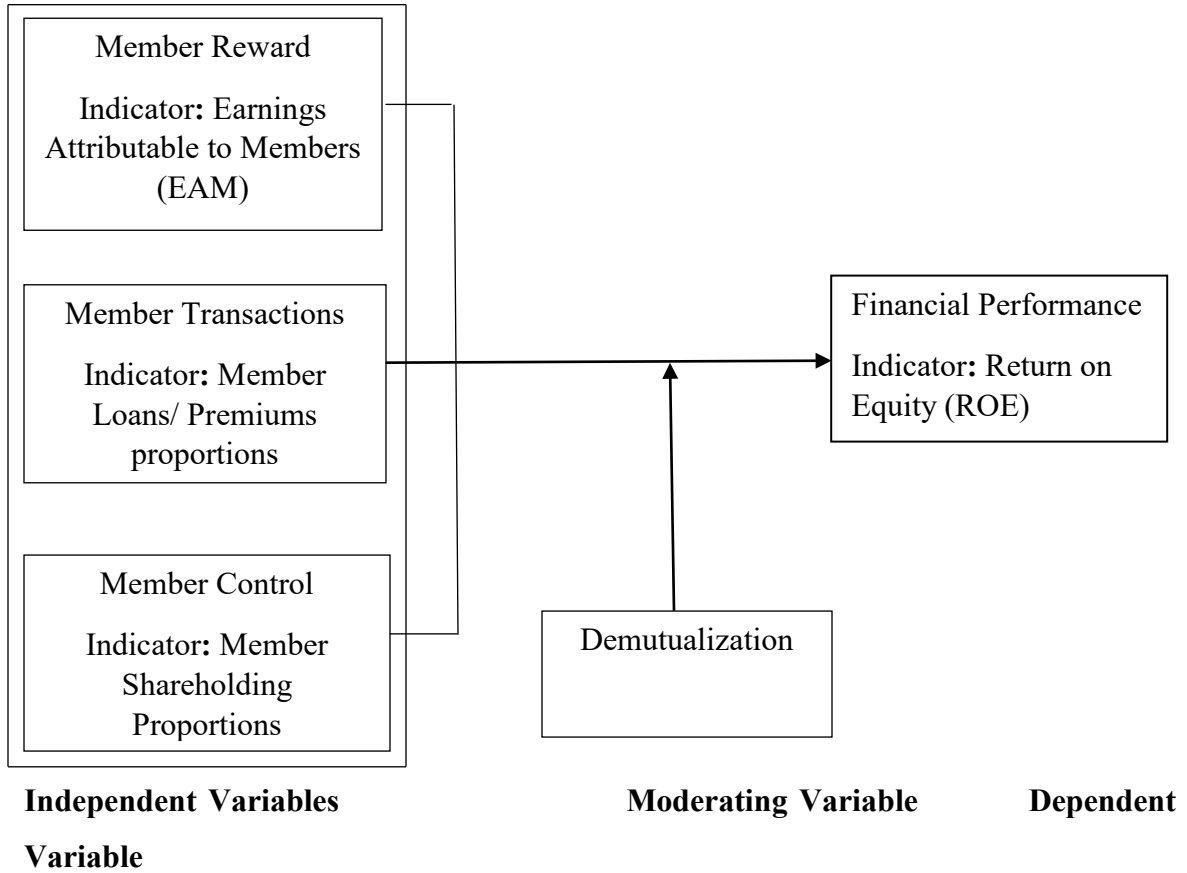


Figure 2. 1 Conceptual framework

The conceptual framework is a diagrammatical representation of the relationship between the independent variables, dummy variable and the dependent variable.

Financial performance was measured by return on equity (ROE) a similar measure was also applied by Kalogeras, Pennings, Kuikman and Doumpos (2011). Member economic participation was disintegrated into its measurable components which were member reward, member transactions and member control. Galor (2001) confirms the above as measures of member economic participation. Demutualization in the was measured as dummy variable following a similar methodology where McNamara and Rhee (1992) considered a pre and post effect of demutualization.

Member reward was explored through the issue of earnings attributable to members (EAM) which was the difference between surplus and indivisible reserves divided by member equity. Fulton and Girard in 2015 also determine member reward by looking as the indivisible reserves perspective. Member transactions were measured through member loans/premiums whose source was Pascucci, Gardebroek and Dries (2012). Member control was measured in terms member shareholding proportions. The measure was informed by Woodford (2008).

Resource based view provided anchorage that demutualization improves an organizations resource position positively affecting financial performance. Property rights theory provided an understanding as to why members seek new property rights through demutualization as it improves member reward and financial performance. Transaction cost theory displayed that demutualization reduces transaction cost positively influence member transactions and consequently raising financial performance. Agency theory provided anchorage that there was a negative influence of demutualization on the relationship between member control and financial performance due to the separation of ownership and control rights.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter shall highlight in brief the methodology that shall be used in conducting the study. It includes the research philosophy, research design, target population, sampling design, data collection procedure, analysis and presentation.

3.2 Philosophical Orientation

Research philosophy is the premise of knowledge upon which any study is established. The selection of a research design is dependent on the research philosophy (Saunders et al., 2007). This study applied positivism research philosophy. Values of validity, reason and truth guided this philosophy. The philosophy focuses on facts purely that are gathered by way of experience and direct observation and empirically measured through experiments, surveys, statistical analysis and quantitative methods (Hatch & Cunliffe, 2006). The research paradigm of positivism was the most appropriate for this quantitative study because it involved testing of hypothesis advanced from the existing theories that related to demutualization, member economic participation and financial performance. The philosophy allows for testing of relationships against collected data (Flowers, 2009).

3.3 Research Design

The study applied a Time Series Cross Sectional research design. It involved panel data estimation. The design allowed for individual specific variables therefore provided for heterogeneity that is normally related to individual co-operative organizations. The design was a combination of time series cross sectional observations and due to this aspect, it is normally considered one of the most effective designs in causation study, other than pure random experiment. The design allowed for a pre and post measurement of the moderating effect of demutualization over time and across the co-operative organizations (Stimson, 1985). As stated by Lempert (1966) it is a par excellence research design; other than detecting causal relationships, it offers a number of distinct merits. It gives data that is more informative, that has less collinearity between variables, with a larger degree of variability, more efficiency and more degrees of freedom. Besides, panel data minimizes the bias that can result from individual co-operative organizations being aggregated. Empirical analysis can also be enriched in a manner that

may not be feasible if either only time series data or cross-sectional data was applied (Ogboi and Unuafe, 2013). This design was used to measure, describe and analyze the influence of demutualization on the relationship between member economic participation and financial performance of co-operative in Kenya.

3.4 Target Population

Target population is defined as the particular population from whom information is wanted (McDaniel, 2001). The population of the study comprised of the two holding co-operatives in Kenya between 1998 and 2017. According to the Ministry of Industry, Trade and-operatives (2017) the existing holding co-operatives are Cooperative Insurance Services Ltd (CIS) and Co-op Holding Co-operative Society Ltd, which own Co-operative Insurance Company Ltd and Co-operative Bank of Kenya Ltd respectively. The Ministry of Industry, Trade and-operatives is the national registration institution for all co-operatives in Kenya as such was used as an reliable source for co-operative sector information. Therefore, the target population were the two organizations.

3.5 Sampling design

Sampling is the method by which a researcher uses to gather things, organizations, places or people for a study (Kombo& Tromp, 2006). Therefore, a sample design is a precise plan of how a sample will be obtained from a given population (Mugenda & Mugenda, 2003). A census methodology was employed since both holding co-operatives were studied for the period between 1998 and 2017.

3.6 Data collection instruments

The research was based on secondary data collected from Co-operative Bank of Kenya and CIC Group websites. The data was collected over a 20 year period; from 1998 to 2017 through a secondary data collection instrument that is discussed under Appendix I. The period was selected since it represents periods before demutualization that is 1998 to 2007 and 1998 to 2011 and periods after demutualization that is 2008 to 2017 and 2012 to 2017 for Co-operative Bank and CIC Group respectively. The main sources of data were the annual reports and financial statements published by organizations covering the mentioned period. The availability of data and completeness was also considered.

3.6.1 Reliability and Validity of Instruments

Reliability refers to the degree to which a test measures consistently what it is supposed to measure, and is expressed numerically (Gay, 2009). The same results should be consistently yielded when measurement is repeated under similar conditions (Orodho, 2005). Validity is the extent to which measures actually measure what they purport to measure (Bellamy, 2012). Validity and reliability of secondary data depends on the credibility of the source of the information collected and is referred to as external validity (Smith & Smith, 2008). Since someone else already tested for reliability and validity and collected the data, the researcher does not have to devote to the processes of primary data collection. Concerns should however be made to ensure that the sources of secondary data being used are credible. Secondary data was collected from audited financial statements. Further, diagnostic tests were conducted to determine whether the assumptions of regression had been met. This resulted in improvement of the bivariate and multivariate panel models increasing the reliability of the model.

3.7 Data collection procedure

The research authorization permit was obtained from the Ministry of Education, Science and technology before the commencement of the data collection process. Secondary data was extracted from the annual financial statements reported by the CIC Group and Co-operative for a twenty-year period that is from 1998 to 2017 through desk search techniques. Data collection was carried out for a period of two months between January and February 2019. Data was collected from the annual shareholder reports and financial statements of each organization obtained from the organization websites. The kind of data collected included Net income after tax (NIAT), Total shareholding, Amount of reserves, Member shareholding, Member loans, Total loans, Member premiums and Total premiums. Secondary data on total loans and total premiums was available in block figures for all years, however, the shareholders investor briefing annual reports which were available from 2014 to 2017 showing the proportion transacted by members specifically which included member loans and member premiums. Therefore, interviews were conducted with senior co-operative professionals in the co-operative divisions of the

organizations who have been in the organization for more than 15 years aiding in the extrapolation of the missing data.

Secondary data was preferred due to the units of variables measurement and it was also informed by the duration of the time series which was 20 years, it was considered adequate as it allowed the study to develop a trend on the behavior of variables over time. It also allowed for an adequate time series data for pre and post demutualization analysis. Financial statements for Co-operative bank were available for 19 years from 1999 to 2017 though incomplete for the former years and for Co-operative Insurance Company they were available for 11 years from 2007 to 2017. The data available was adequate since it covered more than 5 year's pre and post demutualization for both organizations. Therefore the panel had an unbalanced nature however this did not have any effect on the methodology because balanced panels methods of data analysis are vigorous enough to be applied in unbalanced panels. Data was organized in panels so as to study the behavior of co-operative organization over time and across space (Baltagi, 2013; Gujarati, 2003).

3.7.1 Operationalization and measurement of variables

Table 3. 1: Operationalization and Measurement of Variables

Variable	Type	Operationalization	Operational Definition	Measurement	Hypothesized direction
Financial performance	Dependent variable	Taken as return on equity (ROE)	Source: Kalogeras, et al. (2011)	Ratio scale	Negative influence
Demutualization	Dummy Variable	Taken as a dummy variable	It shall take a value of 0 before and 1 after demutualization	Nominal Scale	
Member Reward	Independent variable	Taken as earnings attributable to members (EAM)	Source: Fulton & Girard (2015)	Ratio Scale	Positive influence
Member Transactions	Independent variable	Taken as proportions of member loans/premium (MT)	Member Loans/premiums proportions. Pascucci, Gardebroek & Dries (2012)	Ratio Scale	Negative influence
Member Control	Independent variable	Taken as shareholding proportions (ME)	Woodford (2008)	Ratio Scale	Negative influence

Source: Author (2018)

3.7.2 Ethical Consideration

To ensure ethical research standards were met, a research authorization permit from the Ministry of Education, Science and Technology was obtained prior to the onset of the process of data collection. The processed data presented in the following chapter was not specific data collected but rather it was data that had been processed through analysis. Furthermore, the data that was presented by the study is openly available on the organization's websites thus the study has not gone against any non-disclosure or ethical guidelines.

3.8 Data analysis

This section were applied in testing the research hypothesis and analyzing the data. The data was organized using Excel program in a format that could be analyzed. This study used Stata 13 for data analysis since this software had the capability of analyzing panel data over a period of time. The study used a 20 year panel data period and as such the software was most suitable for the study (Cameron & Trivedi, 2009). Descriptive statistics for the individual study variables were analyzed. Thereafter, diagnostic tests were carried out for the data set so as to ascertain that the econometric assumptions of regression were met. The study conducted heteroscedasticity, autocorrelation, multicollinearity, normality and cross sectional dependence tests. Finally, the results obtained from the analytical models were applied to test the research hypothesis of the study and establish direction and the strength of the relationship between the variables of the study.

3.8.1 Diagnostic test

Before the administration of multiple regression analysis a number of essential assumptions were checked so as to avoid type II and type I errors that occur during the interpretation stages of the model (Cohen, West & Aiken, 2013). These assumptions include testing for multivariate normality and multi-collinearity (Cohen et al., 2013). Further a proper estimation technique needs to avoid spurious regression arising from the heteroscedasticity, cross-sectional dependence, and serial correlation (Bhattacharya, Paramati, Ozturk, & Bhattachary, 2016).

3.8.1.1 Testing for Normality

The multivariate regression model assumes that there is normal behavior of variables (Oscar, 2007). To find out the dissemination of each of the one way error components for panel data, an extension of the classical Bera-Jarque test by, Montes-Rojas, Sosa-Escudero and Wang (2013) was used. The test first presents the correlation analysis of each domain risk measurement components accompanied by the one way error component, Kurtosis, Skewness and normality test. If the p-value was be more than 0.05 ($p > 0.05$), the study failed to reject the null (at 95%) and thus concluded there was normal distribution of variables.

3.8.1.2 Test for Heteroscedasticity

Heteroscedasticity refers to disturbances of regression which have non constant variances across observations (Greene, 2008). Heteroscedasticity leads to findings being inefficient as it arises in multiple applications, in both time series and cross- data (Baltagi, 2013). This study applied the Breusch-Pagan heteroscedasticity test. The null hypothesis stated that variables were homoscedastic. Therefore, at 95% of level of significance if the p value was greater than 5% the study failed to reject the null hypothesis, concluding the data was homoscedastic.

3.8.1.3 Testing for autocorrelation

Across periods time-series data regularly displays serial correlation or autocorrelation of disturbances (Greene, 2008). The presence of autocorrelation is problematic to panel data models that are linear. This is because it makes consistent the estimated regression coefficients thus they are left inefficient. Moreover it makes the standard errors biased (Drukker, 2003; Baltagi, 2013). Wooldridge's test for serial correlation was adopted. The test helps in determining whether there is correlation between the errors in different observations (Brookes, 2008). The null hypothesis was there is no autocorrelation. If the chi statistic was more than percent, the study failed to reject the null (at 95% significance level) and the conclusion would be there was no autocorrelation of errors in different observations (Wooldridge, 1960).

3.8.1.4 Testing for Multicollinearity

Kumari (2008) defines multicollinearity as the presence of a linear relationship among the independent variables. Multicollinearity can lead to a forecasting error that is large and increase the difficulty in assessing the relative significance of variables independently in the model. This study applied both the Variance Inflation Factor (VIF) so as to test for multicollinearity. Variance Inflation Factor greater than 5 ($VIF > 5$) would indicate presence of multicollinearity (Oscar, 2007). VIF shows the magnitude of inflation of the variance of the coefficient estimate as a result of multicollinearity (Belsley, Kuh & Welsch, 1980).

3.8.1.5 Testing for Cross- Sectional Dependence

For cross-sectional dependence, this study employed Pesaran's test of error cross-sectional dependence (CD). This test is based on an average of pairwise correlation coefficients between the time series for each of the panel units, which is used to calculate the test statistics. The study accepts the null hypothesis (i.e. the cross-sectional independence) for both estimations. The test is suitable for panel models, including unit root and stationary dynamics heterogeneous; large N and small T. Above all, the test provides robust results when dealing with raw series and on the estimated residuals (Pesaran, 2004). Pesaran's test performs well even for small T and large N, unlike Breusch-Pagan LM test (Baltagi, 2013).

3.8.1.7 Fixed and random effects testing

Fixed and random effects tests were run on the panel data collected and the hausman test was applied on results of both tests so as to select the most suitable for the study. Fixed effects model considers the exogenous effects that may play a role in the model while the random effects model stands to provide better results, if the model is described well in terms of completeness. The hausman test, allowed the study to assess which between the two was more suitable for interpretation. With use of the within transformation it may be concluded that the fixed effects model does away with unobserved time-invariant of individual effects (Nickell, 1981; Diggle, 2002). In the case of the random effects model,

no outside effects are considered as it is assumed that no exogenous effects exist meaning all errors are already counted in the model (Christensen, 2002; Baltagi & Chang, 1994).

3.8.2 Analytical models

Model 1

The first objective was to find out the influence of demutualization on the relationship between member reward and financial performance. Return on equity was used as the measure of financial performance and applied as a dependent variable. Member reward was measured in terms of earnings attributable to members (EAM) and applied as an independent variable. The bivariate regression equation for this was:

Model 3.1: Relationship between Member Reward and Financial Performance

$$y_{it} = \beta_0 + \beta_1 X_{1,it} + \varepsilon$$

Model 3.2: Influence of demutualization on this relationship

$$y_{it} = \beta_0 + \beta_1 X_{1,it} + \alpha_2 D_{2i} + \varepsilon$$

Where:

Y_{it} = The dependent variable which was financial performance of co-operative organization “i” at time “t” that was measured by Return on Equity (ROE).

β_0 = Autonomous financial performance

β_k = Coefficient for independent variables

α_k = Coefficient for dummy variables

D_k = Dummy variable – Demutualization. Assuming two firms in should take 1 for periods after demutualization and 0 for periods before demutualization.

$X_{1,it}$ = Member reward measured by earnings attributable to members (EAM) of co-operative organization for “i” at time “t”

ε = A random error term and takes care of other factors that affect financial performance which are not defined in the model.

Model 2.

The second objective was to determine the influence of demutualization on the relationship between member transactions and financial performance. Member transactions were measured in terms proportion of member loans/premiums and applied as an independent variable. The bivariate regression equation for this was:

Model 3.3: Relationship between Member Transactions and Financial Performance

$$y_{it} = \beta_0 + \beta_1 X_{2,it} + \varepsilon$$

Model 3.4: Influence of demutualization on this relationship

$$y_{it} = \beta_0 + \beta_2 X_{2,it} + \alpha_2 D_{2i} + \varepsilon$$

Where:

$X_{2,it}$ = Member transactions was measured in terms proportion of member loans/premiums of co-operative organization “i” at time “t”

All the other definitions remain as defined in model 1.

Model 3

The third objective was to establish the influence of demutualization on the relationship between member control and financial performance. Member control was measured in terms of shareholding proportions and applied as an independent variable. The bivariate regression equation for this was:

Model 3.5: Relationship between Member Control and Financial Performance

$$y_{it} = \beta_0 + \beta_1 X_{3,it} + \varepsilon$$

Model 3.6: Influence of demutualization on this relationship

$$y_{it} = \beta_0 + \beta_3 X_{3,it} + \alpha_2 D_{2i} + \varepsilon$$

Where:

$X_{3,it}$ = Member control was measured in terms member shareholding proportions of co-operative organization “i” at time “t”

All the other definitions remain as defined in model 1.

Model 4

The general objective was to establish the influence of demutualization on the relationship between member economic participation and financial performance. The multivariate regression equation for this was:

Model 3.7: Relationship between Member Economic Participation and Financial Performance

$$y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \varepsilon$$

Model 3.8: Influence of demutualization on this relationship

$$y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \alpha_2 D_{2i} + \varepsilon_{it}$$

Where:

Definitions remain as defined in model 1, 2 and 3.

This model was based on empirical evidence that link demutualization to member economic participation and financial performance. The empirical studies that identified this link include Pyykkonen (2012); Liang, Huang, Lu and Wang (2015); Otaokpukpu, Ogbu and Okonkwo (2017).

3.8.3 Test for robustness

The Mann-Whitney U test was utilized in testing for robustness that is to see if the results of the empirical model would hold when subjected to a non-parametric test. It is distinct from the t-test as it compares median scores and not the mean of two samples; meaning it is more robust against heavy tail distributions and outliers. Being a non-parametric test, Mann Whitney need not require special distribution during analysis of the dependent. Therefore, when the dependent variable is of ordinal scale and not normally distributed becomes a suitable test for group comparison. (Salkind, 2010). If the p-value was lower than the significance level, the study rejected the null hypothesis and concluded that there was no difference between financial performance pre and post demutualization. This would mean the evidence was enough to conclude that demutualization had an influence on member economic participation and financial performance and vice versa. In addition to the empirical model and Mann Whitney U Test, a structural break test was conducted

around the time demutualization took place as a complement to the empirical model discussed above.

3.9 Data presentation

A detailed summary of the estimated findings was presented in charts and tables for discussion and simple interpretation.

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter presented the research findings and discussion. The chapter is organized in the following manner: Section 4.2 dispenses the descriptive statistics analysis of the data Section 4.3 shows the diagnostic tests results and lastly section 4.4 shows the analytical analysis results based on the study objectives..

4.2 Descriptive Statistics

4.2.1 Descriptive statistics summary

The descriptive statistics summary is represented in table 4.1

Table 4.1 Summary Statistics for Secondary Dataset

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	28	.7177317	.8348535	-.236725	2.592634
EAM	28	.6260356	.7674963	-.2452286	2.359335
MT	28	.2827143	.1165869	.089	.596
ME	28	.8182143	.1643238	.6456	1

Table 4.1 shows that the number of observations per each variable which was 28. It shows that the average return on equity (ROE), earnings attributable to members (EAM), member transactions (MT) and member equity (ME) were 71.77%, 62.6%, 28.27% and 81.82% respectively. Therefore, in the study duration the co-operatives were positively profitable, members were adequately rewarded, member transactions were moderately low and member control was relatively strong.

The mean financial performance (ROE) of 71.77 per cent is an indication that the co-operatives were doing well in relation to surplus however their standard deviations of 83.48 percent was quite high and meant that the profit making capability was divergent from each other over the years. ROE varied from -23.67 to 259.3 percent an indication that over the years the co-operatives managed to conquer their financial difficulties so as to become sustainable and quite profitable. Member reward (EAM) varied quite closely with ROE with standard deviation and average of 76.74 and 62.60 per cent. It varied from -24.52 to 235.9 percent over the duration of the study. An indication that member reward has been rising at a positively significant rate and highly correlated with the

financial performance. Notably, in an ideal state, member reward should be limited and it should be in proportion to the member transaction and not in relation to financial performance as stated the third co-operative identity principle.

Member transactions (MT) has a minor standard deviation and mean of 11.66 and 28.27 per cent respectively. It varied between 8.9 to 59.6 percent over the years. It is worth noting that over the years, member transactions have been declining. The mean was quite low an indication that members were not committed to transacting with their co-operatives. The deviation of member transactions is also quite low meaning it did not vary too much over the years. The minimum value of 8.9 per cent is an indication that the co-operatives have in reality departed from the third co-operative principle because it would be expected that the earnings attributable to members would be behaving in a similar fashion to the member transactions. There seems to be a different relationship between member reward and member transactions as we are having circumstances where member reward was as high as 235.9 per cent while the highest member transactions were at 59.6 per cent this is a signal that the principle of member economic participation is not adhered to and as such member reward has become a factor of financial performance rather than being proportional to member reward.

The average member equity (ME) was 81.82% and 16.43% was the standard deviation. The maximum and minimum values were 100% and 64.56% respectively. This indicate high level of member control which could be attributed to the high shareholding proportions. Control is linked to voting rights which are linked to shareholding such that no matter what shareholding one has each has one vote. The ideal co-operative situation is where member equity is 100% such that members contribute wholly the total share capital required and have 100 per cent control of their co-operative. The reduction in member equity is as a result of demutualization that alters the capital structure allowing for non-member equity

4.2.2 Graphic representation of the influence of Demutualization on the relationship between Member Reward and Financial Performance

Figure 4.1 and 4.2 show the diagrammatic effect of demutualization on this relationship through line graphs

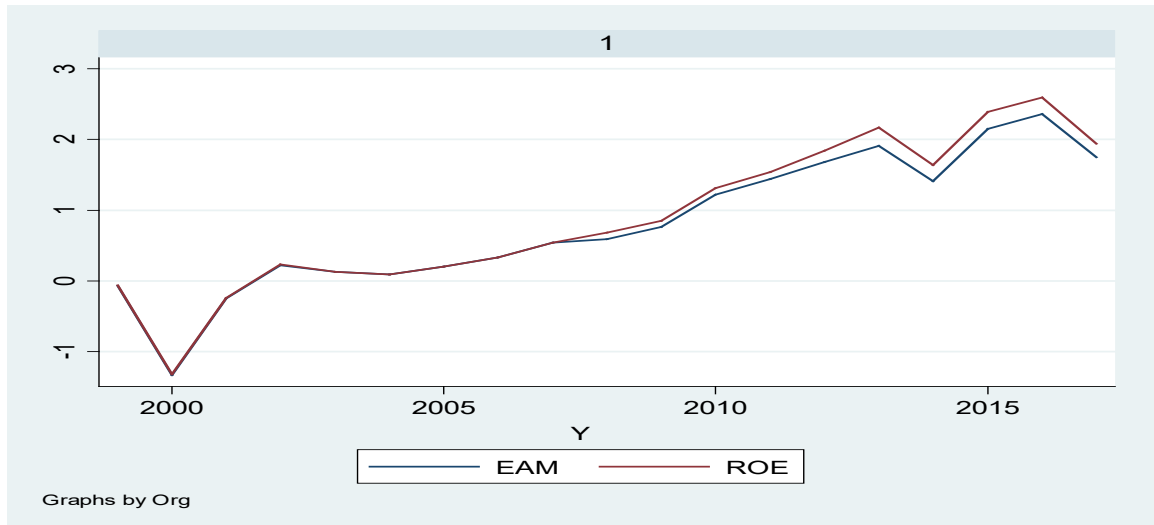


Figure 4.1 Co-operative Bank of Kenya Comparative Line Graphs for Member Reward and Financial Performance

Pre-demutualization financial performance (ROE) and member reward (EAM) were almost equal however post-demutualization in 2008 demutualization occurred and as a result member reward became slightly lower than financial performance.

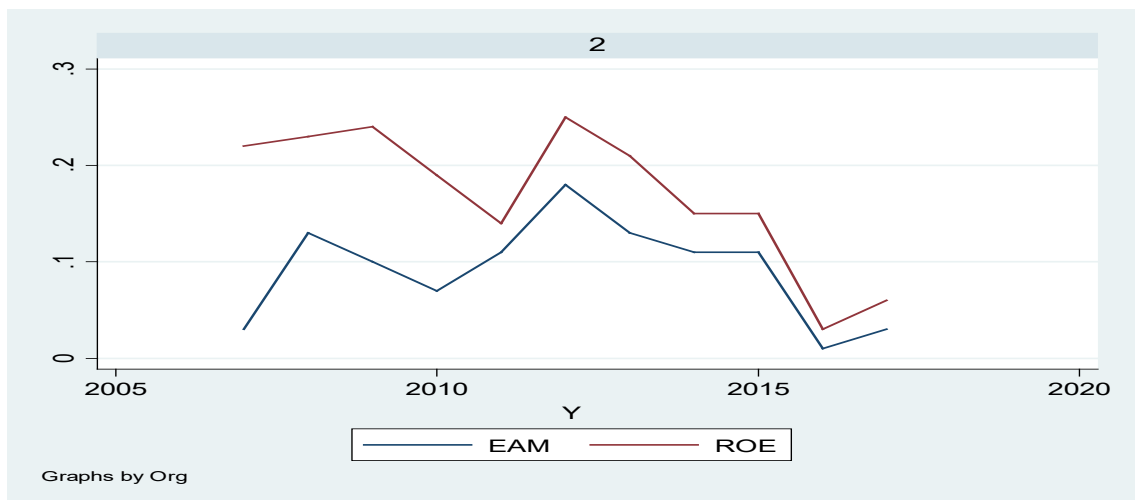


Figure 4.2 CIC Group Comparative Line Graphs for Member Reward and Financial Performance

Pre-demutualization there was a huge gap between member reward and financial performance however, in 2012 demutualization happened resulting in an improvement in member reward relative to financial performance as shown in the reduced gap between the line graphs.

To confirm that whether demutualization had an effect on the relationship between member reward and financial performance, a structural break test was conducted around the period of demutualization. It had a null hypothesis that there was no structural break. Study findings of the chow test indicated an F statistic of 8.51 which had p value of 0.0021 which was less than 5 percent significance level. Thus, the study rejected the null hypothesis concluding that a structural break existed in the respective periods when demutualization happened for both holding co-operatives.

4.2.3 Graphic representation of the influence of Demutualization on the relationship between Member Transactions and Financial Performance

Figure 4.3 and 4.4 show the diagrammatic effect of demutualization on this relationship through line graphs

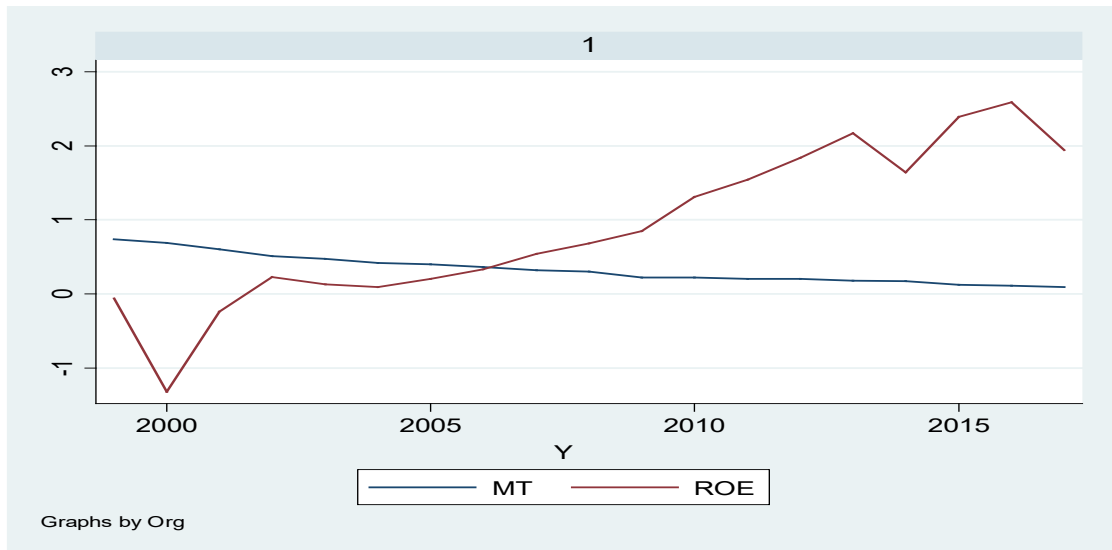


Figure 4.3 Co-operative Bank of Kenya Comparative Line Graphs for Member Transactions and Financial Performance

Pre-demutualization member transactions were declining at a moderate rate as financial performance improved. Demutualization occurred in 2008, where post demutualization

financial performance is seems to be improving aggressively as member transactions are declining at a faster rate.

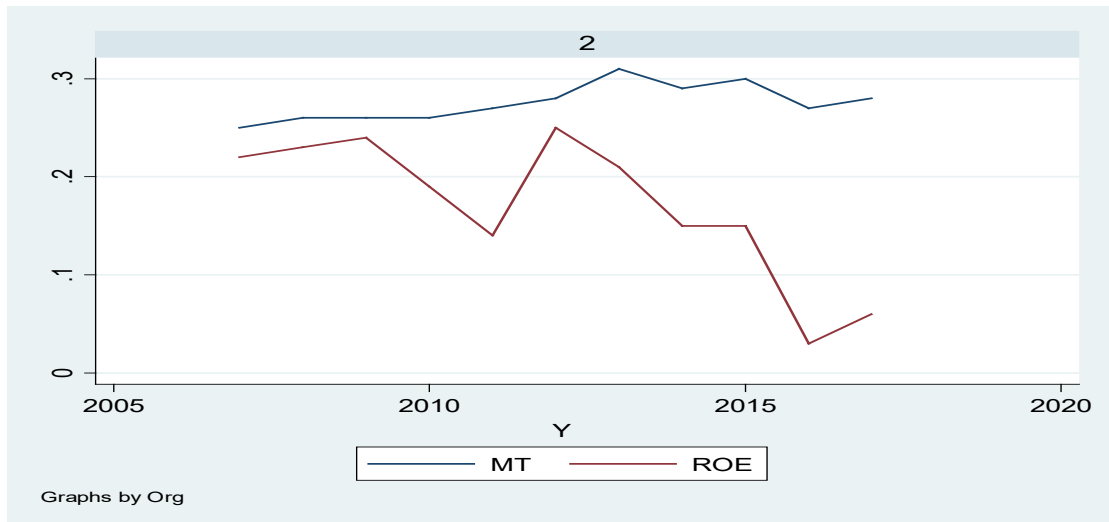


Figure 4.4 CIC Group Comparative Line Graphs for Member Transactions and Financial Performance

Pre-demutualization member transactions improved moderately as financial performance varied. In 2012, demutualization occurred resulting in financial performance declining aggressively while member transactions seem to vary at an almost constant rate.

On further investigation of the influence of demutualization on the relationship between member transactions and financial performance a structural break test was conducted around the period of demutualization. It had a null hypothesis that there was no structural break. Study findings of the chow test indicated an F statistic of 3.31 which had p value of 0.0572 which was greater than 5 percent significance level. Thus, the null hypothesis was not rejected by the study at 5 per cent level of significance however at 10 per cent level of significance the null would have been rejected. Therefore, the study concluded there was inadequate evidence to support the argument that a structural break existed in the respective periods when demutualization happened for both holding co-operatives.

4.2.4 Graphic representation of the influence of Demutualization on the relationship between Member Control and Financial Performance

Figure 4.5 and 4.6 show the diagrammatic effect of demutualization on this relationship through line graphs.

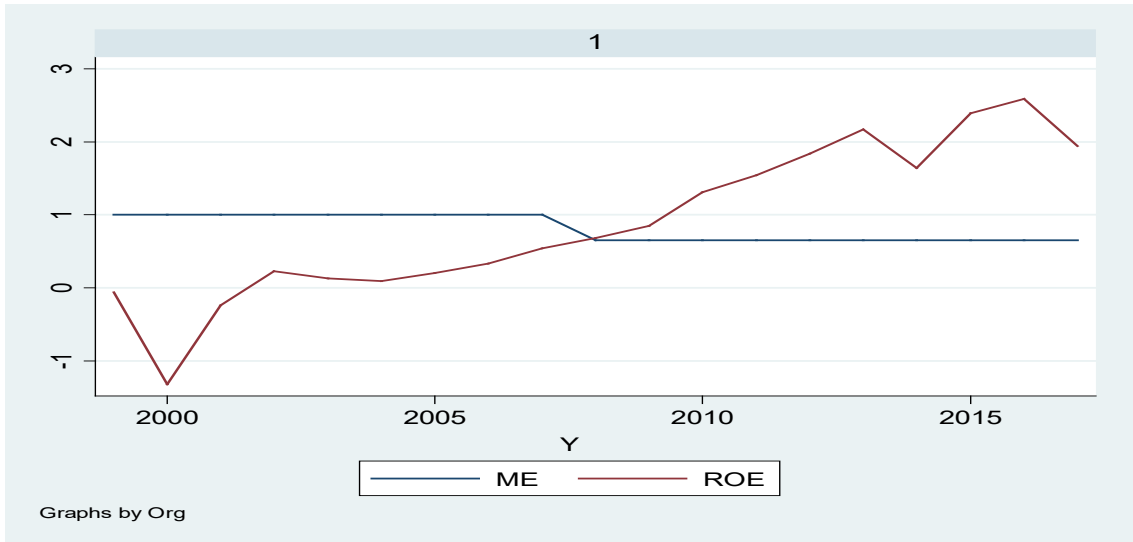


Figure 4.5 Co-operative Bank of Kenya Comparative Line Graphs for Member Control and Financial Performance

In 2008, demutualization occurred causing the member control to drop from 100% shareholding to 64.56%, however financial performance improved.

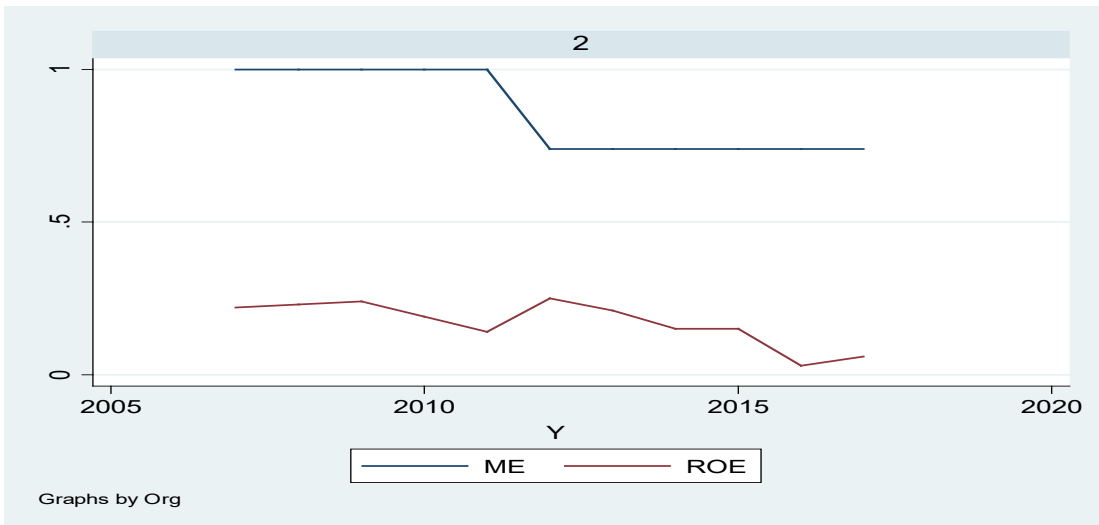


Figure 4.6 CIC Group Comparative Line Graphs for Member Control and Financial Performance.

In 2012, as a result of demutualization, member control to drop from 100% shareholding to 74.10%, additionally financial performance declined post demutualization.

To confirm influence of demutualization on the relationship between member control and financial performance a structural break test was conducted around the period of demutualization. It had a null hypothesis that there was no structural break. Study findings of the chow test indicated an F statistic of 6.47 which had p value of 0.0194 which was less than 5 percent significance level. Thus, the study rejected the null hypothesis concluding that a structural break existed in the respective periods when demutualization happened for both holding co-operatives.

4.2.4 Graphic representation of the influence of Demutualization on the relationship between Member Control and Financial Performance

Figure 4.7 and 4.8 show the diagrammatic effect of demutualization on this relationship through line graphs

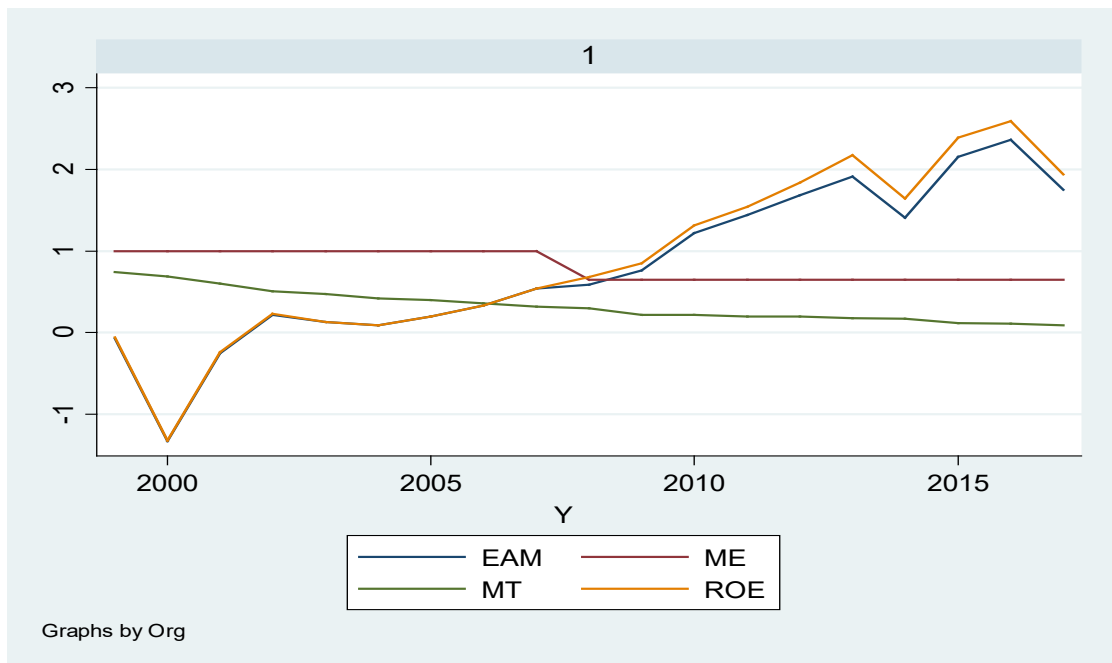


Figure 4.7: Co-operative Bank of Kenya Comparative Line Graphs for Member Economic Participation and Financial Performance

Overall there is a convergence around 2008 when demutualization happened and as a result member reward, member transactions and member control dropped which are all

components of member economic participation. However financial performance seems to have improved significantly post demutualization.

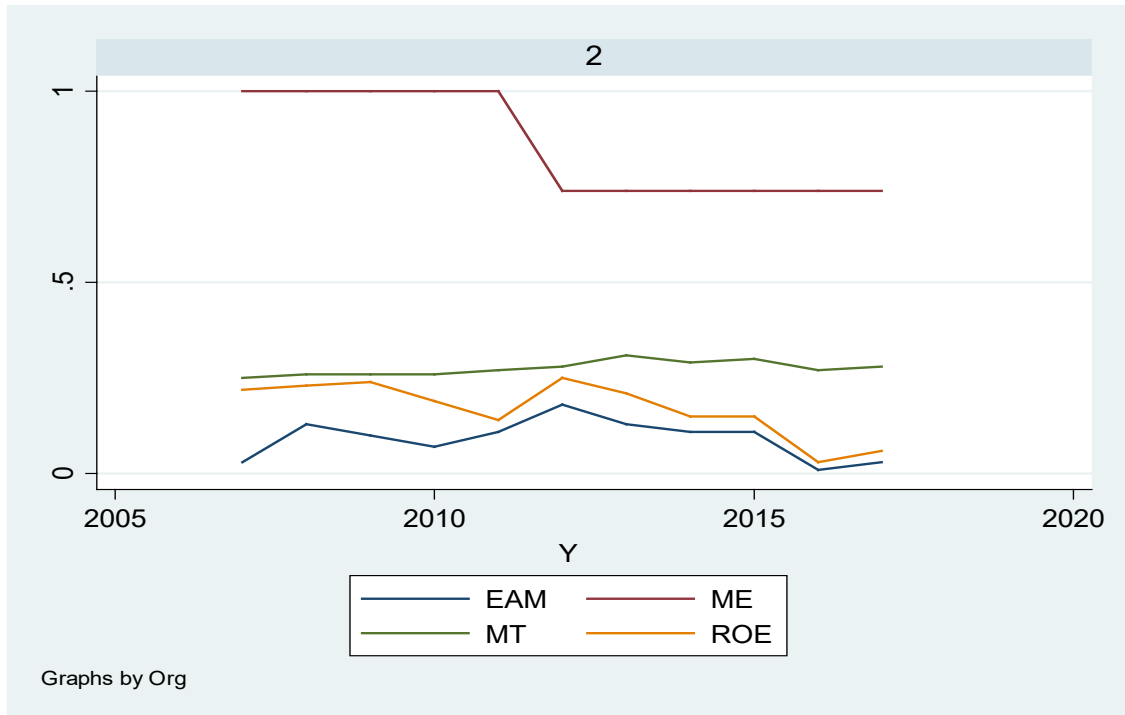


Figure 4.8: CIC Group Comparative Line Graphs for Member Economic Participation and Financial Performance

In 2012 as a result of demutualization, member control and financial performance declined while member reward and member transactions improved.

To find out the influence of demutualization on the relationship between member economic participation and financial performance a structural break test was conducted around the period of demutualization. It had a null hypothesis that there was no structural break. Study findings of the chow test indicated an F statistic of 6.41 which had p value of 0.0032 which was less than 5 percent significance level. Thus, the study rejected the null hypothesis concluding that a structural break existed in the respective periods when demutualization happened for both holding co-operatives.

4.3 Diagnostic Tests Results

4.3.1 Test for Normality

Bara-Jarque test was used to determine if the variables were normally distributed having a null hypothesis of normal distribution of data variables. Indicated below are the results:

Table 4.2 Test for normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	chi2(2)	Prob>chi2
ROE	28	0.0199	0.8640	5.28	0.0715
EAM	28	0.0229	0.7897	5.13	0.0770
MT	28	0.0673	0.2229	4.82	0.0899
ME	28	0.6968	0.0000	37.93	0.0000

The overall normality test of each data sets for ROE, EAM and MT had chi2 statistics which had p values that were greater than 5% significance level. The study failed to reject the null hypothesis concluding that the variables were normally distributed. The study noted that the chi statistics for ME was less than the critical values, this was because of the nature of member shareholding which was constant at 100% before demutualization and dropped to constant proportions after demutualization. Therefore the dataset was normally distributed for each model and was utilized further in linear modeling.

4.3.2 Test for Heteroscedasticity

The Breusch-Pagan test was applied in testing for heteroscedasticity having a null stating that the data was Homoscedasticity. The results had a chi2 statistic of 0.03 with a p value of 0.8670 which was greater than 5 per cent level of significance, therefore the study did not reject the null at 95% significance level and concluded that the residuals were homogeneous. The white test gave similar results where chi2 was 7.73 with a corresponding p value of 0.5615 which was also greater than 5 per cent level of significance.

4.3.4 Cameron & Trivedi's decomposition of IM-test for Normality and Heteroscedasticity

The Cameron & Trivedi's decomposition of IM- test was done to confirm that indeed the data had a normal distribution and there were no problems of heteroscedasticity. The results are indicated below:

Table 4.3: Combined Normality and Heteroscedasticity test

Source	chi2	df	p
Heteroscedasticity	7.73	9	0.5615
Skewness	2.50	3	0.4746
Kurtosis	0.48	1	0.4866
Total	10.72	13	0.6343

The test gave a further confirmation that the data was homoscedastic and normal as all the p values were greater than 0.05 thus not reject the null hypothesis of normality and homoscedasticity. Therefore the dataset was utilized further in statistical modeling as it was.

4.3.4 Test for multicollinearity

The Variance Inflation Factor (VIF) was applied in multicollinearity testing. The results are as indicated below:

Table 4.4: Test for Multicollinearity

Variable	VIF	1/VIF
EAM	2.52	0.397222
MT	2.42	0.413115
ME	2.22	0.451028
Mean VIF	2.39	

The findings showed that all the variables had a Variance Inflation Factor that was less than 5 ($vif < 5$) with Tolerance Statistics greater than 0.20 ($1/vif > 0.20$). The study therefore concluded that there was no problem of multicollinearity.

4.3.5 Test for autocorrelation

Wooldridge's test was used for autocorrelation testing having a null hypothesis that there was no autocorrelation of data. The results indicated an F statistic of 8.595 with 0.2093 as the p value which was greater than 0.05, therefore the study did not reject the null hypothesis at five per cent significance level and concluded that first-order autocorrelation was not present in the data.

4.3.6 Test of Cross-Section Dependence

The study employed Pesaran's test for cross-sectional dependence (CD) problem. Cross-sectional independence of data was the null hypothesis. The results of the pesaran's test

of cross sectional independence had a statistic of -0.664 with 1.4932 as p value and an mean consummate value of the off-diagonal elements of 0.200. The p value was more than 0.05 and as such the null hypothesis was not rejected by the study concluding that there was cross-sectional independence of data.

4.3.8 Fixed and Random Effect Testing

To establish the appropriate model for interpretation both the random and fixed effects models were run and the hausman test was applied in selecting the most suitable. The first model that was run was the fixed effects model whose findings are shown in table 4.5

Table 4.5 Fixed Effects Results

Dependent variable		ROE
Explanatory Variable		Coefficient
EAM		1.115***
MT		-0.08607
ME		0.08299
Constant		-.02358
Post Estimation Diagnostics		
R square	Within	0.9962
	Between	1.0000
	Overall	0.9961
	Rho	0.5325
F test (3, 23)		2008.42***
chow test	F(1,23)	3.32*
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The results of the model run show an F statistic of 2008.42 which was more than the significance level of 0.05. Therefore, member economic participation component variables were jointly significant in explaining the disparities in the dependent variable which was Financial Performance (ROE). Rho which was the interclass correlation was 53.25% suggesting that 53.25% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.62 % respectively. Therefore, 99.62 % of the return on equity variations arose from

dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R^2 was 99.61 percent, indicating that the model variables account for around 99.61% change in ROE which was the dependent variable, while around 0.39 percent change may be an outcome variables not considered by this model.

The chow test statistic was 3.32 which was more than the significance level of 5 % and as such that the fixed effects were same as zero was rejected. Therefore, the option of specifying the model as pooled OLS instead of fixed effects was rejected.

The random effects specification was the second optional model. The results are as indicated in table 4.8

Table 4.6 Random Effects Estimates

Dependent variable		ROE
Explanatory Variable		Coefficient
EAM		1.055***
MT		-0.3784***
ME		0.07393
Constant		0.1039
Post Estimation Diagnostics		
R square	Within	0.9958
	Between	1.0000
	Overall	0.9969
	Rho	0
Wald chi2 (3)		7742.29***
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The model was significant with a Wald test result of 7742.29 which was more than the significance level of 0.05. Therefore, member economic participation component variables were jointly significant in explaining the disparities in the dependent variable which was Financial Performance (ROE).

Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.58 %respectively. Therefore, 99.58% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of

the ROE variations arose from dissimilarity between the holding co-operatives. Overall R^2 was 99.69%, indicating that the model variables account for around 99.61% change in ROE which was the dependent variable, while around 0.31 percent change may be an outcome variables not considered by this model.

The p value for Chi2 was less than five percent therefore the null that pooled OLS was better was also rejected meaning that the random effects was more suitable model with the panel data.

Post estimation diagnostics comparison between the random and fixed effects showed that the study conclusions could be compared. When pooled OLS specification was compared the two models above it was rejected in both circumstances. Too add onto that the overall explanatory powers of the models do not differ significantly; the random effects model had an overall R^2 of 99.69% while the fixed effect specification an overall R^2 of 99.61%. However, this does not do away with the need to distinguish between the two models through the hausman test. The results are shown in table 4.7:

Table 4.7 Hausman Test

Test statistic Chi2(3)	P-value
3.41	0.3322

This test was applied so as to aid the study in selection of the appropriate model to interpret. The null hypothesis was that random effects was the preferred model. The findings indicated a chi2 statistic of 3.41 with 0.3322 as the p value which was more than 5% significance level, thus the study did not reject the null hypothesis concluding that the random effects model was more appropriate compared to the fixed effects model. Therefore, the results of the random effects model were interpreted.

4.4 Analytical Model Results

The research hypotheses were established through models. Model 1 to 3 provided results for the three specific objectives while model four showed findings for the general objective of the study.

4.4.1 Model 1: Influence of Demutualization on the relationship between Member Reward and Financial Performance

The first objective was to find out the influence of demutualization on the relationship between member reward and financial performance. This was done in two stages. The study first determined whether a relationship between member reward and financial performance existed. The results are shown in table 4.8:

Table 4.8 Relationship between Member Reward and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
EAM		1.085***
Constant		0.03820***
Post Estimation Diagnostics		
R square	Within	0.9960
	Between	1.0000
	Overall	0.9958
	Rho	0
Wald	chi2	6091.88***
Sigma_e		0.04614
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model for this relationship was:

$$ROE_{it} = 0.03820 + 1.085EAM + 0.04614$$

Table 4.8 showed that member reward (EAM) had a coefficient of 1.085 with 0.000 as p value with financial performance (ROE) indicating that member reward had a positive and significant relationship with financial performance. The constant (cons) was 0.03820 and was also significant showing that financial performance had been independently improving over the years. Wald statistic of 6091.88 is greater than the critical value at five per cent level of significance. Therefore, the member reward was significant in explaining the disparities in the dependent variable which was Financial Performance (ROE).

Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.60 %respectively. Therefore, 99.60% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 99.58%, indicating that the model variables account for around 99.58% change in ROE which was the dependent variable, while around 0.42 percent change may be an outcome variables not considered by this model. This high overall R² due to the measurement of financial performance and member reward in the model where member reward is net profit after tax less indivisible reserves divided by member shareholding while financial performance is net profit after tax divided by total shareholding. Secondly, the study sought to determine the influence of demutualization on this relationship. The results are shown in table 4.9

Table 4.9 Influence of Demutualization on the relationship between Member Reward and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
EAM		1.084***
FirmDummy		0.004415
Constant		0.03669**
Post Estimation Diagnostics		
R square	Within	0.9959
	Between	1.0000
	Overall	0.9958
	Rho	0
Wald chi2		33.44***
Sigma_e		0.4539
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model 1 for this findings was:

$$ROE_{it} = 0.03669 + 1.084EAM + 0.004415D + 0.04539$$

Demutualization (FirmDummy) had a positive co-efficient of 0.004415 with a probability

value of 0.865 which was more than the 0.05 significance level thus the study did not reject the null hypothesis that demutualization had no significant effect on member reward and financial performance of co-operatives in Kenya. The study concluded that demutualization had a positive but not significant effect on the relationship between Member Reward and Financial Performance. Wald statistic of 33.44 is more than the five per cent critical value. Therefore, the member reward and demutualization were significant in explaining the disparities in return on equity.

Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.59 %respectively. Therefore, 99.59% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R^2 was 99.58%, indicating that the model variables account for around 99.58% change in ROE which was the dependent variable, while around 0.42 percent change may be an outcome variables not considered by this model.

4.4.2 Model 2: Influence of Demutualization on the relationship between Member Transactions and Financial Performance

The first objective was to determine the influence of demutualization on the relationship between member transactions and financial performance. The study first determined whether a relationship between member transactions and financial performance existed. The results are displayed in table 4.10.

Table 4.10 Relationship between Member Transactions and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
MT		-5.349***
Constant		2.230***
Post Estimation Diagnostics		
R square	Within	0.8452
	Between	1.0000
	Overall	0.5580
	Rho	0
Wald chi2 (3)		32.82***
sigma_e		0.2877
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model for these findings was:

$$ROE_{it} = 2.230 - 5.349MT + 0.2877$$

The random effects model run of the relationship between member transactions (MT) and financial performance (ROE) shows a negative significant relationship of -5.349 with 0.000 p value. This indicates a very strong inverse relationship exists between the two variables. The autonomous financial performance was 2.230 with a p value of 0.000 therefore financial performance independent of the factors in question was positive and significant. Wald statistic of 32.82 was more than the critical value significance level of five percent. Therefore, the member transactions were significant in explaining the disparities in return on equity. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 84.52 %respectively. Therefore, 84.52% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 55.80%, indicating that the model variables account for around 55.80% change in ROE which was the dependent variable, while around 44.20 percent change may be an outcome variables not considered by this model.

Secondly, the study sought to determine the influence of demutualization on this relationship. The results are shown in table 4.11

Table 4.11 Influence of Demutualization on the Relationship between Member Transactions and Financial Performance

Dependent variable	ROE
Explanatory Variable	Coefficient
MT	-4.673***
FirmDummy	0.2519
Constant	1.895***

Post Estimation Diagnostics		
R square	Within	0.8467
	Between	1.0000
	Overall	0.5722
	Rho	0
Wald chi2 (3)		33.44***
sigma_e		0.2878

KEY	
p-value <0.01	***
P-value <0.05	**
P-value <0.1	*

The functional model 2 for this findings was:

$$ROE_{it} = 1.895 - 4.673MT + 0.2519D + 0.287$$

Table 4.11 shows that demutualization had co-efficient of 0.2519 with 0.362 as the p value. Therefore, the study failed to reject the null hypothesis that demutualization had no significant effect on member transactions and financial performance and concluded that demutualization had a positive but not significant effect on this relationship. This results were counter intuitive because earlier the study findings showed that there is a negative significant relationship between member transactions and financial performance. On further analysis through non parametric tests the study found out that for Co-operative Bank of Kenya, member transactions declined significantly post demutualization while for CIC group they improved moderately post demutualization. Wald statistic of 33.44 is more than the significance level of five percent. Therefore, the member transactions and demutualization were significant in explaining the in return on equity in the random effects specification. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The

between and within R-square were 100% and 84.67 %respectively. Therefore, 84.67% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 57.22%, indicating that the model variables account for around 57.22% change in ROE which was the dependent variable, while around 42.78 percent change may be an outcome variables not considered by this model. It is worth noting inclusion of demutualization in the model rises slightly by 1.48% the percentage by which the member transactions account for change in financial performance however we cannot peg the improved member transactions to demutualization.

4.4.3 Model 3: Influence of Demutualization on the relationship between Member Control and Financial Performance

The first objective was to establish the influence of demutualization on the relationship between member control and financial performance. This was done in two stages. The study first determined whether a relationship between member control and financial performance existed. The results are displayed in table 4.12.

Table 4.12 Relationship between Member Control and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
ME		-3.535***
Constant		3.610***
Post Estimation Diagnostics		
R square	Within	0.5035
	Between	1.0000
	Overall	0.4842
	Rho	0
Wald chi2 (3)		24.41***
sigma_e		0.5152
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model for this relationship was:

$$ROE_{it} = 3.610 - 3.535ME + 0.5152$$

Table 4.12 showed that Member Control (ME) coefficient was -3.535 with 0.000 as p value thus significant. This meant that there was a negative and significant relationship between member control and financial performance. The autonomous financial performance was 3.610 with 0.000 as the p value. This meant as financial performance continued to improve autonomously members would continue to lose more control over their co-operative. Wald statistic of 24.41 more than the significance level of five percent. Therefore, the member control was significant in explaining the variations in return on equity in the random effects specification. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 50.35 % respectively. Therefore, 50.35% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 48.42%, indicating that the model variables account for around 48.42% change in ROE which was the dependent variable, while around 51.58 percent change may be an outcome variables not considered by this model.

Secondly, the study sought to determine the influence of demutualization on this relationship. The results are shown in table 4.13

Table 4.13 Influence of Demutualization on the Relationship between Member Control and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
ME		-16.08***
FirmDummy		-4.193***
Constant		16.27***
Post Estimation Diagnostics		
R square	Within	0.7080
	Between	1.0000
	Overall	0.7926
	Rho	0
Wald chi2 (3)		95.55***
sigma e		0.4032
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model 3 for this findings was:

$$\mathbf{ROE}_{it} = \mathbf{16.27} - \mathbf{16.08ME} - \mathbf{4.193D} + \mathbf{0.4032}$$

Table 4.13 shows that the demutualization coefficient was -4.193 with 0.000 as the p value which was less than 0.05. Therefore, the study rejected the null hypothesis that demutualization had no significant effect on the relationship between member control and financial performance and concluded that demutualization had a negative and significant effect on this relationship. Wald statistic of 95.55 was more than the significance level of five per cent. Therefore, the member control and demutualization were significant in explaining the disparities in return on equity in the random effects specification. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 70.80 % respectively. Therefore, 70.80% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 79.26%, indicating that the model variables account for around 79.26% change in ROE which was the dependent variable, while around 20.74 percent change may be an outcome variables not considered by this model. It is worth noting inclusion of demutualization in the model raises significantly (by 30.84%) the percentage by which the member control accounts for change in financial performance and we can conclude the reduction in member control was due to demutualization.

4.4.4 Model 4: Influence of Demutualization on the relationship between Member Economic Participation and Financial Performance.

The general objective of the study was to establish the influence of demutualization on the relationship between member economic participation and financial performance. This was done in two stages. The study first determined whether a relationship between member economic participation and financial performance existed. The results are displayed in table 4.15.

Table 4.15 Relationship between Member Economic Participation and Financial Performance

Dependent variable	ROE	
Explanatory Variable	Coefficient	
EAM	1.055***	
MT	-0.3784***	
ME	0.07393	
Constant	0.1039	
Post Estimation Diagnostics		
R square	Within	0.9958
	Between	1.0000
	Overall	0.9969
	Rho	0
Wald chi2 (3)	7742.29***	
sigma_e	0.04700	
KEY		
p-value <0.01	***	
P-value <0.05	**	
P-value <0.1	*	

The functional model for this relationship was:

$$ROE = 0.1039 + 1.055EAM - 0.3784MT + 0.07393ME + 0.04700$$

Table 4.15 shows that financial performance had a positive (1.055) significant relationship with member reward (EAM), negative (-0.3784) significant relationship with member transactions (MT) and positive (0.07393) but not significant relationship with member control (ME); all of which are aspects of member economic participation principle. The results on positive but not significant relationship between member control and financial performance were counter intuitive. On running bivariate tests which first of all included the relationship between financial performance, member control and member reward and secondly financial performance, member control and member transactions; the results became intuitive where the relationship between member control and financial performance was negative in both circumstances. Thus the study concluded the counter intuitive results were because of the multivariate model where all the three independent variables were analyzed concurrently. The autonomous financial performance was positive 0.1039 but not significant. Wald statistic of 7742.29 which was

more than the significance level of five per cent. Therefore, the components of member economic participation were significant in explaining the disparities in return on equity. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.58 % respectively. Therefore, 99.58 % of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R² was 99.69%, indicating that the model variables account for around 99.69% change in ROE which was the dependent variable, while around 0.31 percent change may be an outcome variables not considered by this model.

Secondly, the study sought to determine the influence of demutualization on this relationship. The results are displayed in table 4.16

Table 4.16 Influence of Demutualization on the Relationship between Member Economic Participation and Financial Performance

Dependent variable		ROE
Explanatory Variable		Coefficient
EAM		1.039***
MT		-0.3943***
ME		-0.2467
FirmDummy		-0.09277
Constant		0.4335
Post Estimation Diagnostics		
R square	Within	0.9960
	Between	1.0000
	Overall	0.9970
	Rho	0
Wald chi2 (3)		7562.44***
sigma e		0.04115
KEY		
p-value <0.01		***
P-value <0.05		**
P-value <0.1		*

The functional model 4 for this findings was:

$$ROE = 0.4335 + 1.039EAM - 0.3943M - 0.2467ME - 0.09277D + 0.04115$$

Table 4.16 shows financial performance had a positive (1.039) significant relationship

with member reward; negative (-0.3943) significant relationship with member transactions and negative (-0.2467) but not significant relationship with member control. Demutualization coefficient was -0.09277 with 0.507 as the p value which was more than 5% significance level. The study did not reject the null hypothesis that demutualization had no significant effect on the relationship between member economic participation and financial performance and concluded that demutualization had a negative but not significant effect on this relationship. Wald statistic of 7562.44 more than the significance level of five per cent. Therefore, the member economic participation and demutualization were significant in explaining the disparities in return on equity in the random effects specification. Rho which was the interclass correlation was 0% suggesting that 0% the variations in ROE were due to dissimilarity across holding co-operatives. The between and within R-square were 100% and 99.60 % respectively. Therefore, 99.60% of the return on equity variations arose from dissimilarity within individual holding co-operatives and 100 % of the ROE variations arose from dissimilarity between the holding co-operatives. Overall R^2 was 99.70 %, indicating that the model variables account for around 99.70% change in ROE which was the dependent variable, while around 0.30 percent change may be an outcome variables not considered by this model. Notably, 99.70 is the highest overall R^2 of all the analytical models considered in this study, therefore the study can conclude inclusion of demutualization in the overall model aided more in accounting for the variation in financial performance other than member economic participation components.

4.5 Robustness test

Analytical modeling is a parametric test and the study wanted to provide a robustness check. The most appropriate non parametric test was Mann Whitney U test which was carried out for all variable starting with The Co-operative Bank of Kenya and finalizing with CIC Group.

The Co-operative Bank of Kenya Results

The null hypothesis tested was that pre and post demutualization financial performance was equal. The z statistic was -3.416 with 0.0006 as p value which was less than 0.05 significance level. Therefore the study rejected the null hypothesis that pre and post

demutualization financial performance was equal. On testing the alternative hypothesis that pre-demutualization financial performance was better than post demutualization, 0.01% p value was less than the significance level of 95% significance level, therefore the study concluded that post demutualization financial performance was better than pre-demutualization.

For the first independent variable, the null hypothesis stated that pre and post demutualization member reward was equal. The z statistic was -3.416 with 0.0006 as the p value which was less than the significance level of 0.05. Therefore the study rejected the null hypothesis that pre and post demutualization member reward was equal. On testing the alternative hypothesis that pre-demutualization member reward was better than post demutualization, 0.01% p value which was less than the significance level of 95%, therefore the study concluded that post demutualization member reward was higher than pre-demutualization.

The null hypothesis for the second independent variable was that pre and post demutualization member transactions were equal. The z statistic was 3.416 with 0.0006 as p value which was less than 0.05 critical value therefore the study rejected the null hypothesis. The alternative hypothesis that pre-demutualization member transactions were higher than post demutualization was tested the p value was 100% which was greater than the significance level of 95% therefore the study concluded that pre-demutualization member transactions were higher than post demutualization.

The third and last independent variable had a null hypothesis stating that pre and post demutualization member control was equal. The z statistic was 4.000 with 0.0001 as p value which was is less than 0.05 significance level therefore the study rejected the null hypothesis. The alternative hypothesis that pre-demutualization member control was stronger than post demutualization was tested and found to be true as the p value was 100% which was greater than the significance level of 95%.

Co-operative Insurance Company Results

The null hypothesis tested was that pre and post demutualization financial performance was equal. The z statistic was 1.095 with 0.2733 as the p value which was is greater 0.05 significance level therefore the study did not reject the null hypothesis that pre and post demutualization financial performance was equal. On testing the alternative, the p value

of 70% was less than 95% therefore the study also rejected the alternative hypothesis that pre-demutualization financial performance was better than post demutualization. The study concluded that there was inadequate evidence to conclude that pre-demutualization financial performance was better than post demutualization.

The null that member reward was equal pre and post demutualization was tested. The z statistic was -0.365 with 0.7150 as the p value which was greater than 0.05 significance level. The study therefore did not reject the null hypothesis. The alternative hypothesis that pre-demutualization member reward was higher than post demutualization was tested, a p value of 43.3% was found, it was less than 95% thus the study rejected that alternative. The study concluded that there was inadequate evidence to conclude that pre-demutualization member reward was better than post demutualization.

The third variable tested was member transaction where the null hypothesis was that it was equal pre and post demutualization. The z statistic was -2.745 with 0.0061 as the p value which was less than 0.05 significance level thus the study rejected the null hypothesis. The alternative hypothesis that pre-demutualization member transactions were higher than post demutualization was tested. A p value of 0.01% was found which was less than 95% significance level, therefore the study rejected this alternative and concludes that post demutualization the member transactions were higher than pre-demutualization.

The last variable tested was member control where the null hypothesis was that it was equal pre and post demutualization. The z statistic was 2.955 with 0.0031 as the p value which less than 0.05 significance therefore the null hypothesis was rejected. The alternative hypothesis that pre-demutualization member control was stronger than post demutualization was tested and found to be true as it had a p value of 100% which was greater than 95% level of significance.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The overall objective of study was to establish the influence of demutualization on member economic participation and financial performance of co-operatives in Kenya. Secondary data was confined to a panel data analysis having 2 cross sections and 17 periods over 2001-2017 period. The study contributed to the existing literature by empirically evaluating the influence of demutualization on the relationship member transactions, member reward, member control and on financial performance of co-operatives in Kenya.

This chapter presents the relevant discussions, conclusions, major findings and recommendations. The discussions were done per objective and also based on the statistical analysis results.

5.2 Discussion of Results

5.2.1 Influence of demutualization on the relationship between Member Reward and Financial Performance

Demutualization (FirmDummy) had a positive co-efficient of 0.004415 with a probability value of 0.865 which is greater than our significance level of 0.05 thus the study failed to reject the null hypothesis that demutualization had no significant effect on member reward and financial performance of co-operatives in Kenya. The study concluded that demutualization had a positive but not significant effect on the relationship between Member Reward and Financial Performance. The chow test also confirmed that a structural break occurred in both organizations during the respective years demutualization took place. Further, Mann Whitney results indicated that for the case of Co-operative Bank post demutualization member reward was higher than pre-demutualization while for the case of CIC Group the alternative that pre-demutualization member reward was higher than post demutualization was rejected however there was not enough evidence to conclude otherwise. Earnings attributable to members (EAM) explains the reward members receive as a result of their transactions with their co-operative society. Co-operatives are not profit oriented organizations but rather service

oriented, and as such this is the main reason as to why member reward is limited by the third ICA principle of Member Economic Participation. The aim is to avoid situations where members join the co-operative society simply to invest and get interest in the form of dividends. In Kenya, a competitive advantage member financial institutions such as Savings and Credit Co-operative Societies (SACCOs) have over other financial institutions is their ability to pay comparatively good dividends on share capital and relatively high returns on member deposits (SASRA, 2017). Member reward is a factor of surplus after tax less indivisible reserves divided by member shareholding. Indivisible reserves concept is an expression of two ideas, the limited return on capital and unallocated co-operative capital. However, a major demerits is when reserves remain undistributed, they reduces the amount available for member reward thus reducing patronization (Fulton & Girard, 2015).

These findings are as expected because demutualization results in member's shares having financial value attached to them, not as in the case of the previous original mutual state where it was common member property lacking financial value. Valuation of a common unallocated capital that has been held intact for years will automatically be higher as this is the capital that is normally indivisible and an indefinite source of capital. Therefore demutualization will increase member reward. Bekkum and Bijman (2006) found that a number of cooperatives had introduced appreciable or internally tradable share mechanism to enable members enjoy rise in the value of the over time. Central Lechera Asturiana Co-operative a holding co-operative received a hostile bid of € 300m that resulted in unrest and member realization that the value of their investment was much more than what they would get upon retirement.

The third ICA principle limits members' returns and since members' shares lack financial value ultimately the internal capability of mobilizing additional capital is hindered. There is a general consensus that demutualization process "frees" the hidden value of shares of members (Cronan, 1994).

It is worth noting that the autonomous component was positive and significant. Therefore we cannot fully attribute the improvement in member reward to purely demutualization but also to the improvement in financial performance overtime. This is however also alarming in that there is also a positive significant relationship between member reward

and financial performance. In the ideal authentic co-operative situation this should not be the case as member reward should be improving in relation to member transactions and not financial performance. We can attribute this departure from the norm to demutualization and as such can expect continued improvement in member reward irrespective of member transactions but in relation to financial performance.

Woodford (2008) found that as a result of demutualization members subsequently received higher reward and they got to appreciate the rise in co-operative asset value and performance. This was a case where financial performance and asset value of the co-operative was improving however members were feeling short changed due to a decrease in the reward they received. Demutualization is proxied as an avenue to strike a win win kind of balance between member reward and financial performance. Through listing members get to enjoy the improved rewards but at what cost? Stanford and Hogeland (2004) in their study also found that members opted for demutualization so as to capture the residual value from the indivisible reserves as outside investors were willing to purchase the Calavo brand at a high price.

In Kenya demutualization seems to alleviate the harmful effects of the common pool. As a co-operative demutualizes so will the member reward increase in close relation with the financial performance evidenced by the positive and significant relationship between member reward and financial performance. The higher the value of co-operative assets, the more sensitive the members will be to demutualization. The property rights theory postulates that under the existing mutual arrangement, production possibilities and new market prices cannot be achieved necessitating the need for new property rights. Members seek this new ownership structures through demutualization which provides the higher yields and improves the financial performance of their co-operative (Demsetz, 1995). The findings of this study are consistent with the property rights theory where Davis and North (1971) state that the possibility of profits, leads to the formation of new institutional arrangements that cannot be captured within the existing arrangement structure.

Co-operative Bank of Kenya majority owners who are Co-op Holdings Co-operative Society recouped from dividends alone their entire capital. The sh.1 dividend payout in

the year 2019 only, matched the entire initial capital investment made by the co-operative movement and therefore they got back their entire initial investment in the bank from a single year dividend payout. The shareholders were not required to provide any additional capital as the bank had adequate retained earnings (Alushula, 2019).

The finding was that demutualization had a positive but not significant influence on the relationship between member reward and financial performance. The results concur with the findings of Fulton & Girard (2015), Woodford (2008) and Bekkum & Bijman (2006) who found that demutualization results in an improved relationship between member reward and financial performance.

5.2.2 Influence of demutualization on the relationship between Member Transactions and Financial Performance

Demutualization had co-efficient of 0.2519 with a p value of 0.362. Therefore, the study failed to reject the null hypothesis that demutualization had no significant effect on member transactions and financial performance and concluded that demutualization had a positive but not significant effect on this relationship. This meant that even though member transactions a negative significant relationship with financial performance demutualization caused the transactions to improve though not significantly. The results were counter intuitive thus robustness test were applied. The chow test confirmed that there was not enough evidence to conclude that a structural break occurred in both organizations during the respective years demutualization took place. Further, Mann Whitney results indicated that for the case of Co-operative Bank post demutualization member transactions were lower than pre-demutualization while for the case of CIC Group member transactions were higher post demutualization than pre-demutualization. Thus the study could not conclusively conclude that the source of the positive effect on the relationship between member transactions and financial performance was demutualization because the results were counter intuitive.

Hazen (2004) found that members who were recipients of high quality member transactions and who felt that their voice is heard in the influence of cooperative policy, were highly loyal to their cooperative. Member involvement in terms of transactions and other in the cooperative life aspects were much higher. Birchall (2002) also found that

when cooperative management encourage members to transact and actively participate in the cooperative activities this resulted in better financial performance than in demutualized organizational structures. Demutualization alters the common understanding between members and leadership of the co-operatives enterprise. Members are normally not fully involved in the co-operative affairs and demutualization is viewed as a departure from the common bond which will affect member loyalty and transactions in different ways depending on member perceptions.

The findings of this study were consistent with the findings of Liang, Huang, Lu & Wang (2015) and Pascucci, Gardebroek & Dries (2012) who found a positive influence of demutualization on member transactions and financial performance. Liang, Huang, Lu & Wang (2015) found that certain aspects of capital had a positive relationship with member participation and all the capital aspects have a positive influence on the co-operative's economic performance. Pascucci, Gardebroek & Dries (2012) observed that member dependence on the co-operative increases with increase in their total deposits. Additionally, members who invest more are were more devoted to transacting with the co-operative. This is similar to the case of Kenya where members are the highest shareholders in co-operatives and as such they are inclined to transact more with their societies.

Inconsistent with the findings of Pyykkonen (2012), Alho (2015) and Ciliberti, Frascarelli & Martino (2018) who found that demutualization had a negative effect on member transactions and financial performance. They explore demutualization from a transaction cost perspective. Pyykkonen (2012) found that members of the hybrid meat co-operative valued capital benefits and transaction price more highly when compared with dairy mutual co-operative members. This led to the hybrid meat co-operative members becoming more sensitive to the higher transaction cost and ultimately reducing their transactional patronage with their co-operatives. Alho (2015) observed that demutualization led to complex co-operative structures that were highly market oriented than member transaction oriented resulting in capital linked member benefits being more superior to the traditional transaction/patronage linked member benefits. This ultimately negatively affected member transactions. Ciliberti, Frascarelli and Martino (2018) found that transaction asset specificity was the main determinant of member participation and

specifically aspects relating to organization structure and specific characteristics of the product and such aspects negatively affected member participation. These discrepancies in findings: with Ciliberti, Frascarelli and Martino (2018) and Alho may be explained by different member transactional perceptions and economies of Italy and Finland respectively compared to Kenya and discrepancies with Pyykkonen (2012) may have been due to the difference in the co-operative sectors the two studies look at, which are the agricultural co-operative sector and Kenyan financial co-operative sector.

The findings are similar to the transaction cost theory that states that demutualization allows for superior price determination and lowers transactions costs involved in serving members thus increasing member transactions.

The findings of this study indicate that financial performance had positive significant relationship with member reward while it has a negative significant relationship with member transactions. Demutualization improved both the member reward and member transactions in relation to financial performance though not significantly. The third co-operative identity principle guides that members should receive limited reward and it should be in proportion to the members' transactions. As such the study may hypothesize that over the next few years members reward will continue increasing and member transactions will continue reducing relative to financial performance if an intervention strategy is not set in motion. Ultimately, the co-operatives may not really be true co-operatives if they do not adhere to the universal co-operative principles and values.

5.2.3 Influence of demutualization on the relationship between Member Control and Financial Performance

Demutualization had a coefficient of -4.193 with a p value of 0.000 which was less than 0.05. Therefore, the study rejected the null hypothesis that demutualization had no significant effect on the relationship between member control and financial performance and concluded that demutualization had a negative significant effect on this relationship. These results differ from the results of the two hypothesis where demutualization had a positive effect on the relationship between member reward and financial performance and also on member transactions financial performance but the effect was not significant. This is an indication that demutualization had more impact on member economic

participation aspect of member control than on member reward and member transactions. The autonomous financial performance was positive and significant, meaning financial performance kept improving independent of what happened to member control. The Chow test also confirmed that a structural break occurred in both organizations during the respective years demutualization took place. Further, Mann Whitney results indicated for both organizations member control was weaker post demutualization than pre-demutualization.

Demutualization alters the capital structure of the co-operatives where through listing; non-members can become partial or full owners of the co-operative organization. It is thus expected from the results that demutualization will have a negative significant effect on member control and financial performance. This is because member control is linked to share capital where each member has one vote regardless of the number of shares one has. Demutualization does away with this system and introduces a situation where capital may have undue influence over the decision making process through the introduction of non-member equity.

The findings of this study were similar to those of Novkovic and Miner (2013) who found that large co-operatives tend to go beyond the traditional member capitalization restrictions and they demutualize so as to gain access to capital markets leading to the danger of capital negatively affecting member decision making power. Woodford (2008) found that demutualization separated ownership and control rights of the co-operative while financial performance improved. However, as to whether a co-operative remained a true co-operative on the long-term was subject to debate. Boland and Cook (2013) observed post demutualization members voted to reduce their shares from 51% to 41% leaving them as minority shareholders and they further reduced the decision making vote from 75% to 66.66%. This resulted in an un-proportional balance between residual claimant rights and the de facto control. These studies show that demutualization led to situations where members got accustomed to letting go of the control of the co-operative especially where financial performance improved. The authenticity of the co-operative nature of such organizations as such was brought to question.

The alteration of capital structure that results from demutualization negatively affects member control and financial performance and as such should be avoided as much as

possible. Where it is not possible co-operative solutions that attempt to ensure member control is secured can be considered. Nadeau and Nilsestuen (2004) found that demutualization was witnessed most in the co-operative insurance sector which had declined from more than 50% in 1980's to 17% by 2004. Electricity and Communication Co-operatives were the most resistant to demutualization because their by-laws provided that delicate decisions such as demutualization could only be passed in high quorum general meetings. This shows how demutualization can be avoided which is through a high democratic life of a co-operative organization. Gijssels and Develtere (2008) found that the state, the civil society and the market were catalysts towards demutualization. They cite five big co-operatives organizations that did not demutualize nor depart from their co-operative values, principles and strategies while pressures for demutualization intensified. They secured shareholder ownership and control.

Notably, the problem arising from separation of ownership and control that results from demutualization, has been corroborated in agency theory by several scholars including Davis, Schoorman, and Donaldson (1997). The findings of this study agree with what the theory postulates that demutualization negatively affects the relationship between member control and financial performance. The findings of this study are consistent with Novkovic & Miner (2013) and Boland & Cook (2013) and Woodford (2008). This begs the question as to whether it is possible to find non conflicting answers to the contradictory demands of the state regulations, competitive market pressure and the civil society getting accustomed to the demutualization trend?

5.2.4 Influence of demutualization on the relationship between Member Economic Participation and Financial Performance

Demutualization had a coefficient of -0.09277 with a p value of 0.507. The p value was greater than 5 per cent level of significance therefore the study failed to reject the null hypothesis that demutualization had no significant effect on the relationship between member economic participation and financial performance and concluded that demutualization had a negative but not significant effect on this relationship. The chow test also confirmed that a structural break occurred in both organizations during the respective years demutualization took place. The independent financial performance was positive but also not significant. As long as financial performance is improving members

normally start paying less and less attention to how the co-operative is run. This can be explained by the nature of the industries in which the two co-operatives operate which are the insurance and banking sectors. By demutualizing and listing in the stock exchange the two organizations tapped into the un-exploited non-member customer base. This could mean that the longer the co-operative societies stayed in the hybrid demutualized state the less members would participate economically in their societies and financial performance will become more and more independent of the member transactions, reward and control. Effectively, in due time the effect of demutualization may be hypothesized to become more negative and more significant as members get accustomed to the demutualized status. This co-operative capitalistic formula of demutualization has led to member control reducing significantly as members lose more and more control with the subsequent introduction on non-member equity capital. Tremblay and Cote (2001) found that Kredit co-operative merge with CERA was not motivated by a financial need but rather by a strategic positioning need. CERA and Kredit merged into a new non-cooperative bank that controlling 10% of the insurance market and 25% of the Belgium banks. This Cooperative - Capitalistic formula is a call and simultaneously a challenge as it opens the door for a different perspective towards demutualization.

The Kenyan Co-operative hybrid organizations continue to focus on developing products that can tap into this non-member market and in totality increasing transaction cost. In the pursuit of profits the organizations continue to lose their co-operative nature of service orientation. If the organizations do not serve their members at lower competitive prices what will stop their members from opening bank accounts and taking insurance policies from other non-co-operative banks and insurance companies and a further decline in member transactions Vis a Vis financial performance? This begs the question as to whether these organizations are truly co-operatives or they are co-operative by name and ownership and not by how they are run. However, this does diminish the fact that the two holding co-operatives rank among the best performing companies in their respective industries.

The Association of European cooperatives and mutual insurers (ACME, 2001) found that insurance co-operatives that did not demutualize were consumer oriented and competitive in that they showed better financial performance compared with those that did. Welch

(2006) also noted that co-operatives that did not demutualize exhibited superior financial performance compared to those that demutualized. As such the study can conclude that demutualization is more a matter of ideology than based on proven facts as even though it alleviates financial constraints, every time an extra need for capital will arise the co-operative common pool becomes more and more diluted as members lose control.

Chaddad (2003) found that demutualization alleviates financial limitations and increases business efficiency. Increased business efficiency leading to improved financial performance post demutualization. The findings of this study are consistent with McNamara and Rhee (1992) who found that demutualization did not have a significant effect on financial performance. Kalogeras, Pennings, Kuikman and Doumpos (2011) also did not find enough evidence to support that demutualization had a positive effect on financial performance. Otaokpukpu, Ogbu and Okonkwo (2017) also found that member participation had a weak negative correlation with financial performance post organization structure change. This shows that the overall effect of demutualization was negative as it directly contradicts the co-operative principle of member economic participation and questions the relevance and practicability of the international co-operative principles.

5.3 Summary of findings

Evidence from previous studies on influence of demutualization on member economic participation and financial performance showed that there were mixed results based on the context and methodology.

5.3.1 Member reward and financial performance

The first objective of the study was to find out the influence of demutualization on the relationship between member reward and financial performance of co-operatives in Kenya. The findings revealed that demutualization had a positive but not significant effect on the relationship between member reward and financial performance. This implies that as a result of demutualization member reward improves in relation to financial performance. This may be because of listing in the stock exchange and as such the co-operative's shares are given a financial value. Co-operative capital must be and continue to be philosophical capital which is focused on returns based on cooperative

principles including limiting returns to members based on their transactions, not returns based primarily on maximizing the economic return to the owner of the capital or based on financial performance.

5.3.2 Member transactions and financial performance

The second objective of the study was to determine the influence of demutualization on the relationship between member transactions and financial performance of co-operatives in Kenya. The results showed that demutualization had a positive but not significant effect on the relationship between member transactions and financial performance of co-operatives in Kenya. The results were counter intuitive as member transactions had a negative significant relationship with financial performance. The findings showed that demutualization positively affects member transactions in relation to financial performance. Member Loans and Insurance premiums were the dimensions of member transactions with most impact on the member transactional relationship and as such were used in analytical testing

5.3.3 Member control and financial performance

The third objective of the study was to establish the influence of demutualization on the relationship between member control and financial performance of co-operatives in Kenya. The findings showed that demutualization had a negative significant effect on the relationship between member control and financial performance of co-operatives in Kenya. This is because upon demutualization, member share capital declined in both organizations to a constant rate with little or even no variation post demutualization. A significant threat to any co-operative, particularly as it grows in size, is if it has by its own choice embedded investor-owned capital into its structure or, due to circumstances beyond the control of the co-operative itself, investor-owned capital has become embedded in its structure.

5.3.4 Member economic participation and financial performance

The overall objective sought to find out the influence of demutualization on member economic participation and financial performance of co-operatives in Kenya. The findings of the study were that demutualization had a negative but not significant effect on member economic participation and financial performance. Aspects of member reward and transactions have been increasing post demutualization though not

significantly. However member control declined significantly post demutualization. Members have currently two-thirds or more decision making capacity in their organizations. If supplemental need of finance arises and members are unable to supply the much needed finance, they may end up losing control of their organizations and the effect of demutualization becoming more adverse. This calls for prudent financial management of the co-operatives if they are to remain co-operative enterprises.

5.4 Conclusions

5.4.1 Member Reward and financial performance

The study find out the influence of demutualization on member reward and financial performance of Kenyan co-operative organizations by checking on the earnings attributable to members. The co-efficients of demutualization and member reward in the regression model were positive and not significant and significant respectively. This indicates that member reward and financial performance are positively related and demutualization enhances this relationship. Thus, it is possible to conclude that demutualization will result in members receiving a higher reward in relation to the financial performance of the co-operatives.

5.4.2 Member transactions and financial performance

The study also determined the effect of demutualization on member transactions and financial performance of Kenyan co-operative enterprises by checking on the member loans and premiums. The analysis revealed that demutualization had a positive but not significant effect on this relationship. Member transactions had a negative significant relationship with financial performance. The results were counter intuitive and may be explained by the fact that through hybrid demutualization, the organizations pursue a double bottom line in giving quality services to their members. This ultimately raises the transaction cost borne by members as the organizations attempt to balance a for-service and a for-profit business model.

5.4.3 Member control and financial performance

The study also established the impact of demutualization on member control and financial performance of co-operatives by checking on the member shareholding and voting rights. Demutualization had a negative significant effect on member control and financial performance. The conclusion of the study is that, member's ownership is one of

the major indicators of the co-operative identity. If pressure is applied and members lose this control the organization may cease to be co-operatives in terms of operations. Adequate and available capital can aid in avoiding this.

5.4.4 Member economic participation and financial performance

The study found that in totality demutualization had a negative but not significant effect on member economic participation and financial performance. The study indicated that demutualization led to uncertainty of the co-operative nature of the organizations. An increase in member reward, a decline in member transactions and decline in member control is contradictory to what the third ICA principle states. That principle of member economic participation calls for members to be the sole contributors and democratic controllers of a co-operatives capital. Further stating that members should receive a limited reward if any in proportions to their transactions. A decline in member transactions Vis a Vis a rise in member reward is serious deviation from the principle and moreover the introduction of non- member capital into the common pool. This is a result of a non-comprehensive Kenyan co-operative act that has also not been harmonized with the banking, insurance among other acts. Bringing a great concern to the co-operative movement, government and the holding co-operatives themselves. Given the pivotal role the co-operative movement plays in the nation's economy, it is therefore critical to embark on strategic solutions other than demutualization which tends to compromise the spirit and intent of co-operation.

5.5. Policy Recommendations

Based on the objectives of the study, the following policy recommendations were reached. The policy recommendations are in line with the proposed draft national co-operative development policy on 'Promoting Co-operatives for Industrialization 2019' developed by the Ministry of Industry, Trade and Co-operatives as from 2017.

5.5.1 Member Reward

It is recommended that the Capital Markets Authority should allow co-operatives access to financial instruments on market terms and conditions, where the instruments are owned or controlled by the owners of philosophical capital. Proper legal and regulatory framework should be developed to permit for co-operative societies to raise capital using capital market instruments. Lastly, the establishment of a secondary market for co-

operative securities. To enable inter-co-operative share trade that adheres to the international co-operative principles. This is to ensure the co-operative spirit and principles are not lost in the process of listing.

5.5.2 Member Control

The study also recommends the creation credit schemes and revolving funds accessible to the co-operative sector so as to assist co-operatives that are experiencing financial difficulty and also those expanding into feasible projects. The study recommends to the extent possible, co-operatives should be accessing co-operative capital in the financial world capital in an organized and disciplined way. Member control is directly linked to a co-operatives capital. Having a constant source of co-operative capital can help in avoiding demutualization. Development of appropriate legal and regulatory framework to facilitate inter borrowing between and among cooperative enterprises is recommended. The study also recommends that specific regulations should be put that decisions that may alter the organization structure and co-operative nature of the co-operatives should be passed only in high quorum meetings.

5.5.3 Member Economic Participation

The issue of demutualization viewed from an accessibility to capital perspective, and particularly co-operative capital, can and should be addressed by legislative and structural change. The study recommends that dual registration of cooperatives as companies should be prohibited and the government should provide for the operations of holding cooperatives and registration of companies. This will help avoid the dual status that has results in conflicts especially in relation to governance of the enterprises. Harmonization of legal framework in all sphere co-operatives operate in will reduce the legislative pressure to demutualize. This recommendation should be supported and promoted by co-operatives and like-minded or like-structured organizations.

Changes to the International Co-operative Principles are recommended where the principle of “Co-operation among Co-operatives” should be made more comprehensive in relation to co-operative capital and capital controlled by co-operatives (collectively, “co-operative capital”). This in its entity will reduce the motivation to deviate from “member economic participation” principle that limits capital contribution to direct members solely while it will simultaneously conserve the co-operative identity.

5.6 Practice Recommendations

5.6.1 Member Reward

From findings, it is recommended that market based pricing system of capital invested by members should be introduced to facilitate transaction-linked member reward. This will safeguard the primary entrepreneurial focus of members and investments. This is especially because ‘the investment, control and transaction’ relationships between members and their co-operatives are key attributes of the co-operative and they continue to be intertwined. Market based pricing will reduce the incentive to demutualize where literature has shown that the co-operative common pool which has been held for generations has a multiplier effect on reward upon valuation and financial pricing.

5.6.2 Member Transactions

The study also recommends the introduction of member delivery rights that can be adjusted based on the capital to transaction ratio depending on member investment and patronization. This will help limit the reward members receive and enhance member transaction with the co-operative. It is also recommended that the transaction cost of member co-operatives should be significantly lower than for non-members and other customers. This will create an incentive for members to invest and transact with the co-operative bank and co-operative insurance company. Further, other than tailor making products for the members, the co-operatives companies should devise more products that will be attractive the individual members of the holding co-operatives and device ways in which these products can be delivered. For instance creation of instant digital loans that can be given by the co-operative bank of Kenya using the security of an individual members’ shares and deposits in their primary society.

5.6.3 Member Control

The members should have been adequately provided with documentation showing the probable outcomes of the proposed changes at least 3 months before such a meeting is called. The study also recommends the apex body for co-operatives in Kenya, the Co-operative Alliance of Kenya, should be strengthened through specific mandatory regulatory financial contributions from the co-operative movement. This will help the organization improve its coordination and most importantly the co-operative image of a business model that is viable on the long term. A good co-operative image can preempt

member notions that the co-operative business model is lacking or unsustainable.

5.6.4 Member Economic Participation

The study recommends that the government and specific co-operative organizations should benchmark with The Co-operative Group based in the United Kingdom, Rabbobank of Netherlands, Le Credit Cooperatif of France, Group ARCO and Cera of Belgium. These organizations underwent major transformation in relation to their financial-economic markets but they did not demutualize nor depart from their co-operative nature rather they developed innovative mechanisms to secure shareholder ownership and control.

5.7 Contribution to Knowledge

This study identified a novel research problem that has not been explored before from a Kenyan context. Further, most of the studies done around the world focus on the influence of demutualization on the specific variables which focus either on member reward or on member transactions or on member control, countable looks at the three variables at the same time as discussed in the current study which has also included the financial performance aspect.

The study confirms what the property rights theory, transaction cost theory and agency theory state in relation to demutualization and the study variables. The study contradicts the resource based view since the change in the capital resource has not produced an improved financial performance meaning there is need to really consider whether demutualization is a matter of ideology or based on proven facts for the Kenyan situation.

The policy recommendations are in line with the proposed national co-operative development policy 2019. Giving the policy a research background and strengthening the proposed regulatory and legal changes advanced as they are now supported by actual research.

5.8 Suggestions for further research

This study established the influence of demutualization on member economic participation and financial performance of co-operatives. Another study could be done that includes the influence of demutualization on other cooperatives principles such as

‘voluntary and membership, democratic member control, autonomy and independence, education, training and information, co-operation among co-operatives and lastly on concern for community principle.’

This study relied on the secondary data for the period 1998 to 2017 and a further study is recommended to include primary data to act as a complement to the secondary. There is need to include the qualitative aspect to such a study. While this study provides insight on member economic participation and financial performance, implications of demutualization ongoing concern of the entities as true co-operatives warrants further research. There is need for a similar study to be conducted after 5 to 10 years to determine whether the co-operatives have maintained their hybrid status or they have demutualized further to become capitalistic investor owned firms.

The scope of this study could be widened to include a bigger population that is not only the two holding co-operatives but also other co-operative companies in Kenya. Further, the study is also recommended to be carried in other co-operative organizations such as in SACCOs which have demutualized and opened up their common bond normally witnessed in the SACCOs that have re-branded and changed their name to include their new open status.

REFERENCES

- Alho, E. (2015). Farmers' self-reported value of cooperative membership: evidence from heterogeneous business and organization structures. *Alho Agricultural and Food Economics*, 83 (5), 1273-1279.
- Alushula, P. (2019, May 23). Co-op Bank owners recoup capital from large dividends. *Business Daily Africa*. Retrieved from <https://www.businessdailyafrica.com/corporate/companies/Co-op-Bank-owners-recoup-capital-from-dividends/4003102-5128846-n331jtz/index.html>
- Arwa, M. M. (2010). Understanding the Relationship between the Demutualization Decision of Stock Exchanges and the Theory of the Firm: A Theoretical Research Note. *European Journal of Economics, Finance and Administrative Sciences*, 23 (2010), 1450-2275.
- Authority, S. S. R. (2017). The SACCO supervision annual report 2017. *Nairobi. SASRA*.
- Baltagi, B. H. (2013). *Econometric Analysis of Panel Data* (5th ed). Chichester, West Sussex: Wiley.
- Baltagi, B.H. & Chang, Y.J. (1994). Incomplete panels: A comparative study of alternative estimators for the unbalanced one-way error component regression model. *Journal of Econometrics*, 62 (2), 67–89.
- Barton, D.G. (1989). *What is a cooperative? In Cooperatives in agriculture*. New Jersey, USA: Prentice-Hall, Inc.
- Barzet, Y. (1989). *Economic analysis of property rights*. Great Britain: Cambridge.
- Battilani, P., & Schroter, H. (2012). Demutualization and Its Problems. *The Cooperative Business Movement, 1950 to the Present*. Bergen, Norway: Cambridge. University Press.
- Bekkum, O. F., & Bijman, J. (2006). Innovations in Cooperative Ownership: Converted and Hybrid Listed Cooperatives. *Management in Agri-Food Chains and Networks*. 7 (2006), 15-16.

- Bellamy, J. (2012). *Principles of Methodology: Research Design in Social Science*. USA: SAGE Publishers.
- Belsley, D. A., Kuh, E., & Welsch, R. E. (1980). Detecting and assessing collinearity. *Regression diagnostics: Identifying influential data and sources of collinearity*, 85-191.
- Berle, A. A., & Means, G. C. (1932). *The modern corporation and private property*. New Brunswick, NJ: Transaction.
- Beugelsdijk, S. & Schaik, V. (2005). Social capital and growth in European regions: an empirical test. *European Journal of Political Economy* 21 (2), 301-324.
- Bhattacharya, M., Paramati, S. R., Ozturk, I., & Bhattacharya, S. (2016). The effect of renewable energy consumption on economic growth: Evidence from top 38 countries. *Applied Energy*, 162, 733–741. <https://doi.org/10.1016/j.apenergy.2015.10.104>
- Bijman, J., Iliopoulos, C., Poppe, K., Gijselinckx, C., Hagedorn, K., Hanisch, M., Hendrikse, G., Kuhl, R., Ollila, P., Pyykkonen, P. & Sangen, G. (2012). *Support for farmers' cooperatives; Final report*. Netherlands: Wageningen UR.
- Birchall, J. & Ketilson, L.H. (2009). *Resilience of the Cooperative Business Model. Sustainable Enterprise Programme / Responses to the global economic crisis*. Geneva: International Labour Organization.
- Birchall, J. (1998). *The future of co-operative and mutual businesses*. Manchester: Manchester University Press.
- Birchall, J. (2002). Mutual, non-profit or public interest company? An evaluation of options for the ownership and control of water utilities. *Annals of Public and Cooperative Economics*, 73 (2), 181.
- Boland, M., & Cook, M. L. (2013, November). The Irish dairy industry and evolution of Glanbia. *In Proceedings of the International Conferences on Economics and Management of Networks (EMNet)*. Morocco: Agadir.

- Brookes, C. (2008). *Introductory econometrics for finance*. New York: Cambridge Press.
- Cameron, A. & Trivedi, P. (2009). *Micro-econometrics using Stata*. College Station, Tex: Stata Press
- Chaddad, F. R. & Cook, M. L. (2000). The Equilibrium Model: A Solution to Cooperative Organizational Flaws in the Australian Dairy Sector? *Organizational Innovation in Agribusiness: Case Study Series*. University of Missouri: Columbia, Missouri.
- Chaddad, F. R., & Cook M. L. (2004). *Understanding new co-operative models: An ownership-control rights typology*. *Review of Agricultural Economics* 26 (3), 348-360.
- Chaddad, F. R., & Cook, M. L. (2002). *Testing for the presence of financial constraints in U.S. agricultural co-operatives*. Department of Agricultural Economics, University of Missouri, Columbia.
- Chaddad, F.R. & Cook, M.L. (2007). *Vertical Markets and Cooperative Hierarchies: The Role of Cooperatives in the Agri-Food Industry*. *Conversions and Other Forms of Exit in U.S. Agricultural Cooperatives*, (4) 61-72. The Netherlands: Springer.
- Chaddad, F.R. & Iliopoulos, C. (2013). Control Rights, Governance, and the Costs of Ownership in Agricultural Co-operatives. *Agribusiness*, 29 (1), 3–22.
- Chechin, A., Bijman, J., Pascucci, S. & Omta, O. (2013). Decomposing the member relationship in agricultural cooperatives: Implications for commitment. *Agribusiness* 29(1): 39 - 61.
- Christensen, R. (2002). *Plane Answers to Complex Questions: The Theory of Linear Models*. New York: Springer.
- Chugh, L., & Meador, J. W. (2006). *Demutualization in the life insurance industry: A study of effectiveness*.

- Ciliberti, S., Frascarelli, A. & Martino, G. (2018, June). Coordination strategies in the Italian agro-food supply chain: cooperatives vs. Producer organizations? *Paper presented at the ICA Conference on Co-operatives in a Rapidly Changing world*, The Netherlands.
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of financial Economics*, 58 (1-2), 81-112.
- Clarke, T. (2004). *Theories of corporate governance: The philosophical foundations of corporate governance*. Manitoba: Routledge.
- Coase, R. H. 1937. The Nature of the Firm. *Economica, New Series*, 4 (16), 386-405.
- Coase, R. H. (1960). The problem of social cost. *Classic papers in natural resource economics*. Springer.
- Cohen, J., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.
- Cook, M. (1994). The role of management behavior in agricultural cooperatives. *Journal of Journal of Agricultural Cooperation*, 8 (1994), 1-17.
- Cook, M. L. (1995). The Future of U.S. Agricultural Co-operatives: A Neo-Institutional Approach. *American Journal of Agricultural Economics*, 77 (5), 1153-1159.
- Cronan, G. (1994). The Conversion Syndrome. Review of the Conversion of Australian Co-operatives into Investor Owned Firms. *A Review of the Conversion of Australian Co-operatives into Investor Owned Firms*, 1-24.
- Cummins, J. D. & Venard, M. (2007). *Handbooks of international insurance between global dynamics and local contingencies*. Springer.
- Daily, C. M., Dalton, D. R., & Canella, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of management Review*, 28 (3), 371–382.
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22, 20–47.

- Davis, L. E., & North, D.C. (1971). *Institutional change and American economic growth*. CUP Archive.
- Demsetz, H. (1995). *The Economics of the Business Firm: Seven Critical Commentaries*. Cambridge: Cambridge University Press
- Demsetz, H., (1988). *Ownership, Control, and the Firm*. Oxford: Basil Blackwell.
- Drukker, M. (2003). Testing for serial correlation in linear panel data models. *The Stata Journal*, 3(2), 168-177.
- Durbin, J. & Watson, G. (1971). *Testing for serial correlation in least squares regression*. *Biometrika*, 1 (58), 1 - 19.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic management journal*, 21(10-11), 1105-1121.
- Flowers, P (2009). *Research philosophies –Importance and relevance: Mscby research leading learning and change*. Cranfield School of Management, (1).
- Fulton, M. & Girard, J.P. (2015). *Demutualization of Co-operatives and Mutuals*. Canada: Ottawa.
- Fulton, M. (1990). Individual and collective interests in cooperatives. *In Cooperative organizations and Canadian society: Popular institutions and the dilemmas of change*. Toronto: University of Toronto Press.
- Fulton, M. (1995). American journal of Agricultural. *The future of cooperatives in Canada: A property rights approach*, 77 (5), 1144-1152.
- Galor, Z. (2001). The Member Owns His Cooperative: Two Israeli Case Studies. *Coop- Dialogue*, 10 (3),6-12.
- Galor, Z. (2008). Demutualization of cooperatives: reasons and perspectives. *Report American Worker Cooperative*, 66.
- Gay, L.R. (2009). *Educational Research Competencies for Analysis and Application*. Merrill Publishing Company.

- Gijselinckx, C., Develtere, P. & Raymaekers, P. (2007). *Renouveau Coopératif et Développement Durable*. Leuven: HIVA/Groupe ARCO.
- Gijselinckx, C., & Develtere, P. (2008). The Cooperative Trilemma: Co-operatives between Market, State and Civil Society. *SSRN Electronic Journal*. doi:10.2139/ssrn.1330375.
- Gijselinckx, C., & Develtere, P. (2008). The Cooperative Trilemma: Co-operatives between Market, State and Civil Society. *SSRN Electronic Journal*. doi:10.2139/ssrn.1330375.
- Granger C.W.J. and Newbold P. (1974). Spurious Regression In *Econometrics Journal of Econometrics*, 2 (1), 111–120.
- Greene, W. (2008). *Econometric Analysis* (6th ed.). Upper Saddle River, N.J: Prentice Hall.
- Gujarati, D. N. (2003). *Basic Econometrics* (4th ed.). New York: McGraw-Hill.
- Hailu, G. & Goddard, E. (2009). Sustainable Growth and Capital Constraints: The Demutualization of Lilydale Co-operative Lt., *Journal of Co-operatives*, 23 (2009), 116-129.
- Hansmann, H. (1998). *The ownership of enterprise*. London: Cambridge.
- Hariyoga, H.S. & Richard J. (2004). The Bankruptcy of Tri Valley Growers: What Went Wrong and What Can We Learn From It? *Update Agricultural and Resource Economics*, 7 (6), 1-4.
- Harris, A., & Fulton, M. E. (1996). *Comparative Financial Performance Analysis of Canadian Co-operatives, Investor-Owned Firms, and Industry Norms*. Centre for the Study of Co-operatives, University of Saskatchewan.
- Harte, L. N. (1997). *Creeping Privatization of Irish Co-operatives: A Transaction Cost Explanation*. Van Gorcum.
- Haslinda, A., & Valentine, B. (2009). Fundamental and ethics theories of corporate governance. *Middle Eastern Finance and Economics*, 4 (4), 88–96.

- Hatch, M. & Cunliffe, A. (2006). *Organization theory: Modern, symbolic and postmodern perspectives*. Oxford: Oxford University Press.
- Hazen. P. (2004). Want to Avoid Conversion? Member loyalty is the key. *Cooperative business journal*, (2004), 8.
- Hendrikse, G. & Bijman, J. (2002). Ownership structure in agri-food chains: The marketing cooperative. *Am J Agric Econ*, 84, 104–119.
- Henehan, B. M., & Anderson, B. L. (2001). *Considering cooperation: A guide for new cooperative development (No. 122227)*. Cornell University, Department of Applied Economics and Management.
- Hogeland, J. A. (2006). The economic culture of U.S. Agricultural cooperatives. *Culture & Agriculture*, 28(2), 67-79.
- Hughes PS, Zargar E (2006). *Exchange demutualization*. Blake, Cassels and Graydon LLP.
- ICA. (2015). *Co-operative identity, values and principles*. International Co-operative Alliance. <http://ica.coop/en/whats-co-op/co-operative-identity-values-principles>.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3 (4), 305–360.
- Kalogeras, N., Pennings, J. M., Kuikman, J., & Doumpos, M. (2011). *Is the Ownership Structure Model a Decisive Determinant of Co-operatives' Financial Success? A Financial Assessment (No. 321-2016-11080)*.
- Kalogeras, N., Pennings, J. M., van Dijk, G., & van der Lans, I. A. (2007). The structure of marketing cooperatives. In *Vertical markets and cooperative hierarchies* (pp. 73-92). Springer, Dordrecht.
- Karantininis, P. & Nilsson, J. (2007). *Vertical markets and cooperative hierarchies: The role of cooperatives in the Agri-food industry*. Springer.

- Keneley, M. J., & Verhoef, G. (2010, January). The Decision to Demutualize: An Analysis of the Pressures for Change. The case of life insurers in Australia and South Africa a comparative perspective. *In Accounting and the State: Proceedings of the sixth Accounting History International Conference* (pp. 1-35). Victoria University of Wellington
- Knoeber, C.R., & Baumer, D.L. (1989). *Understanding retained patronage refunds in agricultural Member Cooperatives*, (August), 10-16.
- Kombo, D. K., & Tromp, D. L. (2006). *Proposal and thesis writing: An introduction*. Nairobi: Paulines Publications Africa, 5, 814-30.
- Kombo, D. K., & Tromp, D. L. (2009). *Introduction to proposal writing*. Nairobi: Pauline publications.
- Kumari, S. (2008). Multicollinearity: Estimation and elimination. *Journal of Contemporary Research in Management*, 1(1), 87-95.
- Lempert, R. (1966). Strategies of Research Design in the Legal Impact Study-The Control of Plausible Rival Hypotheses. *LAW & Soc'y REV*, 1, 111. Chicago.
- Liang, Q., Huang, Z., Lu, H., & Wang, X. (2015). Social Capital, Member Participation, and Cooperative Performance: *Evidence from China's Zhejiang*. *International Food and Agribusiness Management Review*, 18 (1) 49-78.
- Libecap G.D. (1989). *Contracting for Property Rights*. Cambridge University Press: New York. Lin, J., and Ma, Y. (2006). The boundary between farmer cooperatives and IOFs: From the perspective of transaction cost and organizational cost. *Agricultural Economics* (3), 16-20.
- Mahoney, J. (2004). *Economic Foundations of Strategy*. University of Illinois at Urbana Champaign College of Business.
- Marinakos, G., Daskalaki, S., & Ntriniias, T. (2014). Defensive financial decisions support for retailers in Greek pharmaceutical industry. *Central European Journal of Operations Research*, 22(3), 525-551.

- Mahoney, J. (2004). *Economic Foundations of Strategy*. University of Illinois at Urbana Champaign College of Business.
- Mendiola, A. and M. O'Hara. (2004). Taking stock in stock markets: the changing governance of exchanges. *Working paper*, Cornell University.
- Miner, K., & Novkovic, S. (2013). Webinar: New thinking on co-operative governance. *Highlights from the International Co-operative Governance Symposium*.
- Ministry of Industry, Trade and Co-operatives. (2017). *National Co-operative Development Policy*.
- Mugenda, O., & Mugenda, A. (2003). *Research methods: Quantitative and qualitative approaches*. Nairobi: Acts Press.
- Nadeau, E. G. & Nilsestuen, R. (2004). The economic disadvantages of co-op conversion for consumer members. *Cooperative business journal*, (March 2004), 10.
- Nickell, S. J. (1981). Economic policy and private investment since the oil crisis' by Artus et al. *European Economic Review*, 16 (1), 57-59.
- Nilsson, J & Lind, L.W., (2015). Institutional changes in the Swedish meat industry. *British Food Journal*, 117 (10), 2501-2514.
- Nilsson, J. (1999). Co-operative Organizational Models as Reflections of the Business Environments. *Finnish Journal of Business Economics* 4: 449-470.
- North D. C. (1971). *Structure and Change in Economic History*. Norton: New York.
- North D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press: New York.
- North, D. C., & Thomas, R. P. (1973). *The rise of the western world: A new economic history*. Cambridge University Press.
- Orodho, A. J. (2005). *Statistics made user Friendly for Educational and Social Science Research*. Nairobi: Masola Publisher.

- Oscar, T. (2007). *Panel data analysis fixed and random effects using Stata (V. 4.2)*. Princeton University: Data and Statistical Services.
- Otaokpukpu, J.N., Ogbu, S.O. & Okonkwo, C.J. (2017). Effect of Type and Participation on Cooperative Financial Performance in Orumba South L.G.A of Anambra State. *International Journal of Social Sciences and Management Research*, 3 (8) 104-114.
- Pascucci, S., Gardebroek C. & Dries, L. (2012). Some like to join, some like to deliver: an econometric analysis of farmers' relationships with agricultural cooperatives. *European Review of Agricultural Economics*, 39 (1), 51–74.
- Pesaran, M. H. (2004). General diagnostic tests for cross section dependence in panels. *Cambridge Working Papers in Economics*.
- Reserve Bank of Australia, (1999). Demutualization in Australia. *Bulletin*, (January).
- Royer, J.S. & Smith, D.B. (2007). Patronage Refunds, Producer Expectations, and Optimal Pricing by Agricultural Cooperatives. *Journal of Cooperatives*, 20, 1-16.
- SACCO Societies Regulatory Authority (SASRA) (2017). *SACCO Supervision Report: Deposit Taking SACCOs*. In house Publication.
- Salkind, N. J. (2010). *Encyclopedia of research design*. Thousand Oaks, CA: SAGE Publications Ltd.
- Smith, E., & Smith, J. (2008). *Using secondary data in educational and social research*. United Kingdom, McGraw-Hill Education.
- Snijders, T. A. B. (2011). *Multilevel analysis*. Springer.
- Staatz, J. (1987a). The structural characteristics of farmer cooperatives and their behavioral consequences. *In Cooperative theory: New approaches*. Washington, D.C: United States Department of Agriculture.
- Staatz, J.M. (1987b). Farmers' incentives to take collective action via cooperatives: A transaction cost approach. *In Cooperative theory: New approaches*. Washington, D.C: United States Department of Agriculture.

- Stanford, L. & Hogeland, J. (2004). Designing organizations for a Globalized World: Calavo's Transition from Co-operative to Corporation. *American Journal of Agricultural Economics*, 86 (5), 1269-1275.
- Taiwo, A.O. & Okafor I. P. (2014). Effect of members' participation on co-operative performance: A study of selected multipurpose cooperative societies (MCS) in Awka South LGA of Anambra State, Nigeria. *International journal of multi-disciplinary research*. IV (2011), 117-126.
- Tortia, E. (2018). The Firm as a Common. Non-Divided Ownership, Patrimonial Stability and Longevity of Co-Operative Enterprises. *Sustainability*, 10 (4), 1004-1023.
- Tremblay, B. E. & Cote, D. (2001). Pratiques innovantes en matière de capitalisation des banques cooperatives. *Cahier de recherché*, 2001 (9), 15-24.
- Tribl, C. (2009). Spatial competition of food processing cooperatives in a mixed market—the case of uniform delivered pricing. *Working paper, Federal Institute of Agricultural Economics, Austria*.
- Trochim, W. M. (2006). Qualitative validity. *Research methods knowledge base*. 361 (2006), 2-16.
- Valentinov, V. (2007). Why are cooperatives important in agriculture? An organizational economics perspective. *Journal of institutional Economics* 3 (1), 55-69.
- Welch, I. (2006). Windfalls or Shortfalls? The true cost of Demutualization. *The All-Party Parliamentary Group for Building Societies & Financial Mutuals*, (2006), 1-44.
- Williamson, O.E., 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- Woodford, K. (2008). Dairy Industry Strategy and Structure as New Zealand takes on the World. *Primary Industry Management*, 11 (1), 5-9.
- Yeo, P. (1994). A Letter to the Editor. *Review of International Cooperation*, 87 (3), 5-7.

Zwanenberg, A. C. (1997). *European dairy cooperatives: developing new strategies* (Doctoral dissertation, University College, Cork).

APPENDICES

Appendix I: Secondary Data collection sheet

Secondary data for the two holding co-operatives from 1998 to 2017 will be collected as follows:

Name of Co-operative Organization:

.....

Variable / Year	Net Income After tax	Total Equity	Restricted Reserves	Member Sharehold ing proportions	Member Loans/Pre miums
1998					
1999					
2000					
2001					
2002					
2003					
2004					
2005					
2006					
2007					
2008					
2009					
2010					
2011					
2013					
2014					
2015					
2016					
2017					

Appendix I: Study Population

List of Co-operative Companies owned by Holding Co-operatives in Kenya from 2001 to 2017.

Firm	Year	ROE	EAM	MT	ME
Co-op Bank	2001	-0.23673	-0.24523	0.596	1
Co-op Bank	2002	0.229307	0.220808	0.505	1
Co-op Bank	2003	0.127927	0.127927	0.474	1
Co-op Bank	2004	0.08966	0.08966	0.417	1
Co-op Bank	2005	0.195965	0.195965	0.398	1
Co-op Bank	2006	0.325712	0.325712	0.363	1
Co-op Bank	2007	0.542494	0.542494	0.321	1
Co-op Bank	2008	0.679749	0.586296	0.303	0.6456
Co-op Bank	2009	0.849842	0.759798	0.223	0.6456
Co-op Bank	2010	1.31163	1.220728	0.218	0.6456
Co-op Bank	2011	1.535519	1.444164	0.201	0.6456
Co-op Bank	2012	1.843032	1.676051	0.196	0.6456
Co-op Bank	2013	2.173353	1.907969	0.182	0.6456
Co-op Bank	2014	1.639288	1.41169	0.17	0.6456

Bank					
Co-op Bank	2015	2.394109	2.145616	0.12	0.6456
Co-op Bank	2016	2.592634	2.359335	0.108	0.6456
Co-op Bank	2017	1.943875	1.754159	0.089	0.6456
CIC	2007	0.217323	0.027692	0.251	1
CIC	2008	0.232261	0.134658	0.263	1
CIC	2009	0.238445	0.100806	0.263	1
CIC	2010	0.186454	0.070226	0.256	1
CIC	2011	0.136049	0.111201	0.27	1
CIC	2012	0.25374	0.180307	0.275	0.741
CIC	2013	0.210247	0.125127	0.309	0.741
CIC	2014	0.151016	0.106233	0.289	0.743
CIC	2015	0.145151	0.113502	0.301	0.743
CIC	2016	0.02516	0.005362	0.273	0.743
CIC	2017	0.063269	0.030741	0.282	0.743

Appendix II: Research Permit



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Wavaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/78156/27504**

Date: **14th January, 2019**

Mary Njoki Mbugua
The Co-operative University of Kenya
P.O Box 24814-00502
KAREN

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Influence of demutualization on member economic participation and financial performance of co-operatives in Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **14th January, 2020**.

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

Appendix III: Proposed Research Budget

S/No	Item	Unit cost (KES.)	Total cost (KES.)
Assets			
	One HP laptop	45,000	45,000
Internet access			
	Internet access costs for proposal writing		6,600
Printing, Photocopying and Stationary			
	Printing 7copies of the research proposal (70 pages)	5	2,450
	Binding 7 copies of research proposal	70	490
	Stationary: (One dozen pens, Five note books, Half a dozen of pencils, One Eraser. Three Clip boards.		1,600
Data collection and Data analysis			
	Research Authorization Permit	1	1,000
	Hiring STATA for data analysis		25,000
Contingency			
	Contingency costs (10% of costs)		8,214
Grand total			90,354

Appendix IV: Research Schedule

DATE/ ACTIVITY	June	July	August	September	October	November/December	January/February/March	March/April/May	June/July/August
Topic Identification and Annotated Bibliography									
Problem Statement and Research Objectives									
Chapter One									
Chapter Two									
Chapter Three									
Corrections, Polishing and Research Presentations									

Data Collection									
Data Analysis									
Chapter 4									
Chapter 5									

- Berle, A. A., & Means, G. C. (1932). *The modern corporation and private property*. New Brunswick, NJ: Transaction.
- Chugh, L., & Meador, J. W. (2006). Demutualization in the life insurance industry: A study of effectiveness.
- Coase, R. H. (1960). The problem of social cost *Classic papers in natural resource economics* (pp. 87-137): Springer.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic management journal*, 21(10-11), 1105-1121.