



---

**Electronic Theses and Dissertations**

---

2021

The Role of innovation in attaining sustainable competitive advantage among Deposit-Taking Savings and Credit Cooperatives (SACCOS) in Nairobi County, Kenya.

Achieng, Salome Grace  
*Strathmore Business School*  
*Strathmore University*

**Recommended Citation**

Achieng, S. G. (2021). *The Role of innovation in attaining sustainable competitive advantage among Deposit-Taking Savings and Credit Cooperatives (SACCOS) in Nairobi County, Kenya* [Thesis, Strathmore University].

<http://hdl.handle.net/11071/12688>

Follow this and additional works at: <http://hdl.handle.net/11071/12688>

**THE ROLE OF INNOVATION IN ATTAINING SUSTAINABLE  
COMPETITIVE ADVANTAGE AMONG DEPOSIT-TAKING SAVINGS  
AND CREDIT COOPERATIVES (SACCOS) IN NAIROBI COUNTY,  
KENYA**

**SALOME GRACE ACHIENG**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS OF THE MASTER OF BUSINESS ADMINISTRATION AT  
STRATHMORE UNIVERSITY**

**VT OMNES  
VNVM SINT**

**STRATHMORE UNIVERSITY BUSINESS SCHOOL  
STRATHMORE UNIVERSITY  
NAIROBI, KENYA**

**MAY, 2021**

## DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

© No part of this dissertation may be reproduced without the permission of the author and Strathmore University.

Salome Grace Achieng

Approval:

This dissertation of Salome Grace Achieng was approved by the following:

Dr. Everlyne Makhanu

Supervisor

Strathmore University Business School

Dr. George Njenga

Executive Dean

Strathmore University Business School.

Dr. Bernard Shibwabo

Director, Office of Graduate Studies



## ABSTRACT

Researchers seem to agree that innovations are of critical importance in sustaining a competitive advantage of any firm. Organizations that adopt new innovations are seen to have a competitive advantage when they introduce new and unique ideas, products and services. The study's key objective was to establish the influence of innovation on sustainable competitive advantage among DT-SACCOs in Nairobi County, Kenya. Specifically, it intended to; determine the relationship between incremental innovation and DT-SACCOs' sustainable competitive advantage, analyze the relationship between disruptive innovation and DT-SACCOs' sustainable competitive advantage and determine how radical innovation and DT-SACCOs' sustainable competitive advantage relate. The research adopted the resource-based view theory. This research used a cross sectional descriptive survey design. The study population was the 42 DT-SACCOs with headquarters in Nairobi County, Kenya. The study used primary data which was obtained using questionnaires. A multiple linear regression model was used to show the relationship between the variables. The study findings reveal that incremental innovation, disruptive innovation and radical innovation influenced DT-SACCOs sustainable competitive advantage positively. The regression and correlation results indicated that there was a positive and significant relation between incremental innovation, disruptive innovation, radical innovation and DT-SACCOs sustainable competitive advantage. Among the three independent variables, incremental innovation had the highest contribution to sustainable competitive advantage in the DT-SACCOs while overall, all three variables had a significant contribution to sustainable competitive advantage. The study recommends the need for having more DT-SACCOs having a mix of incremental innovation, disruptive and radical innovation as this will boost DT-SACCOs sustainable competitive advantage. The findings will help managers to focus on critical success factors for success within their organizations hence improving the competitive advantage of their businesses. The main limitation of the study was that it covered innovation in only DT-SACCOs so there would be need for further research on other types of SACCOs or other sectors.

**Keywords:** *Disruptive Innovation, Incremental Innovation, Radical Innovation, Sustainable Competitive Advantage, Deposit-Taking Savings and Credit Cooperatives (DT-SACCOs),*

## DEDICATION

This dissertation is dedicated to my family who have supported me throughout my education.

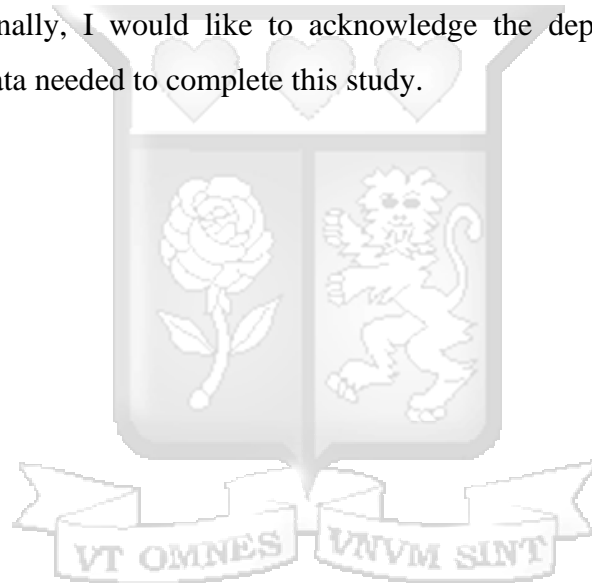


## ACKNOWLEDGEMENT

This study has been completed through the sustenance and encouragement from various individuals to whom I am grateful. I thank God for His grace and mercies that He saw me through my studies in good health and right mind. I give all glory and honour to Him.

Special appreciation goes to my supervisor Dr. Everlyne Makhanu, for her time, patience, and constructive advice throughout the entire project. She shared with me her professional experience which made this study interesting and a worthwhile undertaking. She encouraged me and was highly responsive to requests or clarifications.

I would like to acknowledge my family that has stood by me and supported me in the course of my entire education. Finally, I would like to acknowledge the deposit taking SACCOs for providing the requisite data needed to complete this study.



# TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>ABSTRACT.....</b>	<b>iii</b>
<b>DEDICATION.....</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>v</b>
<b>TABLE OF CONTENTS .....</b>	<b>vi</b>
<b>LIST OF TABLES .....</b>	<b>x</b>
<b>LIST OF FIGURES .....</b>	<b>xi</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>xii</b>
<b>DEFINITION OF TERMS.....</b>	<b>xiii</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION TO THE STUDY.....</b>	<b>1</b>
1.0 Introduction.....	1
1.1 Background Information.....	1
1.1.1 Innovation in organizations.....	4
1.1.2 Sustainable Competitive Advantage in organizations .....	5
1.1.3 SACCOS in Kenya .....	7
1.2 Statement of the Problem.....	8
1.3 Research Objective .....	9
1.3.1 Specific Research Objectives.....	9
1.4 Research Questions .....	10
1.5 Scope of the Study .....	10
1.6 Significance of the Study .....	10
<b>CHAPTER TWO .....</b>	<b>11</b>

<b>LITERATURE REVIEW .....</b>	<b>11</b>
2.1 Introduction.....	11
2.2 Theoretical Review .....	11
2.2.1 Resource Based View Theory.....	11
2.3 Empirical Literature Review.....	13
2.3.1 Incremental Innovation and Sustainable Competitive Advantage.....	13
2.3.2 Disruptive Innovation and Sustainable Competitive Advantage.....	15
2.3.3 Radical Innovations and Sustainable Competitive Advantage .....	17
2.4 Summary of Literature and Research Gaps .....	20
2.5 Conceptual Framework.....	22
2.6 Chapter Summary .....	24
<b>CHAPTER THREE .....</b>	<b>25</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>25</b>
3.1 Introduction.....	25
3.2 Research Philosophy.....	25
3.3 Research Design.....	25
3.4 Target Population.....	26
3.5 Sampling Frame .....	26
3.6 Data Collection Instruments and Procedure .....	26
3.6.1 Data Collection Instruments .....	26
3.6.2 Data Collection Procedure .....	26
3.7 Data Analysis and Presentation .....	27
3.8 Research Quality.....	28
3.8.1 Validity of Research Instrument .....	28

3.8.2 Reliability of Research Instrument .....	28
3.9 Diagnostic Tests.....	29
3.9.1 Normality Test .....	29
3.9.2 Multicollinearity Test.....	30
3.9.3 Autocorrelation Test .....	30
3.10 Ethical Considerations .....	31
<b>CHAPTER FOUR.....</b>	<b>32</b>
<b>PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS.....</b>	<b>32</b>
4.1 Introduction.....	32
4.2 Response Rate.....	32
4.3 Demographics .....	32
4.3.1 Gender.....	33
4.3.2 Age.....	33
4.3.3 Highest Level of Education .....	34
4.3.4 Work Experience with the Firm.....	34
4.4 Sustainable Competitive Advantage.....	35
4.5 Incremental Innovation and Sustainable Competitive Advantage.....	35
4.5.1 Descriptive for Incremental Innovation.....	36
4.5.2 The relationship between Incremental Innovation and Sustainable Competitive Advantage .....	37
4.6 Disruptive Innovation and Sustainable Competitive Advantage .....	38
4.6.1 Descriptive for Disruptive Innovation .....	39
4.6.2 The relationship between Disruptive Innovation and Sustainable Competitive Advantage .....	40
4.7 Radical Innovation and Sustainable Competitive Advantage.....	41

4.7.1 Descriptive Statistics for Radical Innovation .....	41
4.7.2 The relationship between Radical Innovations and Sustainable Competitive Advantage .....	43
4.8 The Overall Model.....	44
4.9 Chapter Summary .....	46
<b>CHAPTER FIVE .....</b>	<b>47</b>
<b>DISCUSSION, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>47</b>
5.1 Introduction.....	47
5.2 Discussions of Findings.....	47
5.2.1 Incremental Innovation and Sustainable Competitive Advantage.....	47
5.2.2 Disruptive Innovation and Sustainable Competitive Advantage.....	49
5.2.3 Radical Innovation and Sustainable Competitive Advantage.....	50
5.3 Conclusions.....	52
5.4 Contribution of the Study.....	52
5.5 Recommendations.....	53
5.6 Limitations of the Study.....	53
5.7 Research Areas for Further Studies .....	54
<b>REFERENCES.....</b>	<b>55</b>
<b>APPENDICES.....</b>	<b>65</b>
APPENDIX I: LETTER OF INTRODUCTION .....	65
APPENDIX II: STRATHMORE UNIVERSITY ETHICAL APPROVAL.....	66
APPENDIX III: NACOSTI PERMIT.....	67
APPENDIX IV: RESEARCH QUESTIONNAIRE FOR MANAGERS .....	68
APPENDIX V: DEPOSIT TAKING SACCOS IN NAIROBI .....	71

## LIST OF TABLES

Table 3.1: Reliability Results.....	28
Table 3.2 Normality Test .....	29
Table 3.3 Multicollinearity Test .....	30
Table 3.4 Autocorrelation Test .....	30
Table 4.1: Response Rate.....	32
Table 4.2: Gender.....	33
Table 4.3: Age.....	33
Table 4.4: Highest Level of Education .....	34
Table 4.5: Work Experience with Current Employer .....	34
Table 4.6: Descriptive Statistics for Sustainable Competitive Advantage .....	35
Table 4.7: Descriptive Statistics for Incremental Innovation .....	36
Table 4.8: Inferential Statistics for Incremental Innovation and Sustainable Competitive Advantage .....	37
Table 4.9: Descriptive Statistics for Disruptive Innovation.....	39
Table 4.10: Inferential Statistics for Disruptive Innovation and Sustainable Competitive Advantage .....	40
Table 4.11: Descriptive Statistics for Radical Innovation .....	41
Table 4.12: Inferential Statistics for Radical Innovation and Sustainable Competitive Advantage .....	43
Table 4.13: Model summary showing the relationship between innovation and sustainable competitive advantage .....	45

## LIST OF FIGURES

Figure 2.1: Conceptual Framework ..... 23



## LIST OF ABBREVIATIONS

**DT-SACCOs**- Deposit taking Savings and Credit Cooperative societies

**MoEST**- Ministry of Education, Science and Technology

**Non-DT-SACCOs**- Non-Deposit taking Savings and Credit Cooperative societies

**RBV**- Resource Based View

**SACCOs** - Savings and Credit Cooperative societies

**SASRA**- Sacco Societies Regulatory Authority

**SMEs** – Small and Medium Enterprises



## DEFINITION OF TERMS

**Disruptive innovation** is an innovation responsible for creating new markets and value networks which consequently disrupts existing markets and value networks, causing displacement of established market-leading firms, products, and alliances (Christensen, McDonald & Raynor, 2015)

**Incremental innovation** is a number of small upgrades that are made to the existing products, services, processes or methods of a firm (Grayson, Jain & Ruiz, 2012).

**Innovation** is the discovery of a novel and new way of doing something which results in improvements or new products or services. This helps the firm to differentiate itself thereby competing in the market (Brem, Maier & Wimschneider, 2016).

**Radical innovation** is an invention that destroys existing business models. It replaces the existing systems or process an entirely new product (Ku, 2017).

**Sustainable Competitive Advantage** is a long-term superiority that an institution gains if it can provide value similar to that of competitors at a lower cost or its ability to charge higher prices by giving out superior value using differentiation (Sheehan, Garavan & Carbery, 2014).



# CHAPTER ONE

## INTRODUCTION TO THE STUDY

### 1.0 Introduction

A detailed description is given in the chapter for background of the study, statement of the problem, research objectives, research questions and significance of the study. The scope of the study is also highlighted.

### 1.1 Background Information

This study was directed towards analyzing innovations and sustainable competitive advantage. Innovation has been a strategy that is being used by many companies and organizations to achieve a competitive advantage that is long term. Therefore, innovation in a corporate is seen to improve the performance of a business more than other businesses (Brem, Maier & Wimschneider, 2016). This study sought to determine how innovation is crucial in attaining a sustainable competitive advantage among deposit taking SACCOs. SACCOs have a dual role of ensuring social development of members while driving an economically viable business, which is the object and purpose for which they were created. For many decades, innovations were concentrated in research and development centers in large firms. This gave the large firms domination and a competitive advantage over other smaller firms. However, the model has been disrupted with the evolution into the digital era, which brought about new digital technologies and venture capital with consumers adopting new technologies (Gann, 2015).

Worldwide, about 98% of economies are being influenced by digitization and modernizations. New businesses are embracing disruptive innovations which give them a competitive advantage over their established counterparts (McKinsey, 2016). According to Ku (2017), corporate innovation involves disruption of existing business models through implementation of new innovation models. Ku (2017) further explains that innovations are important for growth and expansion of a business. Innovation is important to a corporation because it makes it successful and it gives it a competitive edge in terms of faster penetration of the market.

The modern co-operative concept began in 1844 in Rochdale village, Manchester in England as asserted by Pollet (2013). Globally, it has since developed as a socioeconomic movement with its own distinct history, purpose and identity. The ancient rural credit union was introduced in 1864

by Raiffeisen in Germany to cover the needs of those in marginal areas deemed non-bankable in the rural communities owing to limited cash flows and shortages of human resources (WOCCU 2008). A rapid growth has been witnessed in the cooperative movement throughout the world premised upon the organizational methods of Raiffeisen since this period.

Effective corporate innovations have been reported to result a rich and market driven product mix for financial institutions in Eastern and Central Europe that resulted in improvement in earning and asset quality though there are relatively fewer SACCOs in the area (Antoun, Coskun & Georgievski, 2018). Many SACCOs and financial institutions in Asia are still struggling with effective strategies in corporate innovations but the few financial institutions that have got it right are witnessing results in various metrics of performance namely; earnings, image, brand strength, customer satisfaction, market sensing capabilities and relational performance (Fung, Chiun & Ramaya, 2016). Another notable outcome of effective corporate innovations in the developed world is that SACCOs are able to take advantage of their core competencies and capacity which leads to repeated sales through development of market driven products that suits the needs and wants of consumers (Johnson, 2009).

SACCOs in Africa have struggled for a long time in attempt to develop new innovations to actualize their main reason for existence which is providing access to credit especially among the population in the rural areas. The World Bank (2007) decried the narrow range of financial services offered to members of SACCOs in the developing world in a study conducted in Kenya, Burkina Faso, Sri-Lanka and Brazil. The study noted that the strident inability to develop new innovative products by SACCOs due to policy and skills deficits led to high risks and high transaction costs that negatively affected the performance of SACCOs. Zikalala (2016) also noted that offering a narrow range of financial services by SACCOs in Swaziland not only undermined their roles of offering access to credit but also rendered many SACCOs financially unsustainable due to systemic limitation in operational strategies in new product development.

SACCOs in East Africa are still struggling with both developments of corporate innovations as well as development of effective strategies in the process despite the great promise and benefits to be derived from the enterprise. Dirar, Berchanu, Getachew and Azadi (2017) found that SACCOs in Ethiopia were offering very limited range of financial products to their members thus leading to

decline to their performance as members have other options and choices as offered by commercial banks which are the main competitors to SACCOs

In Kenya the cooperative movement was started in 1931 when the cooperatives were regularized. In 1945, the cooperative ordinance act was enacted due to the numerous interventions by different stakeholders and in 1977; the current cooperative society act Cap 490 of the Kenyan law was amended (Lagat, Mugo, & Otuya, 2013). The act stipulates that for a society to be registered it has to have at least ten members in which most belong to a community who undertake similar economic activities. The key requirement to be a member is that you must provide financial resources where the pool of funds is used to give loans to the members at an affordable interest. Some of the commercial banks in Kenya like Equity bank and Family bank all started out as SACCOs (Bruett, 2011).

SACCOs in Kenya play a critical role in economic development of members. So prominent is the SACCO movement in Kenya that it is ranked the most vibrant in Africa and seventh globally. SACCOs have ensured financial inclusion and banking to most low-income households in Kenya especially in the rural areas (Muriuki & Ragui, 2013). It is estimated that over 81% of Kenyans rely on SACCOs to access financial services in Kenya (Fin Access, 2012). SACCOs are divided into non-deposit taking SACCOs and deposit taking SACCOs which were the concern of this study. Deposit taking SACCOs operate like commercial banks by accepting deposits, offer payment services and other front office services (SASRA, 2020).

From the assumptions of the resource-based view (RBV) theory, market turbulence and the intensity of competition are the two primary market factors that may fuel the desire of a firm to be innovative (Grant, 2010; Penrose, 1959). The conditions in the market are under the influence of behaviors, tastes or consumer psychology (Penrose, 1959). Companies that lack methods of sustaining their sustainability in response to market variations may be adversely affected. Therefore, to mitigate such adverse conditions, firm innovations would be helpful in the creation or renewal of the relevance of a firm's special assets (Tsai & Yang, 2013).

Firms ought to apply timely innovations because environments evolve continuously and the most crucial innovations are those that enable a firm to achieve competitive advantage thereby improving the performance of the firm (Henard & Szymanski, 2011). Additionally, it has generally been accepted that innovation is responsible for improving the firm performance despite market

imperfections (Hult et al., 2014). There is therefore a need for the firms to match resources and capabilities to meet the business environment's needs therefore sustaining competitive advantage (Tsai & Yang, 2013). Technological and administrative innovation are necessary to enable a firm to remain competitive in its market context. Different forms of innovation arise with a massive interplay of the variations (Cooper, 1998). For example, innovative firms encourage their staff to help in the design of new products (Luk et al., 2018) and experiment new ideas and actions (Menguc & Auh, 2016). In short, the innovativeness of a firm stimulates innovative attitudes resulting in new methods, services, and products (Tsai & Yang, 2013). Therefore, managers should substantially improve innovative efforts in their businesses to maintain superior firm performance (Hult, Hurley & Knight, 2014).

According to Sheehan, Garavan and Carbery (2014), to sustain the competitive advantage of any firm, innovation is very important. Organizations that adopt new innovations are seen to have a competitive advantage when they introduce new and unique ideas, products and services (Brem, Maier & Wimschneider, 2016). Sheehan, Garavan and Carbery (2014), further noted that innovative organizations obtain a competitive advantage via creation of non-imitable products and services. Ionescu and Dumitru (2015) noted that innovation aims at meeting the existing market needs and satisfying customer needs. The ability of a company to innovate directly affects its competitive advantage.

### **1.1.1 Innovation in organizations**

Innovations in technology are the present-day corporations' endeavors to produce and accumulate knowledge and they have been considered as the factors that speed up growth in economy and increase productivity (Aghion, Harris, Howitt & Vickers, 2011). Today's value is generated by operations, while tomorrow's opportunities are created by innovations. The distinction between innovations and operations is uncertainty. Intertwining of creativity and routine throughout the process makes innovation a unique process. Creativity is often seen as a basis of innovation. Creative ideas and the ability to convert that idea into action to bring about change leads to innovation (Hana, 2013).

The World Council of Credit Unions (2018) highlights that credit unions which provide their core services through online and mobile channels have experienced growth. Innovations are adopted by DT-SACCOs as competitive strategy to surpass its rivals and are presumed as a vital means to

withstand the unpredictable and dynamic sector to accomplish its goals, retain success and improve competitive performance in the business (Maorwe, 2011). Consequently, the DT-SACCOs must embrace new creative means to fund their exercises instead of sole reliance on individuals' deposits and explore innovative methods for accomplishing success in every single operational dimension. They must utilize magnificent practices that ensure sustainability and development (Mutuku, 2014).

According to Gamal (2011), corporate innovation is a multidimensional and complex activity which encompasses: service, product, business model and process innovation. Nuryakin (2018) categorized innovation in three ways, namely: product innovation; technological innovation and process innovation. The OECD Oslo manual (2015) identifies and describes four types of innovation, namely: process innovation, product innovation, organizational innovation and marketing innovation. Davenport (2013) classifies corporate innovations into incremental, disruptive and radical innovation.

This study focused on the classification of innovations as used by Davenport (2013). The reason is because this classification was used in the context of SACCOs which is the focus of the current study. The three types of innovations adopted by organizations include: incremental innovation which is a progression of small improvements done on a firm's present products, services, activities or strategies (Grayson, Jain & Ruiz, 2012). Disruptive innovation on the other hand is an innovation that makes another market and value network and finally upsets a current market and value network, dislodging set up market-driving firms, items, and alliances (Christensen, McDonald & Raynor, 2015). Further, radical innovation is the one that damages or displaces a current business model (Ku, 2017).

### **1.1.2 Sustainable Competitive Advantage in organizations**

Wang (2014) observed that competitive advantage is realized when a firm executes actions which allow it to outperform its competitors. This is achieved when the organization's activities become more profitable as compared with the activities of its competitors. Other significant activities that affect a company's competitive advantage include the market share, the quality of product and technological advancements (Ceglinski, 2016). Further according to Wanyoike (2016), for organizations to stay competitive they must fully adopt innovation through innovation policies,

innovation strategies and process creation as well establishing a creative culture within the organization.

Competitive advantage can be described as the continuous reward of using specific distinct strategies established through unique combinations of internal organizational resources and capabilities that are not imitable. This helps a firm in attaining competitive advantage. Competitive advantage is “evolution that meets requirements of the current generation without undermining the potential of later generations in meeting their obligations” (Davila, 2014). A company has competitive advantage if it has higher positioning in terms of keeping competitive forces at bay. A firm is said to have a competitive edge if it has a mastery of making extended gain (Chandler & Hanks, 2014).

Barney (2001) makes reference that the organization must think about the accessible sources of distinction and develop these advantages. Thus, the competitive advantage is realized in case the association viably actualizes an innovation equipped for reducing prices in the market (Bharadwaj, Varadarajan & Fahy, 2013). Consequently, innovation can be the fundamental instrument for an organization to accomplish manageable competitive advantage confronting alternate contenders. The source of distinct competitive advantages is accomplished by the decrease of costs, the utilization of advertising methods and the innovation of products (Davila, 2014).

The connection between innovation and competitive advantage is in the organization's ability to effectively use its resources, in a manner to help it make innovations and to distribute them in order to realize competitive advantage (Ito & Henry, 2012). In concurrence with Conto, Júnior, Valle and Vaccaro (2016), a firm’s undertaking may be viewed as an innovation if there is (feasible) monetary outcome and (quantitative) money related outcome and this innovation will almost certainly determine whether the firm will acquire competitive advantage to confront its rivals.

It is crucial to understand the causal connection of innovation, making the generation of competitive advantage feasible for the firm. Usually supervisors strive to make their firms survive in the early and later stages. The expansion of their activities through procedures that unfold result in cost challenge either having a wide or explicit core interest. In this procedure, it is normal to expect that challenges arise, and organizations look for changes to make in their specific situations, ideally over their competitors. Given these affirmations, to realize practical competitive advantage,

it is necessary to execute new methods and practices, inside or outside, which have not been adopted by the market or by the organization (Mustafa & Yaakub, 2018). Duncan, Gintei and Swain (2018) measured sustainable competitive advantage of SACCOs in terms of market share, cost reduction, customer loyalty and efficiency and that is the definition that was adopted in the current study.

### **1.1.3 SACCOS in Kenya**

The Savings and Credit Cooperative societies (SACCOs) are one of the most visible and important cooperative societies in Kenya. They are distinct and have unique traits as compared to other cooperatives. Their purpose is to mobilize savings and give credit facilities of their members. The delivery of savings and credit facilities is part of financial services. SACCOs are grouped together with financial intermediating cooperatives which are housing cooperatives and investments (SASRA, 2020). The SACCO subsector in Kenya is legal. It is divided into two; the deposit taking-SACCOs are those that take deposits, and thus offer withdraw-able savings accounts services similar to those offered by banks. They also offer front office service activities (FOSA) where members can walk into their banking halls as they withdraw or deposit money into their accounts. On the other hand, the non-DT-SACCOs segment are those that mobilize savings from their members in the form of share capital only; these amounts are strictly utilized as collateral for credit facilities advanced to such members. These deposits are not withdraw-able by the member but can only be refunded when the member leaves the SACCO. The non-deposit taking SACCOs do not offer front office services as members do not hold accounts where they deposit or withdraw money. Their operation is known as back office service activity (BOSA).

All DT-SACCOs are regulated by SASRA. However, effective January 2021, all non-DT-SACCOs holding members' deposits above Ksh. 100 million are also regulated by SASRA (SACCO Societies Regulations, 2020). There are 176 deposit taking SACCOs in Kenya. The DT-SACCOs operating in Nairobi County are 42 (SASRA, 2020). The focus of the study was on DT-SACCOs in Nairobi County because it is where most SACCOs operate from.

The latest report by SASRA (2020) reported that DT-SACCOs total assets growth rate reduced to 11.97 percent in 2018 compared to 12.4 percent in 2017. Total deposits growth rate also recorded a decline from 12.01 percent in 2017 to 11.99 percent in 2018. The growth rate in total loans of 13 percent in 2018 exceeded the growth rate of total deposits an indication of lower rate of

mobilization of deposits compared to demand for loans yet total deposits are the main funding source for the loan portfolio. There was also an increase in allowance for loan loss which indicates the non-performing loan portfolio in 2018 to 42.25 percent from 23.44 percent in 2017. The dormant membership also increased to 40.11 percent in 2018 compared to 2017 when the change was a decline of 1.35 percent. DT-SACCOs also continue to contend with delays and non-remittance from SACCO members' institutions that adversely impacts deposits and loan repayments (SASRA, 2020). Deposit-taking SACCOs are referred to as credit unions in the global platform. The average penetration of credit unions globally is at 9.38 percent and Kenya's penetration rate is at 28.4 percent (World Council of Credit Unions (WOCCU)), 2018. While Kenya's penetration rate is relatively higher than the global rate, it shows that potential for the SACCOs' growth can be further enabled by establishing a sustainable competitive advantage.

Deposit-taking SACCOs' performance has been affected recently by high competition from other deposit-taking institutions in Kenya, especially commercial banks (Mugo, Muathe & Waithaka, 2019; Odhiambo, 2019). Banks have gone to an extent of issuing unsecured loans to their clients and non-clients, this non-price competitive tool has posed a challenge on SACCOs' performance, to be efficiently sound, deposit taking SACCOs have opted venturing into innovative products (Munene, Ndambiri & Wanjohi, 2019). However, it is not clear whether the adoption of these new innovations have made the DT-SACCOs more efficient and whether they play a role in enhancing firm performance.

## **1.2 Statement of the Problem**

According to Sheehan, Garavan and Carbery (2014), in order to sustain a competitive advantage of any firm, innovation is of critical importance. Organizations that adopt new innovations are seen to have a competitive advantage when they introduce new and unique ideas, products and services (Brem, Maier & Wimschneider, 2016). Sheehan, Garavan and Carbery (2014), further noted that innovative organizations obtain a competitive advantage via creation of non-imitable products and services. SACCOs have been facing competition from other financial institutions that have adopted innovative strategies such as the ease of access to credit facilities through the mobile loans, MPESA, Mshwari and KCB-MPESA that allow people to save and access credit (Shejero, 2016). The introduction of interest rate capping also saw the SACCOs face a stiff competition

from commercial banks. All these have imposed a threat to the sustainable competitive advantage of SACCOs.

Compared with commercial banks which are competitive financial institutions, DT-SACCOs continue to underperform. SACCOs are more in number compared with banks but their financial performance is lower. Commercial banks are also seen to have more branches than DT-SACCOs. Further compared with other institutions in the financial sector, SACCOs reported the least performance in 2018 as per the Kenya Financial Sector Stability report in terms of assets, loans, deposits, capital and reserves and core capital (Central Bank of Kenya, 2018). These indicate a reduced sustainable competitive advantage among DT-SACCOs in Kenya. This study hence seeks to address the problem of sustainable competitive advantage among DT-SACCOs through establishing the role that innovation plays in attaining a sustainable competitive advantage.

Various studies have been attempted in the area of sustainable competitive advantage among SACCOs. Lisangari (2016) investigated how innovation strategies impact competitive advantage among SACCOs operating in Mombasa County. Another study seeking to analyze the factors affecting competitive advantage of SACCOs was conducted by Okelo (2014) but failed to look at the innovation factor. Other studies by Sagwa and Kambu (2016); Ngugi (2017) and Ng'ang'a (2017) investigated the competitive strategies used by SACCOs to maintain a durable competitive advantage. This study sought to address the problem of reduced competitive advantage among DT-SACCOs as shown by reduction in asset growth by investigating the role that innovation can play in improving competitive advantage among DT SACCOs in Nairobi.

### **1.3 Research Objective**

The main objective was to establish how corporate innovations influence sustained competitive advantage among deposit taking SACCOs in Nairobi County, Kenya.

#### **1.3.1 Specific Research Objectives**

- i. To examine how incremental innovation and sustainable competitive advantage relate among DT SACCOs in Nairobi.
- ii. To establish the relation between disruptive innovation and sustainable competitive advantage among DT SACCOs in Nairobi.

- iii. To determine the relation between radical innovation and sustainable competitive advantage among DT SACCOs in Nairobi.

#### **1.4 Research Questions**

- i. What is the relationship between incremental innovation and sustainable competitive advantage among DT SACCOs in Nairobi?
- ii. What is the relationship between disruptive innovation and sustainable competitive advantage among DT SACCOs in Nairobi?
- iii. How does radical innovation relate with sustainable competitive advantage among DT SACCOs in Nairobi?

#### **1.5 Scope of the Study**

This study's scope consisted of all the 42 licensed DT SACCOs by SASRA and that are operating in Nairobi. These licensed SACCOs were selected since obtaining data on the growth as well as performance was easy as it is documented yearly. The study was conducted for the year 2020.

#### **1.6 Significance of the Study**

The study is beneficial to SACCO managers, policy makers and scholars. The management of SACCOs are set to benefit from the findings through the adoption of the recommendations that will be highlighted. From the study findings, the SACCO management can understand the role played by individual types of innovation and decide on the way forward to sustainable competitive advantage.

Policy makers on the other hand can use the study findings to determine the major areas that need be regulated in the SACCOs sub sector. Hence, they can adopt policies and procedures for running of SACCOs that favor the sustainable competitive advantages of SACCOs.

Finally, the results of this study can be documented for further references by future researchers who may want to further this research on innovation and sustainable competitive advantage of SACCOs. Further, the findings of this study will contribute to theory development in the area of corporate innovations and competitive advantage.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The section will explain the theoretical perspective of the study, empirical literature review, the research gap, the conceptual framework and finally the chapter summary. Studies that have been conducted in the past in the field of innovation and sustainable competitive advantage were examined in order to establish the gaps that needed to be addressed.

#### **2.2 Theoretical Review**

This presents a theoretical review explaining the relation between innovation and sustainable competitive advantage. The theory reviewed here was resource-based view theory as it was considered the most applicable in linking innovations to sustainable competitive advantage.

##### **2.2.1 Resource Based View Theory**

The theory was proposed by Barney (1991). This theory explains the innovations; disruptive, incremental and radical innovations. When a company innovates by either creating a new market, adding improvements to existing products or destroys the existing market creating a totally new one, this brings about the characteristics of resources considered to have a sustainable competitive advantage over the others. As such, this theory was applied to link all the independent variables to the dependent variable sustainable competitive advantage.

This theory states that for a firm to maintain competitive advantage it ought to have resources that are uncommon, non-imitable, non-substitutable and valuable (Barney, 1991). Penrose and Penrose (2009) asserted that a firm's heterogeneity of its productive resources and not the homogeneity make it unique which formed the basis for the resource based view theory. Other characteristics of resources that were added by other authors include durability of the resources, non-tradability and idiosyncrasy.

As per Barney (1991), a vital asset should empower an organization to act in ways which lead to high deals, low expenses or in different ways that increase the value of the organization (Barney, 1986). Barney (1986) likewise accentuated that assets are profitable when they enable an organization to imagine or execute systems that improve its proficiency and adequacy (Barney, 1991). RBV causes supervisors of firms to comprehend why skills can be seen as an organization's

most imperative resource and, in the meantime, to acknowledge how those advantages can be utilized to enhance business execution. All corporate organizations aspire to achieve growth through tapping into best operational resources and implementing comprehensive strategies to enable organizations achieve their primary mandate and objectives (Rosemann & Vom Brocke, 2015).

Assets should be difficult to find among the present and future competitors of an organization. Subsequently assets must be rare or remarkable to offer competitive advantages. Assets regulated by a few organizations in the commercial center will not give competitive advantage, as they cannot plan and execute a remarkable business technique in correlation with various rivals. Flawed imitability means replicating or mimicking the assets will not be attainable. Bottlenecks for flawed imitability can be many along with challenges in obtaining assets, equivocal connection with capacity and competitive advantage or intricacy of assets. Non-substitutability of assets suggests that assets cannot be replaced by another elective asset. Competitors cannot accomplish similar implementation by replacing assets with other elective ones (Madhani, 2010).

Resource based view theory is criticized in eight different ways. First, RBV is criticized to have limited implications on management. Secondly, the RBV implies infinite regress. Third, the applicability of RBV is limited. The fourth criticism indicates that sustainable competitive advantage is not achievable while the fifth one considers RBV not being a theory of the firm. Sixth, the characteristics of the resources that achieve sustainable competitive advantage are critiqued as being neither necessary nor sufficient. The seventh criticism indicates that the value of a resource is too indeterminate to be a useful theory. Finally, the theory is criticized as having an unworkable definition of a resource (Kraaijenbrink, Spender & Groen, 2014).

This theory explains the disruptive, incremental and radical innovations. Rare, non-imitable, non-substitutable and valuable resources are created either by changing the features of existing products, product lines or varying the complements in the existing products which is incremental innovation. It can also be achieved through radical innovations where new product, process, technology or service that radically changes firm behavior, users and introduces market structures. Disruptive innovation also provides these resources by changing the technology and the business models. Therefore, adoption of these innovations would lead to sustainable competitive advantage as no other competitor company will be able to imitate them.

## **2.3 Empirical Literature Review**

This section presents empirical review on previous studies conducted both locally and in the international scene on either incremental innovation, disruptive innovation and/or radical innovations and their effect on sustainable competitive advantage. Most researchers have however classified innovations in other ways apart from these three and their findings have also been discussed in this section.

### **2.3.1 Incremental Innovation and Sustainable Competitive Advantage**

Incremental innovation is identified by new features, extended product lines, variations or complements of current products, improvements in efficiency or quality of products (Tushman & Nadler, 1986). Normally, the improvements in incremental innovations are small and have low to medium risk and uncertainty (Varadarajan, 2009). Short term market competitiveness can be achieved using incremental innovation, but radical innovation is necessary for long-term growth (Bessant, 2011).

Incremental innovations in the deposit taking SACCOs include transaction alert to customers, digital identification, digital marketing, big data analysis, diversified loan repayment methods, diversified loan products, new features in loan products and new features in saving products. The current study sought to establish the influence of these incremental innovations on sustainable competitive advantage among deposit taking SACCOs in Nairobi, Kenya.

Incremental innovation tries to meet the requirements of present clients at a rate which is in accordance to the present direction of technology (Parast, 2011). Gradual innovation ventures require the capacity to strengthen, recombine, and exploit existing learning assets (Lee, 2011). In this case, exploitative learning happens with a tight and top to bottom pursuit to take in all around characterized arrangements of a firm (Kang & Snell, 2009). Yields of steady innovation ventures are slight varieties of existing items, services, practices or methodologies (Damanpour, 2011).

MoEST (2018) study on incremental innovations in Kenya showed that the overall innovation intensity stood at 89.9 percent; 70.9 percent of companies embraced product innovations, 92.4 percent embraced process innovations; and 85.4 percent embraced organizational and marketing innovations. The findings are similar to the findings from the 2013 pilot innovation which was centered around services, and showed that 62.9 percent of firms were product or process

innovators, of which 42.5 percent engaged in the introduction of products and 37.5 percent engaged in the introduction of processes; 73 percent focused on organization; and 65.1 percent on marketing innovations. The differences are attributed to the use of smaller sample sizes and sector compositions from the surveys. In spite of this, innovation in Kenya is mostly incremental with a lack of international innovators. Approximately 11 percent of companies engaged in the introduction of new products in country and 17.6 percent introduced new processes. Because the Kenyan market is narrow, compared to international markets, the suggestion is that most innovations are composed of small improvements to existing products and processes, or introduction of already existing products produced by other firms in the local market.

Tarus, Boit and Korir (2017) sought to establish how incremental innovation affects a firm's competitive advantage. This study employed the explanatory research design. A census survey was conducted on selected service sector firms including 30 commercial banks and 2 telecommunication industries. The specific respondents in this study were branch managers and departmental heads from which primary data was obtained by questionnaire. The study analyzed the data using both the inferential statistics analysis and descriptive statistics. The study found a negative association between incremental innovation and firm's competitive advantage. The study put focus on the service sector firms and used explanatory research design while this current study adopted a descriptive research design and focused on deposit taking SACCOs.

Pappenheim, Elibaly, Elkady and Fakry (2016) analyzed incremental innovation and customer perception while seeking to establish how consumers perceive incremental innovation. The study also assessed how consumers' perception on incremental innovation affects market success of a product. The study established that consumers are positive about incremental innovation and they expect it from manufacturers. It was also concluded that incremental innovation does positively affect the market success of a product. The concepts that were investigated here were customer perception while the current study sought to determine how innovation affects sustainable competitive advantage.

Awuah (2011) investigated the strategies for competitive advantage of Ghana Commercial Bank Limited. The study's intent was to analyze the current competitive strategies pursued by the bank, identify reasons for its success or failure, determine how it affects the bank's performance and make recommendations to improve its competitive position. Bezniki (2012) indicated that

Information Communication Technology (ICT) was a crucial success factor in knowledge management in a study of the role of ICT as a source of competitive advantage and that it was crucial in decision making. She pointed that ICT alone was not the only factor that would improve performance or acquire and sustain competitive advantage. The two investigations were based on ICT which is a product of innovation but were done among commercial banks.

Another study on incremental innovation was done by Lee (2011) to determine how incremental innovation affects human, structural, social and relational capital elements. Data collection was done through a survey of the manufacturing companies in the US. The study found that the social capital and relational capital positively relate with incremental innovation. The study was conducted in USA and focused on innovation against human, social and relational capital elements of companies other than sustainable competitive advantage.

### **2.3.2 Disruptive Innovation and Sustainable Competitive Advantage**

Christensen et al. (2013) refers to disruptive innovation as a technology or market structure change that eliminates conventional management practices used by a company. The definition of that innovation is made by referring to a broader concept of technology meaning that it is the processes by which a firm transforms labor, capital, materials, and information to goods and services which have more value, in which all firms have access to technologies, while innovation is the change in technology. Davenport (2013) and Christensen, McDonald & Raynor, (2015) define disruptive innovation as an innovation that makes another market and value network and finally upsets a current market and value network, dislodging set up market-driving firms, items, and alliances.

Some of the disruptive innovations taking place in the deposit taking SACCOs include but not limited to digital onboarding, mobile banking, internet banking, crop insurance, online loan processing, online balance checking, online loan payment, online deposit making, use of debit cards, use of credit cards and use of ATMs. These disruptive innovations are expected to significantly influence sustainable competitive advantage among DT SASCCOs in Nairobi, Kenya.

Masila (2018) investigated how electronic banking impacts efficiency of microfinance banks in Kenya. It was conducted on all the 13 microfinance banks in Kenya. Electronic banking was the independent variable with four measures (value of mobile banking transactions per year, value of internet banking transactions per year, value of agency banking transactions per year and value of

ATM transactions per year. Efficiency was the dependent variable given by total revenue to total assets. Secondary data was for 5 years (January 2013 to December 2017) annually. Findings produced an R-square value of 0.763 meaning that 76.3 percent changes in Kenyan microfinance banks' efficiency resulted from the selected independent variables while 23.7 percent was associated with other factors beyond the study's scope. The results further revealed that mobile banking, agency banking and ATMs produced positive substantial values for this study while internet banking produced positive but weak values for this study. The study was conducted among the microfinance banks, the dependent variable was efficiency and secondary data was collected. The current study will focus on the SACCOs, the dependent variable is sustainable competitive advantage and only primary data will be collected.

According to World Bank (2018) innovation outcomes in Kenya are relatively high. In their survey, 53 percent of the companies surveyed introduced a product or process in the period 2010-2012; 39.8 percent introduced product innovations; and 38 percent process innovations. The rate of innovation is greater with marketing innovation; 69.2 percent companies introduced improvements in marketing. Contrarily, only 27.8 percent implemented organizational innovations. In summary, the introduction of significant changes to products and processes, and especially marketing, is common in Kenya.

Windell (2018) investigated the effect of disruptive innovation on the ICT environment of an organization. The influence of disruptive technology was explained in terms of the business value of the value network of the organization, information technologies, business activities and the current security framework of the information technology architecture. The study was done among three organizations in South Africa. The study established that where a company was aware of and adopted disruptive technology, it resulted into a sustainable competitive advantage for the firm if adopted sufficiently. This study was conducted in South Africa other than Kenya, and the dependent variable was ICT environment and not sustainable competitive advantage and was not specific on the type of innovation while this study specifies DT-SACCOs as the study organizations.

A study by Coccia (2017) investigated how disruptive innovation led to competitive advantage of the firms in high intensity R&D markets. The study was conducted in the drug discovery industry. The study found that disruptive innovation is as a result of many problems arising from a firm and

the adoption of disruptive innovation leads to sustainable competitive advantage. This study was conducted among drug discovery firms but not DT-SACCOs.

Gemici and Alpkan (2015) investigated the effect of disruptive innovation on competitive advantage of the Turkish airlines. The study adopted a qualitative research case study. The findings of the study indicated that disruptive innovation in the form of low-cost carriers increased the competitiveness of the Turkish airline. The study was conducted in Turkey among the airline companies and collected qualitative data. The present study was conducted in Kenya among DT-SACCOs and obtained quantitative data.

A study by Nur et al., (2014) investigated the extent of strategic innovation and barriers to strategic innovation among hotels in Antalya province in Turkey. It was found that the reasons hotels innovate is to upgrade and improve the quality of services offered. It was also found that the main barrier to innovation is cost of undertaking the innovation. The study did not investigate how innovation impacts sustainable competitive advantage. Urbancová (2013) investigated if competitive advantage can be achieved by innovating and knowledge among companies in Czech Republic. The findings showed that organizations established the importance of supporting innovative ideas and that conceded that knowledge is meaningful in innovation. It is useful to the process of innovation since it acquires both input and output of the change process. The study was done outside Kenya and did not focus on DT-SACCOs as in the current study.

Mutia (2013) studied the Innovation Strategies and Competitive Advantage in Kenya's Telecom Industry. The study's intent was to establish how innovation strategies enhanced, competitive advantages of the key firms in the industry in Kenya. The findings showed that meeting customer needs was the primary reason for the success of products in the market and could be attributed to stimulate superior competitive advantage. It was hence recommended that top management in the industry should align their research and innovation strategies to understand the needs of customers in order to have a sustained competitive advantage. The focus of the study was on the telecom industry.

### **2.3.3 Radical Innovations and Sustainable Competitive Advantage**

Radical innovation refers to a new product, process, technology or service which radically changes the behavior of firms, users and market structures (Coccia, 2015). Projects that involve radical innovations are met with high uncertainty levels because more often new procedures, equipment

and facilities are required in the production of the radical innovations (Song & Thieme, 2009). In developing radical innovations, two requirements must be fulfilled by companies: creating breakthrough ideas that will permit the company to discover major technologies and opportunities hidden in distorted information; and implement the ideas into profitable, marketable technologies and products by combining resources and exploiting them (Hill & Rothaermel, 2013).

The radical innovations taking place among SACCOs in Kenya and those expected to take place in future include; banking as a service (Baas), deposit taking, financial regionalization and rising super platforms. Baas represents a shift from building and managing financial solutions to assembling client-driven financial management tools and related offerings, allowing financial institutions to compete in this fast-changing market. Financial regionalization implies moving to different regions down distinctly different paths while rising super platforms offer the ability to engage with different financial institutions using one channel and may become the dominant model for delivering financial services in certain markets. These innovations lead to new customer acquisition, customer retention, wider market, and increased surplus, increased share capital, increased number of SACCO members, increased loan assets and increased profitability.

Beck, Müller-Bloch and Christopher (2017) conducted a study on block chain as a radical innovation in the banking industry. In their case study, they analyzed how an incumbent bank deals with the radical innovation of blockchain. They found that blockchain as an innovation is unique, since its ability to lower transaction costs requires both intra-organizational, and inter-organizational level of co-operation to fully utilize the technology. They developed a framework that illustrates how the process of discovering, incubating, and accelerating with blockchain can look like. This study was one of the first case studies in the area; which illuminated the challenges that organizations face as they engage with blockchain. The study is a standard blueprint for business executives as they seek to embrace blockchain technology. The investigation was conducted outside Kenya, in the banking industry but was not related to innovation and sustainable competitive advantage.

Perin, Sampaio, Jiménez-Jiménez and Cegarra-Navarro (2016) examined the impact of radical innovation on firm's performance. Data collection involved a survey through email. To test the hypothesis, the study utilized the structural equation modeling. The study found that radical innovations perform a crucial part in the performance of firms in the developing economies. This

study was different methodically as it used structural equation modelling, and related innovation with the performance concept which is different from competitive advantage in this study.

Forés and Camisón (2016) investigated the incremental and radical innovations and how they are dependent on the accumulation of knowledge; the ability of the firms to accumulate knowledge. A firm has the ability to accumulate knowledge and generate it internally using the skills, knowledge and experience of their staff (Smith et al. 2005). It is also possible for an organization to accumulate knowledge using external sources through the development of absorptive capabilities, or they can utilize a strategy that will accumulate knowledge through a combination of the two alternatives (Forés & Camisón, 2016). The creation of capabilities for internal knowledge involves the construction of an internal system which allows organizational members to generate, transfer, and integrate new knowledge within the organization. The resulting internal knowledge is obtained from innovative activities like problem solving and experimentation, and is expounded through internal communication between organizational members from different functions, who combine information in a variety of ways in form of teams or project groups. The formation of organizational teams enables the spread of knowledge in the organization across functions, thereby minimizing misunderstandings between units and assists in the creation of a common language and shared vision for future development. Teams can be utilized as an effective tool for the integration of knowledge in the organization which can be applicable to different situations which will create assured strategic renewal. The study was not conducted in Kenya.

Fathali (2016) investigated the impact of competitive strategies on corporate revolutions in the automobile industry in Iran. The study considered two major automobile manufacturers in the country. The findings showed that competitive strategies had a profound impact on corporate innovation. With powerful statistical importance, three competitive strategies; cost focus, cost leadership and differentiation are responsible for the differences in corporate innovation features including innovation in process, product, and administrative. In this study, the innovation was the dependent variable and was conducted in Iran among the automobile companies and not SACCOs in Kenya.

Lewrick, Omar, Williams, Tjandra and Lee (2015) investigated the correlation between radical innovation and market orientation in the retail industry. The study found that radical innovation leads to an increased competitor orientation which is a key ingredient in market orientation. In

another study, Commer (2013) studied how innovation types such as marketing, product, process and organizational innovation impacted different aspects of firm performance of manufacturing firms in Pakistan. The findings showed that the innovations had a positive impact on organizational performance of the firms. The dependent variable was market orientation and not competitive advantage, was conducted among manufacturing companies in Pakistani and not SACCOs in Kenya.

Owino (2011) studied the competitive strategies utilized by SACCOs in Mombasa County and concluded that the SACCO's should make a decision on the specific competitive strategy they desire. They should also identify enough funding and complement it with visionary leadership to have a competitive edge over competitors to be able to cope with problems existing in the external environment. The study did not specify innovation as the competitive strategy but was general on all competitive strategies. Karanja (2011) studied whether competitive advantage can be attained using innovation strategies in United Bank of Africa Ltd. From the study, it was established that innovation strategies used by the United Bank of Africa, was responsible for the success of the bank and its survival in an uncertain and competitive financial environment thereby achieving competitive advantage. The context of the study was on banks and not on SACCOs.

Bwaley (2011) also did an investigation on the relation between innovation strategies and competitive advantage among NSE listed banks and found that many of them have adopted and innovated several strategies to achieve an advantage. The study was conducted among banks and not SACCOs. Finally, Waloba (2013) studied innovation as the standard for the creation of sustainable competitive advantage among Kenya's shipping agents found that it is widely utilized as a basis of creating competitive advantage in Kenya's shipping agency business. This study is also different from the present study as it was conducted among shipping agents and not SACCOs.

#### **2.4 Summary of Literature and Research Gaps**

The literature review identified research gaps that this research sought to fill. Though various studies have been conducted on innovation, there remains information, contextual and methodological gaps. This study sought to address the gaps shown in Table 2.1 by assessing the role played by specifically incremental, disruptive and radical innovations on the competitive advantage of the financial sector - deposit taking SACCOs.

**Table 2.1: Summary of Literature and Research Gaps**

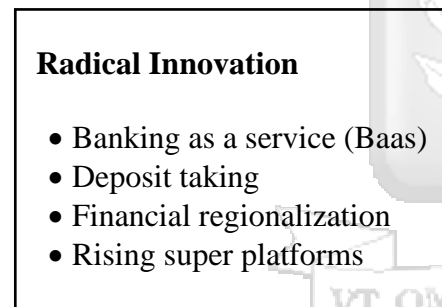
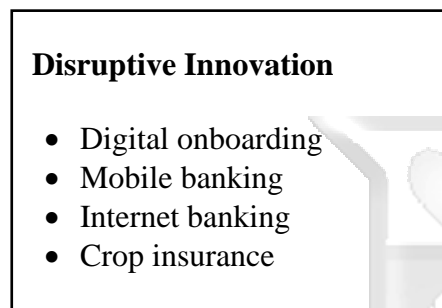
<b>Author</b>	<b>Title</b>	<b>Findings</b>	<b>Research Gaps</b>	<b>Current study</b>
Lee (2011)	To determine how incremental innovation affects human, structural, social and relational capital elements	The study found that the social capital and relational capital positively relate with incremental innovation.	The dependent variable was human structural, social and relational capital elements.	The current study focused on sustainable competitive advantage
Masila (2018)	To determine the effect of electronic banking on efficiency of microfinance banks in Kenya.	The results further revealed that mobile banking, agency banking and ATMs produced positive and statistically significant values for this study while internet banking produced positive but non-statistically significant values for this study.	Although the study was on electronic banking which is a form of disruptive innovation, the dependent variable was efficiency. The study was also carried out in all microfinance banks in Kenya	The current study focused on sustainable competitive advantage
Windell (2018)	Effect of disruptive innovation on the ICT environment of an organization.	The study established that where a company was aware of and adopted disruptive innovation, it resulted into a sustainable competitive advantage for the firm if adopted sufficiently.	The study was conducted in South Africa.	The current study focused at DT-SACCOs in Nairobi County, Kenya
Coccia (2017)	How disruptive innovation led to competitive advantage of the firms in high intensity R&D markets.	The study found that disruptive innovation is a as result of many problems arising from a firm and the adoption of disruptive innovation leads to sustainable competitive advantage.	The study was conducted in Italy but not Kenya.	The current study was conducted in Kenya
Gemici and Alpkın (2015)	Effect of disruptive innovation on competitive advantage of the Turkish airlines.	The findings of the study indicated that disruptive innovation in the form of low-cost carriers increased the competitiveness of the Turkish airline.	The study was conducted in the transport industry in Turkey but not Kenya.	The current study was conducted in the Kenyan SACCO sector
Beck, Müller-Bloch and Christopher (2017)	Block chain as a radical innovation in the banking industry.	Blockchain as an innovation is unique, because its transaction cost-lowering nature requires cooperation not	The study was not done in Kenya and did not cover sustainable	The current study linked corporate innovations to sustainable

		only on an intra-organizational, but also on an inter-organizational level to fully leverage the technology.	competitive advantage	competitive advantage in Kenya
--	--	--------------------------------------------------------------------------------------------------------------	-----------------------	--------------------------------

**2.5 Conceptual Framework**

The conceptual framework is the representation of the connection between the independent variables and dependent variable. Fig 2.1 shows this study’s conceptual framework. The conceptual framework shows that incremental innovation, disruptive innovation and radical innovations all lead to improved sustainable competitive advantage of deposit taking SACCOs. Incremental innovations include SMS alerts, digital identification, digital marketing and big data analysis. These are classified as incremental innovation since they bring about some changes and improvements in the way communication is done, the way identification is done and data analysis but do not displace the other methods of doing so neither do they disrupt the existing model. Disruptive innovations include; digital onboarding, mobile banking, internet banking and crop insurance. These innovations disrupt the existing model since they bring about new ways of marketing, banking which are of greater value and which makes other methods of doing so obsolete. They may also target the lower end of the market. Radical innovations on the other hand include; Banking as a service (Baas), deposit taking, financial regionalization and rising super platforms. These innovations bring changes to the way the SACCOs behave, users and the structure of markets.

## Independent variables



## Dependent variables



**Figure 2.1: Conceptual Framework**

**Table 2.2: Operationalization of Variables**

<b>Variable</b>	<b>Measurement</b>	<b>Data Collection Tool</b>	<b>Data Analysis</b>	<b>Supporting Literature</b>
Incremental innovation	Likert scale	Questionnaire	<ul style="list-style-type: none"><li>• Descriptive statistics</li><li>• Correlation analysis</li><li>• Regression analysis</li></ul>	<ul style="list-style-type: none"><li>• (Grayson, Jain &amp; Ruiz, 2012)</li></ul>
Disruptive innovation	Likert scale	Questionnaire	<ul style="list-style-type: none"><li>• Descriptive statistics</li><li>• Correlation analysis</li><li>• Regression analysis</li></ul>	<ul style="list-style-type: none"><li>• (Christensen, McDonald &amp; Raynor, 2015)</li></ul>
Radical innovation	Likert scale	Questionnaire	<ul style="list-style-type: none"><li>• Descriptive statistics</li><li>• Correlation analysis</li><li>• Regression analysis</li></ul>	<ul style="list-style-type: none"><li>• (Ku, 2017)</li></ul>
Sustainable competitive advantage	Likert scale	Questionnaire	<ul style="list-style-type: none"><li>• Descriptive statistics</li><li>• Correlation analysis</li><li>• Regression analysis</li></ul>	<ul style="list-style-type: none"><li>• Sheehan et al. (2014)</li></ul>

## **2.6 Chapter Summary**

The chapter did a review of theories relating to innovation and sustainable competitive advantage. The theory reviewed was resource-based view theory. The chapter further provided a theoretical relationship between corporate innovations and sustainable competitive advantage. The chapter also provided a review of empirical literature, the research gaps and a summary of the literature.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The section presented research design, target population, sampling frame, sample and sampling techniques, instruments, data collection procedure, pilot test, data processing and analysis. As per Saunders, Lewis and Thornhill (2009), selecting an efficient method of research is difficult because the method adopted influences the results. Myer (2009) states that research ought to move from the underlying philosophy to research design and data collection.

#### **3.2 Research Philosophy**

Research philosophy is a belief about the manner in which data pertaining to a specific phenomenon is gathered, analyzed and consumed (Sekaran and Bougie, 2013). Creswell (2014) provides a framework of four philosophies that can be applied when conducting contemporary research in business topics. These are positivism, constructionism, critical realism and pragmatism. This study was guided by positivism approach. According to Burns and Burns (2008) positivism is concerned with facts rather than impressions. Such facts are consistent with the notion of 'observable social reality'. Positivism research philosophy entails production of quantitative data based on large samples as well as testing of theory and hypothesis. Another attribute of this ideology is that a highly structured methodology is followed by the positivist researcher while testing the hypothesis. Moreover, positivism works on measurable observations upon which statistical analysis is obtained. This study adopted a positivistic approach since it relied on evidence and statistics to determine the relationship among variables.

#### **3.3 Research Design**

This is defined by Labaree (2013) as the overall strategy that is selected to accommodate the various study components in a coherent and consistent manner which ensures that the research problem is well addressed. Labaree (2013) further asserted that it entails the plan/ layout for data collection and data analysis. Descriptive cross-sectional research design was adopted in this study. A descriptive research design according to Kombo and Tromp (2011) seeks to acquire data that describes existing phenomena through asking people about their attitude, perceptions, values or behavior. The descriptive studies involve collecting information without changing the

environment in which the phenomenon exists. The study was cross-sectional as it cut across all the 42 deposit taking SACCOs with headquarters in Nairobi, Kenya.

### **3.4 Target Population**

This is the whole group of people or objects to which a researcher generalizes the conclusions (Lavrakas, 2008). The target population in this study included all the 42-deposit taking SACCOs in Nairobi County, Kenya (SASRA, 2020).

### **3.5 Sampling Frame**

It is the list of all items in a study population. It defines a set of people or elements from which a sample of target population is selected (Lewis-Beck, Bryman & Liao, 2013). The sampling frame for this study was a list of all the 42 SACCOs in Nairobi City County, Kenya. Since the target population was relatively small, the study used the census technique and therefore sampling was not conducted. The unit of analysis was managers in the SACCOs as they are involved in decision making and have the full information concerning innovation and sustainable competitive advantage in the SACCOs.

### **3.6 Data Collection Instruments and Procedure**

#### **3.6.1 Data Collection Instruments**

Questionnaires were applied in collecting primary data. Closed ended questions were used. Closed ended questions were structured into a likert scale which provided quantitative data. The questionnaire was divided into five sections. Section A covered demographic information of the respondents, section B covered closed ended questions on disruptive innovation, section C covered closed ended questions on incremental innovation, section D covered closed ended questions on radical innovations while section E covered closed ended questions on sustainable competitive advantage. Appendix II provides the questionnaire that was used.

#### **3.6.2 Data Collection Procedure**

Data collection began with obtaining consent from the university and NACOSTI. Questionnaires were distributed to the selected respondents who were first assured of the high level of confidentiality that was maintained. They were assured that the information given will be used for academic purposes and not for any other purposes. Administration of questionnaires was done

through the help of research assistants who were first trained to ensure efficiency and effectiveness. Questionnaires were distributed to managers through drop and pick method, email and online Google forms. After distributing the questionnaires, the managers were allowed a span of two weeks to complete filling in the questionnaires. This is because of the tight schedule of managers which would require them to have more time to respond to the questionnaires. In cases of drop and pick questionnaires, the research assistants then picked the questionnaires for analysis.

### 3.7 Data Analysis and Presentation

Once data is collected, it was entered into SPSS and then coded. The study analyzed quantitative data through descriptive and inferential statistics. Descriptive analysis involved mean, percentages and the standard deviation for the responses concerning the study variables, incremental innovation, disruptive innovation, radical innovation and the sustainable competitive advantage. Inferential statistics included correlation analysis and regression analysis and was used to determine the relationship between individual independent variables, incremental innovation, disruptive innovation and radical innovation and the dependent variable sustainable competitive advantage. Principle component analysis was used in variable reduction. The regression model was as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where;

Y = Sustainable competitive advantage

$\alpha$  - Is the regression constant or intercept,

$\beta_1$ ,  $\beta_2$  and  $\beta_3$  - Are regression coefficients or change induced in Y by each  $X_1$ ,  $X_2$  and  $X_3$

$X_1$  - Incremental innovation,

$X_2$  - Disruptive innovation,

$X_3$  - Radical innovation,

$\epsilon$  (Extraneous) - Error term

### 3.8 Research Quality

Fraser, Fahlman, Arscott and Guillot (2018) define a pilot study as a project undertaken prior to the main project. Pilot testing means finding out if the data collection instrument will work for the real project. The pilot test aims at testing if the questions in the instrument make sense and if they are reliable. Pilot testing in this study was conducted on 4 departmental managers (10% of the sample size) which were randomly selected. Those respondents who were used in the pilot test were not part of final study.

#### 3.8.1 Validity of Research Instrument

Kimberlin and Winterstein (2008) defined validity as the degree to which the interpretations of the outcome of a test are warranted, which relies on the specific use the test is required to serve. The main types of validity include; face validity, content, construct and criterion validity. Face validity measures the extent to which the measure is related to the specific construct in the eyes of non-experts. Face validity evaluates if the questionnaire is feasible, readable, has consistency of style and if it uses clear language. Content validity evaluates if the items in the instrument reflect the content and if it has included all the desirable items leaving out the undesirable ones. Construct validity tests if the ideas were translated into functioning and operating reality. Finally, criterion validity examines the extent to which a measure is related to an outcome. Validity in this study was determined through administering the questionnaire to experts in the field of innovation.

#### 3.8.2 Reliability of Research Instrument

Reliability measures if the instrument measures that which it is required to measure every time it is used. It was determined through the use of Chronbach's alpha which determines the internal consistency of the questionnaire (Taber, 2018). Data collected from the managers in the pilot test was analyzed using SPSS and Chronbach's alpha for the items in the questionnaire generated. Those items that had a Chronbach's alpha of less than 0.7 which is the threshold were eliminated from the questionnaire while collecting data for the main study.

**Table 3.1: Reliability Results**

Variables	Cronbach's Alpha	Critical Value	Conclusion
-----------	------------------	----------------	------------

Incremental innovation	0.763	0.7	Reliable
Disruptive innovation	0.776	0.7	Reliable
Radical innovation	0.826	0.7	Reliable
Sustainable competitive advantage	0.883	0.7	Reliable

*Source: Primary Data (2020)*

### 3.9 Diagnostic Tests

In order to ensure there was no violation of the regression model assumptions before proceeding to estimation of the equations, diagnostic tests were performed. The violation of regression model's assumptions leads to arriving at biased and inefficient parameter estimates. Diagnostic tests were therefore performed so as to ensure that regression analysis assumptions were not violated. The diagnostic tests that were conducted for this study were normality test, multicollinearity and heteroskedasticity.

#### 3.9.1 Normality Test

Normality was tested by the Shapiro Wilk which though uncommon, fails to work well where large amount of data is involved, and the test was supplemented by the Kolmogorov-Smirnov test which was suitable for testing distributions of Gaussian nature which have specific mean and variance. The results of normality test are as shown in Table 3.2.

**Table 3.2 Normality Test**

Sustainable competitive advantage	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Incremental innovation	.178	36	.300	.881	36	.723
Disruptive innovation	.173	36	.300	.918	36	.822
Radical innovation	.176	36	.300	.892	36	.784

a. Lilliefors Significance Correction

*Source: Primary Data (2020)*

Both Shapiro-Wilk and Kolmogorov-Smirnov tests revealed that the research data was normally distributed by recording p-values greater than 0.05 and hence rejecting the null hypothesis. The data was consequently considered fit to be used in conducting parametric tests like Pearson's correlation, regression analysis and ANOVA.

### 3.9.2 Multicollinearity Test

Tests for multicollinearity of data were carried out using variance inflation factors (VIF) and Tolerance statistics to determine whether the predictor variables considered in the research are significantly correlated with each other. According to Grewal *et al.* (2004) the main sources of multicollinearity are small sample sizes, low explained variable and low measure reliability in the independent variables. The results of Multicollinearity are as shown in Table 3.2

**Table 3.3 Multicollinearity Test**

Variable	Collinearity Statistics	
	Tolerance	VIF
Incremental innovation	0.352	2.841
Disruptive innovation	0.360	2.778
Radical innovation	0.392	2.551

*Source: Primary Data (2020)*

According to Cooper and Schindler (2003) VIF values above 10.0 demonstrate significant multicollinearity between pairs of variables. Table 3.2 shows that the variance inflation factors were 2.841, 2.778 and 2.551 for incremental innovation, disruptive innovation and radical innovation respectively. This shows that there was no significant multicollinearity between the variables since none of them was above 10.0.

### 3.9.3 Autocorrelation Test

Auto-correlation test was carried out through the Durbin-Watson Statistic. A durbin-watson statistic of 1.947 was within the acceptable range between 1.5 and 2.5 implied that the variable residuals were not serially correlated. The results are as shown in Table 3.4

**Table 3.4 Autocorrelation Test**

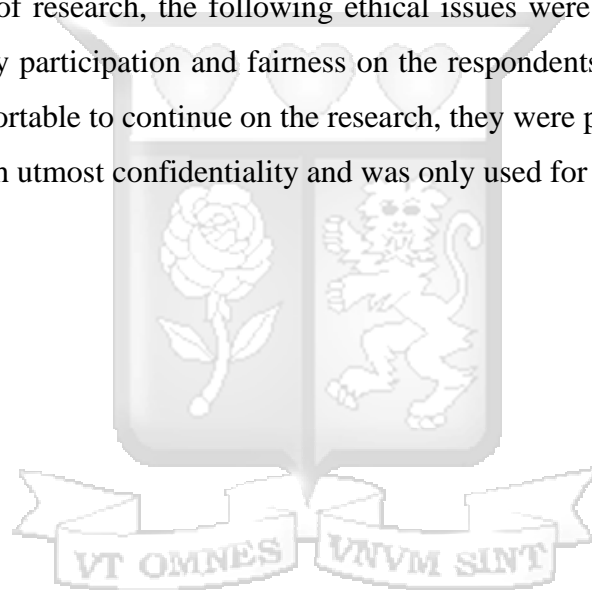
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.694 <sup>a</sup>	.482	.433	.415820	1.947
a. Predictors: (Constant), Incremental innovation, Disruptive innovation, Radical innovation					
b. Dependent Variable: Sustainable competitive advantage					

*Source: Primary Data (2020)*

### 3.10 Ethical Considerations

Ethics is a behaviour which the researcher is required to uphold while carrying out the study (Saunders, 2011). Research ethical considerations emphasize the need to observe voluntary consent, withdrawal liberty and protection from mental and physical harm (Akaranga & Makau, 2016). Due care was given to strict adherence of research procedures more so those dealing with human subjects. As the research involves human participants, care was taken to see to it that they are not negatively affected in any manner and the research is not carried out for personal gain. Research permit was sought prior to research study. Thus, approval was sought from Strathmore University and NACOSTI before carrying out the actual research.

Throughout the process of research, the following ethical issues were observed: confidentiality and anonymity, voluntary participation and fairness on the respondents. This implies that if any respondent were uncomfortable to continue on the research, they were permitted to quit. The data collected was treated with utmost confidentiality and was only used for research purposes.



## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS

#### 4.1 Introduction

This section presents the results from the study. The sections in this chapter include the general information section encompassing the response rate and demographic information. The chapter also outlines the descriptive and inferential statistics in line with the study objectives.

#### 4.2 Response Rate

In survey research, a response rate is the number of responses obtained divided by the number of target respondents. The response rate is also denoted as the completion rate or return rate and it is usually expressed in percentage form. Information on the rate of response for this research is displayed in Table 4.1.

**Table 4.1: Response Rate**

<b>Response Rate</b>	<b>Frequency</b>	<b>Percent</b>
Returned	36	85.7
Unreturned	6	14.3
<b>Total</b>	<b>42</b>	<b>100</b>

*Source: Primary Data (2020)*

Table 4.1 showcases that 42 questionnaires were issued to 1 manager in each of the 42 deposit-taking SACCOs in Nairobi County. The study findings exhibit that out of the 42 issued questionnaires to the target respondents, only 36 responses were made with adequate information and returned which translated to an overall 85.7% study response rate. This is in line with Neil (2009), who stated that a study with 70% response rate and above is sufficient for analysis and drawing conclusions.

#### 4.3 Demographics

The study targeted managers of the 42 DT-SACCOs in Kenya. Respondents were given questionnaires to facilitate collection of primary data. This section presents the findings on the descriptive statistics for the demographic profiles of all the respondents.

### 4.3.1 Gender

The target respondents were requested to specify their gender. The results are as shown in Table 4.2

**Table 4.2: Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	20	55.6%
Female	16	44.4%
<b>Total</b>	<b>36</b>	<b>100%</b>

*Source: Primary Data (2020)*

Results demonstrate that the proportion of respondents who were male was 55.6% while the rest 44.4% were female. This depicts that the DT-SACCOs uphold gender diversity as there is no great disparity between the number of male and female employees among the target respondents.

### 4.3.2 Age

The researcher was also interested in establishing the age of the respondents. Table 4.3 gives an illustration of the results.

**Table 4.3: Age**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
Less than 30	8	22.2%
30-39	24	66.7%
40-49	4	11.1%
<b>Total</b>	<b>36</b>	<b>100%</b>

*Source: Primary Data (2020)*

Results illustrate that the largest proportion of respondents (66.7%) were aged between 30-39 years, 22.2% age bracket was below 30 years while the least percentage (11.1%) were between 40-49 years. The results postulate that most employees in the deposit taking SACCOs are young. Young people are more risk takers as compared to old people and therefore are likely to adopt new corporate innovations.

### 4.3.3 Highest Level of Education

The respondents were implored to state their highest education level. Table 4.4 gives an illustration of the results.

**Table 4.4: Highest Level of Education**

<b>Education</b>	<b>Frequency</b>	<b>Percentage</b>
Bachelor's degree	24	66.7%
Postgraduate	12	33.3%
<b>Total</b>	<b>36</b>	<b>100%</b>

*Source: Primary Data (2020)*

Results demonstrate that the largest proportion (66.7%) had bachelor's degree while 33.3% were postgraduates. The implication of the results is that deposit taking SACCOs are keen to hire staff that are educated. In most cases, high level of educated is associated with competence and mastery of requisite skills required to execute one's duties at the place of work. Educated employees are likely to bring in more corporate innovations as compared to less educated employees.

### 4.3.4 Work Experience with the Firm

The employees had spent variable number of years in the organization as illustrated in Table 4.5.

**Table 4.5: Work Experience with Current Employer**

<b>Work Experience</b>	<b>Frequency</b>	<b>Percentage</b>
10 years and below	28	77.8%
11-20 years	4	11.1%
21-30 years	4	11.1%
<b>Total</b>	<b>36</b>	<b>100%</b>

*Source: Primary Data (2020)*

The duration with an organization can be used as an indicator of their level of knowledge of internal organizational processes, capabilities, and success. The results indicated that 77.8% had worked with their company for 10 years and below, 11.1% for 11-20 years and 11.1% for over 21-30 years. The longer one stays in an organization, the higher the likelihood of coming up with innovations as the understanding of the organization is enhanced over time.

#### 4.4 Sustainable Competitive Advantage

This section analyses the attributes of sustainable competitive advantage including customer satisfaction, operations efficiency and SACCO results. The mean and standard deviation for the specific attributes of sustainable competitive advantage are as presented in Table 4.6.

**Table 4.6: Descriptive Statistics for Sustainable Competitive Advantage**

Statement	N	Median	Mean	Std. Dev.
The Sacco has experienced a reduction in its banking operations cost	36	3.00	3.88	0.87
The Sacco has experienced an improvement in customer loyalty	36	3.00	4.12	0.87
There is prompt and efficient service delivery in our SACCO	36	4.00	4.29	0.81
The SACCO's profitability level is on the rise every year	36	4.00	3.42	1.13
We are able to reach to a wider market than our competitors	36	4.00	3.98	0.95
<b>Average</b>		<b>3.60</b>	<b>3.93</b>	<b>0.92</b>

*Source: Primary Data (2020)*

Results demonstrate that sustainable competitive advantage had improved to a great extent. This can be explained by the fact that the mean score for DT-SACCOs experiencing reduction in their banking operations cost was 3.88 and a standard deviation of 0.87. The mean score for DT-SACCOs has experienced an improvement in customer loyalty was 4.12 and a standard deviation of 0.87. Prompt and efficient service delivery was also depicted by the mean score 4.29 and standard deviation of 0.81. The mean score for SACCO's profitability level being on the rise every year was 3.42 and a standard deviation of 1.13. Further, the respondents agreed that their SACCO is able to reach a wider market than their competitors as shown by a mean of 3.93 and a standard deviation of 0.92.

#### 4.5 Incremental Innovation and Sustainable Competitive Advantage

The first study objective aimed to establish the effect of incremental innovation on sustainable competitive advantage among deposit-taking SACCOs in Nairobi County, Kenya. The respondents were requested to complete the questionnaire on statement concerning incremental

innovation and sustainable competitive advantage on a 5-point Likert scale. Both descriptive and inferential statistics are presented in this section.

#### 4.5.1 Descriptive for Incremental Innovation

The mean and standard deviation for the specific attributes of incremental innovation are as presented in Table 4.7.

**Table 4.7: Descriptive Statistics for Incremental Innovation**

Statement	N	Median	Mean	Std. Dev
Our SACCO has majored on digital identification	36	4.00	4.24	0.55
Our SACCO has introduced transaction SMS alert to customers	36	4.00	4.21	0.73
The SACCO continuously diversifies on the features in saving products	36	4.00	4.03	0.63
Our SACCO regularly engages in digital marketing	36	4.00	3.55	0.86
The initial products in our SACCO have been differentiated into cheaper products	36	4.00	4.45	0.50
Our SACCO has diversified into big data analysis	36	4.00	4.33	0.53
<b>Average</b>		<b>4.00</b>	<b>4.14</b>	<b>0.63</b>

*Source: Primary Data (2020)*

Results demonstrate that the DT-SACCOs had adopted incremental innovation to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to incremental innovation were greater than 3. The findings revealed that most of the respondents concurred that the most significant incremental innovation is differentiating the initial products into cheaper products (Mean=4.45, std. dev=0.5). The findings further revealed that there was agreement by the respondents that the SACCOs have diversified into big data analysis (Mean=4.33, std. dev=0.53). Respondents further agreed that the SACCOs have diversified into digital identification (Mean=4.24, std. dev=0.55). Additionally, findings discovered that majority of the respondents agreed that SACCO has introduced transaction SMS alert to customers (Mean= 4.21, std. dev=0.73). The findings, furthermore, showed that most respondents agreed on the statement that the SACCO continuously diversifies on the features in saving products (Mean=4.03,

std. dev=0.63). Lastly, the findings revealed that most respondents concurred that the SACCOs regularly engages in digital marketing (Mean=3.55std dev=0.86).

#### 4.5.2 The relationship between Incremental Innovation and Sustainable Competitive Advantage

This subsection analyses the relationship between incremental innovation and sustainable competitive advantage as indicated in Table 4.8.

**Table 4.8: Inferential Statistics for Incremental Innovation and Sustainable Competitive Advantage**

<b>Correlation</b>					
		<b>Sustainable competitive advantage</b>			
Incremental innovation	Pearson Correlation	.429**			
	Sig. (2-tailed)	0.000			
<b>Model of Fitness</b>					
<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.429a	0.184	0.176	0.5181863		
<b>ANOVA</b>					
	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	5.881	1	5.881	21.902	0.000
Residual	26.046	34	0.269		
Total	31.927	35			
<b>Regression Coefficients</b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	1.408	0.496		2.841	0.005
Incremental innovation	0.558	0.119	0.429	4.680	0.000

*Source: Primary Data (2020)*

Correlations analysis was done to establish the association between incremental innovation and sustainable competitive advantage. The findings were as shown in Table 4.8. The correlations findings shown that the relationship amongst incremental innovation and sustainable competitive advantage was positive as indicated by the pearson correlation ( $r=0.429$ ,  $p<0.001$ ). The implication here was that incremental innovation positively impacted sustainable competitive advantage among the Deposit-taking SACCOs in Nairobi County.

Regression determined the effect of incremental innovation on sustainable competitive advantage as indicated by the model of fitness in Table 4.8. The appropriateness of fit demonstrates that the findings showed that the R square was 0.184 indicating that incremental innovation explains 18.4% of the variation in sustainable competitive advantage and therefore 81.6% is of the variation is explained by other factors not included in this study.

The ANOVA results in Table 4.8 exhibited that the overall model used to assess the relationship between incremental innovation and sustainable competitive advantage was significant. This was supported by a significance level of 0.000 that was below 0.05 with confidence level being at 95%.

The regression coefficient results in Table 4.8 indicated that incremental innovation positively and significantly relate with sustainable competitive advantage ( $\beta=0.558$ ,  $p=0.000$ ). This suggested that a unit increase in incremental innovation would result in 0.558 increase in sustainable competitive advantage as in the model. The t value (4.680) was higher than the t critical of 1.96 which further supports the findings.

$$Y=1.408+0.558X$$

Where;

Y= Sustainable competitive advantage and

X = Incremental innovation

#### **4.6 Disruptive Innovation and Sustainable Competitive Advantage**

The second study objective aimed to establish the effect of disruptive innovation on sustainable competitive advantage among deposit taking SACCOs in Nairobi County, Kenya. The respondents were requested to complete the questionnaire on statement concerning disruptive innovation and sustainable competitive advantage on a 5-point Likert scale. Both descriptive and inferential statistics are presented in this section.

#### 4.6.1 Descriptive for Disruptive Innovation

The mean and standard deviation for the specific attributes of disruptive innovation are as presented in Table 4.9.

**Table 4.9: Descriptive Statistics for Disruptive Innovation**

Statement	N	Median	Mean	Std. Dev
Our SACCO has adopted online loan processing	36	4.00	4.21	0.69
Our SACCO has introduced digital onboarding	36	4.00	4.03	0.63
We currently introduced use of mobile banking in our SACCO	36	4.00	4.03	0.52
In our SACCO, we have introduced crop insurance	36	4.00	4.42	0.55
Our SACCO has introduced internet banking	36	4.00	4.33	0.68
<b>Average</b>		<b>4.00</b>	<b>4.17</b>	<b>0.62</b>

*Source: Primary Data (2020)*

Results demonstrate that the DT-SACCOs practiced disruptive innovation to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to disruptive innovation were greater than 3. The findings showed that most respondents concurred that they have introduced crop insurance (Mean=4.42, std. dev=0.55). The findings also discovered that the SACCOs have introduced internet banking (Mean=4.33, std. dev=0.68). The findings also show that most of the respondents agreed that the SACCOs have adopted online loan processing (Mean=4.21, std. dev=0.69). Additionally, findings revealed that the SACCOs have introduced digital onboarding (Mean=4.03, std. dev=0.63). Further, findings shown that many respondents concurred that their SACCO has introduced use of mobile banking (Mean=4.03, std. dev=0.52). The overall mean was 4.17 and the standard deviation was 0.62 suggesting that for most of the statements regarding disruptive innovations, respondents were agreeing.

#### 4.6.2 The relationship between Disruptive Innovation and Sustainable Competitive Advantage

This subsection analyses the relationship between disruptive innovation and sustainable competitive advantage as indicated in Table 4.10.

**Table 4.10: Inferential Statistics for Disruptive Innovation and Sustainable Competitive Advantage**

<b>Correlation</b>					
		<b>Sustainable competitive advantage</b>			
Disruptive innovation	Pearson Correlation		.544**		
	Sig. (2-tailed)		0.000		
<b>Model of Fitness</b>					
<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>		<b>Std. Error of the Estimate</b>	
.544a	0.296	0.289		0.4814159	
<b>ANOVA</b>					
	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	9.446	1	9.446	40.759	0.000
Residual	22.481	34	0.232		
Total	31.927	35			
<b>Regression Coefficients</b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	0.293	0.538		0.543	0.588
Disruptive innovation	0.821	0.129	0.544	6.384	0.000

*Source: Primary Data (2020)*

Correlations analysis was done to establish the association between disruptive innovation and sustainable competitive advantage. The correlations findings shown that the relationship between disruptive innovation and sustainable competitive advantage was positive ( $r=0.544$ ,  $p<0.000$ ). The implication here was that disruptive innovation positively impacted sustainable competitive advantage among the Deposit-taking SACCOs in Nairobi County.

Regression analysis was done to determine the effect of disruptive innovation on sustainable competitive advantage. Table 4.10 showed that the R square was 0.296 signifying that incremental innovation explains 29.6% of the variation in sustainable competitive advantage.

The ANOVA results in Table 4.10 indicated that the overall model applied to assess the relation between disruptive innovation and sustainable competitive advantage was significant. This was supported by a significance level of 0.000 that was below 0.05 at 95% confidence level.

The regression coefficient results in Table 4.10 indicated that disruptive innovation positively and substantially relate with sustainable competitive advantage ( $\beta=0.821$ ,  $p=0.000$ ). This implied that change with a unit in disruptive innovation would lead in 0.821 changes in sustainable competitive advantage as in the model. The findings were further supported by a t statistic of 6.384 which was higher than the t critical of 1.96.

$$Y = 0.293 + 0.821X$$

Where:

Y is sustainable competitive advantage

X is disruptive innovation

#### 4.7 Radical Innovation and Sustainable Competitive Advantage

The third study objective aimed to establish the effect of radical innovation on sustainable competitive advantage among deposit-taking SACCOs in Nairobi County, Kenya. The respondents were requested to complete the questionnaire on statement concerning radical innovation and sustainable competitive advantage on a 5-point Likert scale. Both descriptive and inferential statistics are presented in this section.

##### 4.7.1 Descriptive Statistics for Radical Innovation

The mean and standard deviation for the specific attributes of radical innovation are as presented in Table 4.11.

**Table 4.11: Descriptive Statistics for Radical Innovation**

Statement	N	Median	Mean	Std. Dev
Our SACCO engages in new procedures, equipment and facilities	36	4.00	4.00	0.55
Our SACCO has ventured into rising super platforms	36	4.00	3.91	0.67
Financial regionalization has been practiced in our SACCO	36	4.00	3.97	0.80
Our SACCO has introduced block chain in its operations	36	4.00	3.85	0.78
<b>Average</b>		<b>4.00</b>	<b>3.92</b>	<b>0.58</b>

*Source: Primary Data (2020)*

Results demonstrate that radical innovation is being practiced by the DT-SACCOs to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to radical innovation were greater than 3. The findings showed that a large proportion of interviewees agreed that their SACCO engages in new procedures, equipment and facilities (Mean=4.0, std. dev=0.55). The findings further noted that most of the respondents agreed that the financial regionalization has been practiced in their SACCO (Mean=3.97, std. dev=0.80). Similarly, findings showed that respondents agreed on the statement that the SACCOs has ventured into rising super platforms (Mean=3.91, std. dev=0.67). The findings further shown that there was an agreement from the respondents that SACCOs have introduced block chain in their operations (Mean=3.85, std dev=0.78).



#### 4.7.2 The relationship between Radical Innovations and Sustainable Competitive Advantage

This subsection analyses the relationship between radical innovation and sustainable competitive advantage as indicated in Table 4.12.

**Table 4.12: Inferential Statistics for Radical Innovation and Sustainable Competitive Advantage**

<b>Correlation</b>					
		<b>Sustainable competitive advantage</b>			
Radical innovation	Pearson Correlation	.708**			
	Sig. (2-tailed)	0.000			
<b>Model of Fitness</b>					
<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>		<b>Std. Error of the Estimate</b>	
.708a	0.501	0.496		0.4053917	
<b>ANOVA</b>					
	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Regression	15.986	1	15.986	97.273	0.000
Residual	15.941	34	0.164		
Total	31.927	35			
<b>Regression Coefficients</b>					
	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	0.315	0.347		.908	0.000
Radical innovation	0.873	0.089	0.708	9.863	0.000

*Source: Primary Data (2020)*

Correlations analysis was done to establish the association between age and sustainable competitive advantage. The findings were as shown in Table 4.12. The correlations findings shown that the relationship between radical innovation and sustainable competitive advantage was positive ( $r=0.708$ ,  $p<0.001$ ). The implication here was that radical innovation positively impacted sustainable competitive advantage among the Deposit-taking SACCOs in Nairobi County.

The variables were regressed to determine the effect of radical innovation on sustainable competitive advantage. The model of fitness findings was presented in Table 4.12. R square was

0.501 indicating that radical innovation explains 50.1% of the variation in sustainable competitive advantage.

The ANOVA results in Table 4.12 indicated that the overall model used to assess the relationship between radical innovation and sustainable competitive advantage was significant. This was supported by a significance level of 0.000 which was less than 0.05 at 95% confidence level.

The regression coefficient results indicated that radical innovation positively and significantly relate with sustainable competitive advantage ( $\beta=0.873$ ,  $p=0.000$ ). This suggested that a unit variation in radical innovation would cause 0.873 variation in sustainable competitive advantage as shown in the model. The t computed was 9.863 which was greater than the t critical of 1.96 further supporting the findings that radical innovation is significantly related with sustainable competitive advantage.

$$Y= 0.315+0.873X$$

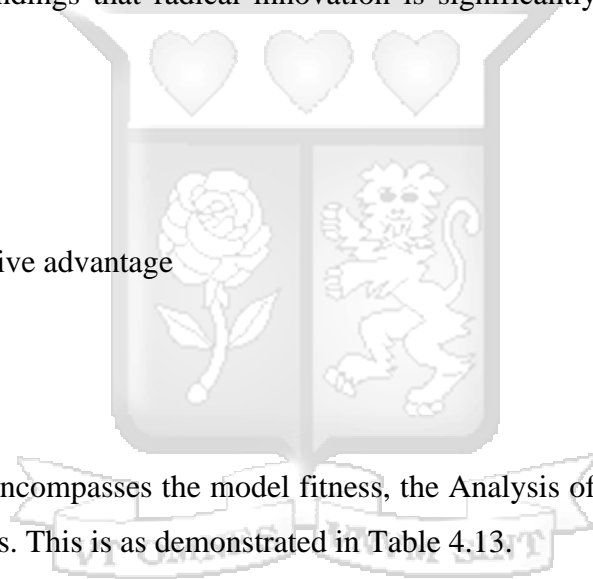
Where:

Y is sustainable competitive advantage

X is radical innovation

#### **4.8 The Overall Model**

The regression analysis encompasses the model fitness, the Analysis of Variance (ANOVA) and the regression coefficients. This is as demonstrated in Table 4.13.



**Table 4.13: Model summary showing the relationship between innovation and sustainable competitive advantage**

<b>Model Summary</b>						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.694 <sup>a</sup>	.482	.433	.415820		
a. Predictors: (Constant), Radical innovation, Disruptive innovation, Incremental innovation						
<b>ANOVA</b>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.143	3	1.714	9.914	.000 <sup>b</sup>
	Residual	5.533	32	.173		
	Total	10.676	35			
a. Dependent Variable: Sustainable competitive advantage						
b. Predictors: (Constant), Radical innovation, Disruptive innovation, Incremental innovation						
<b>Regression Coefficients</b>						
Variable	B	Std. Error	Beta	T	Sig.	
(Constant)	2.056	0.17		12.11	0.000	
Incremental innovation	0.226	0.057	0.285	3.938	0.000	
Disruptive innovation	0.144	0.059	0.172	2.43	0.016	
Radical innovation	0.168	0.037	0.379	4.559	0.000	

*Source: Primary Data (2020)*

Incremental innovation, disruptive innovation and radical innovation were considered satisfactory in explaining DT-SACCOs' sustainable competitive advantage as presented in Table 4.13. This is as reflected by an R square of 0.482. This thus implies that incremental innovation, disruptive innovation and radical innovation explain 48.2% of the variations in DT-SACCOs sustainable competitive advantage with the difference being explained by other factors beyond the study. The other implication is that the model linking the variables relationships is satisfactory. The R value of 0.694 implies that there exists a strong relationship between the predictor variables (incremental innovation, disruptive innovation and radical innovation) and DT-SACCOs sustainable competitive advantage.

Results in Table 4.13 confirm the significance of the model and this is shown by F statistic of 9.914 and a p value of 0.000. This shows that incremental innovation, disruptive innovation and radical innovation are good predictors of DT-SACCOs sustainable competitive advantage. The

regression analysis helped to demonstrate the magnitude of influence incremental innovation, disruptive innovation and radical innovation have on DT-SACCOs sustainable competitive advantage.

The resulting regression model is as follows:

$$Y = 2.056 + 0.226X_1 + 0.144X_2 + 0.168X_3 + 0.17$$

Where

Y = DT-SACCOs' sustainable competitive advantage,

X<sub>1</sub> – Incremental innovation,

X<sub>2</sub> – Disruptive innovation,

X<sub>3</sub> – Radical innovation

Results in Table 4.13 demonstrated a positively significant relationship between incremental innovation and DT-SACCOs sustainable competitive advantage ( $\beta$  0.226, P 0.000). This illustrates that increase in incremental innovation by one unit would cause an improvement on DT-SACCOs sustainable competitive advantage by 0.226 units. Results also portrayed a positively significant relationship between disruptive innovation and DT-SACCOs sustainable competitive advantage ( $\beta$  0.144, P 0.016). This points out that increase in disruptive innovation by one unit would cause an improvement on DT-SACCOs sustainable competitive advantage by 0.144 units. Further, results demonstrated a positively significant relationship between radical innovation and DT-SACCOs sustainable competitive advantage ( $\beta$  0.168, P 0.000). This illustrates that increase in the level of radical innovation by one unit would cause an improvement on DT-SACCOs sustainable competitive advantage by 0.168 units.

#### **4.9 Chapter Summary**

This chapter included the study general information encompassing the response rate and demographic information. The descriptive statistics showing the means and standard deviation for each of the study variables, and the inferential statistics which presents the correlation and multiple regression analysis results. The next chapter of the study presents the discussion, conclusions and recommendations.

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a discussion, conclusion, and recommendations. The discussion, conclusion, recommendations for improvements for the study are presented in line with the study research objectives. Recommendations for further research are also presented in this chapter.

#### **5.2 Discussions of Findings**

The research aimed at finding out the effect of innovations on DT-SACCOs' sustainable competitive advantage. The study sought to answer the following research questions: What is the effect of incremental innovation on DT-SACCOs' sustainable competitive advantage? What is the effect of disruptive innovation on DT-SACCOs' sustainable competitive advantage? What is the effect of radical innovation on DT-SACCOs' sustainable competitive advantage?

This section provides the discussions of the findings for each of the research objectives. The study also established the demographic characteristics of the respondents. The results showed that the gender distribution was close to 1:1. This reveals that there is no gender discrimination as far as employment is concerned in DT-SACCOs. Majority of the employees were in the reproductive age group, with fewer younger people and fewer older people, with those in the middle ages occupying the majority of positions. Owing to the fact that the industry demands higher qualifications, the study also confirmed a higher proportion of employees having postgraduate and bachelor's degrees. On the contrary, a higher proportion of employees had stayed with the companies for less than 5 years.

##### **5.2.1 Incremental Innovation and Sustainable Competitive Advantage**

The study findings reveal that incremental innovation influenced DT-SACCOs sustainable competitive advantage positively. The findings revealed that most of the respondents concurred that the most significant incremental innovation is differentiating the initial products into cheaper products. The findings further revealed that the SACCOs have diversified into big data analysis. Respondents further agreed that the SACCOs have diversified into digital identification. Additionally, findings discovered that majority of the respondents agreed that the SACCOs have introduced transaction SMS alert to customers. The findings, furthermore, showed that the

SACCOs continuously diversify on the features in saving products. Lastly, the findings revealed that most respondents concurred that the SACCOs regularly engages in digital marketing. The regression and correlation results support the results as incremental innovation and DT-SACCOs sustainable competitive advantage were positively and significantly related. These study findings support the resource based view theory which posit that provision of rare and unique resources can enhance firm success.

The study findings reveal that DT-SACCOs in Kenya have differentiated the initial products into cheaper products. These findings are supported by Parast (2011) who argues that incremental innovation tries to meet the requirements of present clients at a rate which is in accordance to the present direction of technology. Gradual innovation ventures require the capacity to strengthen, recombine, and exploit existing learning assets (Lee, 2011). In this case, exploitative learning happens with a tight and top to bottom pursuit to take in all around characterized arrangements of a firm (Kang & Snell, 2009). Tushman and Nadler (1986) point that incremental innovations can be characterized as new features, extended product lines, variations or complements of existing products, improving efficiency or product quality.

The findings of the current study differ with Tarus, Boit and Korir (2017) who sought to establish how incremental innovation affects a firm's competitive advantage. This study employed the explanatory research design. A census survey was conducted on selected service sector firms including 30 commercial banks and 2 telecommunication industries. The specific respondents in this study were branch managers and departmental heads from which primary data was collected using a questionnaire. The study analyzed the data using both the inferential statistics analysis and descriptive statistics. The study found a negative association between incremental innovation and firm's competitive advantage.

Further, Pappenheim, Elibaly, Elkady and Fakry (2016) analyzed incremental innovation and customer perception while seeking to establish how consumers perceive incremental innovation. The study also assessed how consumers' perception on incremental innovation affects market success of a product. The study established that consumers are positive about incremental innovation and they expect it from manufacturers. It was also concluded that incremental innovation do positively affect the market success of a product.

The RBV theory is supported by the findings of this study since the aim was to establish the influence of incremental innovation on DT-SACCOs sustainable competitive advantage and it was established that by providing incremental innovation which is considered to be a unique resource, sustainable competitive advantage among DT-SACCOs can be achieved (Penrose, 1959). The results also support the notion that infusion of innovation is relevant since it creates additional value for new entities.

The findings of this study were that incremental innovation influences sustainable competitive advantage among DT-SACCOs in Nairobi County, Kenya. This implies that increased number of DT-SACCOs practising incremental innovations will lead to improved DT-SACCOs sustainable competitive advantage. Further, the study found that incremental innovations are being practiced by DT-SACCOs in Nairobi County to a great extent.

### **5.2.2 Disruptive Innovation and Sustainable Competitive Advantage**

Results demonstrate that disruptive innovation influenced DT-SACCOs sustainable competitive advantage positively. The findings showed that most respondents concurred that they have introduced crop insurance. The findings also discovered that the SACCOs have introduced internet banking. The findings also show that most of the respondents agreed that the SACCOs have adopted online loan processing. Additionally, findings revealed that the SACCOs have introduced digital onboarding. Further, findings showed that many respondents concurred that their SACCO has introduced use of mobile banking. The regression and correlation results support the results as disruptive innovation and DT-SACCOs sustainable competitive advantage were positively and significantly related. These study findings support the resource based view theory which posits that provision of rare and unique resources can enhance firm competitive advantage.

The finding that disruptive innovations positively influence DT-SACCOs competitive advantage is in line with Masila (2018). Masila (2018) investigated how electronic banking impacts efficiency of microfinance banks in Kenya. It was conducted on all the 13 microfinance banks in Kenya. Electronic banking was the independent variable with four measures (value of mobile banking transactions per year, value of internet banking transactions per year, value of agency banking transactions per year and value of ATM transactions per year. Efficiency was the dependent variable given by total revenue to total assets. The results revealed that mobile banking,

agency banking and ATMs produced positive substantial values for this study while internet banking produced positive but weak values for this study.

The results are in line with World Bank (2018) who found that innovation outcomes in Kenya are relatively high. In their survey, 53 percent of the companies surveyed introduced a product or process in the period 2010-2012; 39.8 percent introduced product innovations; and 38 percent process innovations. The rate of innovation is greater with marketing innovation; 69.2 percent companies introduced improvements in marketing. Contrarily, only 27.8 percent implemented organizational innovations. In summary, the introduction of significant changes to products and processes, and especially marketing, is common in Kenya.

The findings also concur with Windell (2018) who conducted a study with the aim of determining the effect of disruptive innovation on the ICT environment of an organization. The influence of disruptive technology was explained in terms of the business value of the value network of the organization, information technologies, business activities and the current security framework of the information technology architecture. The study was done among three organizations in South Africa. The study established that where a company was aware of and adopted disruptive technology, it resulted into a sustainable competitive advantage of the firm if adopted sufficiently.

The RBV theory was supported by the findings of the current study as it was revealed that by DT-SACCOs practicing disruptive innovation, which is considered to be a unique resource, DT-SACCOs enhance their sustainable competitive advantage. This therefore implies that disruptive innovation can be referred to as a unique resource that can help firms achieve sustainable competitive advantage.

### **5.2.3 Radical Innovation and Sustainable Competitive Advantage**

The study findings illustrate that radical innovation influenced DT-SACCOs sustainable competitive advantage positively. The findings showed that a large proportion of interviewees agreed that their SACCO engages in new procedures, equipment and facilities. The findings further noted that most of the respondents agreed that the financial regionalization has been practiced in their SACCO. Similarly, findings showed that respondents agreed on the statement that the SACCOs has ventured into rising super platforms. The findings further shown that there was an agreement from the respondents that SACCOs have introduced block chain in their operations.

The regression and correlation results support the results as radical innovation and DT-SACCOs sustainable competitive advantage were positively and significantly related. These study findings support the resource based view theory which posits that provision of rare and unique resources can enhance firm success.

Results demonstrate that ability to offer radical innovation enhanced DT-SACCOs sustainable competitive advantage. These findings are in lieu with the assertions of Perin, Sampaio, Jiménez-Jiménez and Cegarra-Navarro (2016) who examined the impact of radical innovation on firm's performance. Data collection involved a survey through email. To test the hypothesis, the study utilized the structural equation modeling. The study found that radical innovations perform a crucial part in the performance of firms in the developing economies.

This finding concurs with Lewrick, Omar, Williams, Tjandra and Lee (2015) who investigated the correlation between radical innovation and market orientation. The study found that radical innovation leads to an increased competitor orientation which is a key ingredient in market orientation. Another study by Commer (2013) studied how innovation type's such as marketing, product, process and organizational innovation impacted different aspects of firm performance of manufacturing firms in Pakistan. The findings showed that the innovations had a positive impact on organizational performance of the firms.

These study findings are in line with Beck, Müller-Bloch and Christopher (2017) who conducted a study on block chain as a radical innovation in the banking industry. In their case study, they analyzed how an incumbent bank deals with the radical innovation of blockchain. They found that blockchain as an innovation is unique, since its ability to lower transaction costs requires both intra-organizational, and inter-organizational level of co-operation to fully utilize the technology. They hence developed a framework that illustrates how the process of discovering, incubating, and accelerating with blockchain can look like. This study was one of the first case studies in the area; which illuminated on the challenges that organizations face as they engage with blockchain.

The RBV theory links to this research objective in that radical innovation offered by DT-SACCOs and which is considered to be a unique resource helps in sustainable competitive advantage among DT-SACCOs. This therefore implies that by practicing radical innovation, DT-SACCOs offers firms unique resources that lead to enhanced competitive advantage.

### **5.3 Conclusions**

The study concluded that incremental innovation influenced DT-SACCOs sustainable competitive advantage positively. This was reflected by the regression and correlation results as there was a positive and significant relationship between incremental innovation and DT-SACCOs sustainable competitive advantage. The study concluded that the DT-SACCOs in Nairobi County are practicing incremental innovation to a great extent.

The study also concluded that disruptive innovation influenced DT-SACCOs sustainable competitive advantage positively. This was reflected by the regression and correlation results as there existed a positive and significant relationship between disruptive innovation and DT-SACCOs sustainable competitive advantage. The study also established that DT-SACCOs in Nairobi County, Kenya practice disruptive innovations to a great extent.

The study further concluded that radical innovation influenced DT-SACCOs sustainable competitive advantage positively. This was reflected by the regression and correlation results as there existed a positive and significant relationship between radical innovation and DT-SACCOs sustainable competitive advantage. The study also concluded that the Kenya DT-SACCOs practiced radical innovations to a great extent.

### **5.4 Contribution of the Study**

This study contributes knowledge on the role of innovations on sustainable competitive advantage. The study has filled existing knowledge gap on the nature of association between the various components of DT-SACCOs innovations (incremental innovation, disruptive innovation and radical innovation) and sustainable competitive advantage. Scholars and researchers will gain from this study as it will form a basis of conducting future studies related to DT-SACCO innovations and sustainable competitive advantage.

The study further contributes to theory development by providing more literature that can aid in development of resource based view theory. The RBV theory can be enhanced further to include incremental innovation, radical innovation and disruptive innovation offered by DT-SACCOs as unique resources which help in sustainable competitive advantage among DT-SACCOs. The results also support the notion that infusion of innovation is relevant since it creates additional value for new entities.

## **5.5 Recommendations**

The study revealed that innovations influenced DT-SACCOs' sustainable competitive advantage positively. The study thus recommends that practitioners should be more vibrant in innovating new ways of increasing their innovations (incremental, disruptive, radical) as this would boost their sustainable competitive advantage and thereby sharpen their competitive edge. The study also recommends that practitioners should adopt new innovative ways of ensuring seamless innovations in their operations.

The study recommends the need for policymakers and to come up with policies that make it easy for DT-SACCOs to innovate and offer rights' protection to encourage innovativeness. Policy makers should also provide incentives to DT-SACCOs to ensure their continued effort to boost innovations is maintained. Policy makers should further come up with policies aimed at enhancing visibility of innovations developed by DT-SACCOs.

The study recommends the need for government to develop policies aimed at protecting the innovations developed by DT-SACCOs so that the firms are able to enjoy maximum benefits from the innovations. The government can also come up with policies aimed at protecting the DT-SACCOs from unfair competition by ensuring there is fair playing ground for all the participants. This would go a long way in ensuring sustainable competitive advantage among DT-SACCOs in Nairobi County and other SACCOs in general.

The study recommends the need for academia and other researchers to build on this study in establishing other factors that can enhance sustainable competitive advantage among DT-SACCOs. Researchers can also establish factors influencing uptake of innovations and or the extent of innovations among these DT-SACCOs. Further, researchers can conduct studies on other DT-SACCOs in Kenya to confirm or disapprove the findings of the current study.

## **5.6 Limitations of the Study**

There are two main types of SACCOs that are in operations in Kenya; the deposit taking and those that do not take deposits. This study only focused on the DT SACCOs and therefore the other SACCOs were not considered.

The study was limited to selected aspects of DT-SACCOs. Given that the competitive advantage of DT-SACCOs could be attributable to other factors that were not covered in this research, then the results of the study would not necessarily be generalized to the entire population of DT-SACCOs in Kenya.

For the purpose of analyzing the data, the researcher used the multiple linear regression model. Because of the limitations involved when this model is used like the erroneous and misleading results following a change in variables, the findings by the researcher cannot be generalized with certainty.

### **5.7 Research Areas for Further Studies**

This study investigated how innovations influence DT-SACCOs sustainable competitive advantage. The study particularly focused on incremental innovation, disruptive innovation and radical innovation. The study recommends that a study focusing on other aspects of innovations should be conducted to show whether they differ on how they impact DT-SACCOs sustainable competitive advantage. The study also recommends that a similar study should be conducted but focus on other DT-SACCOs in Kenya that were not captured in this study. This would help to establish whether there is any similarity on how innovations impact DT-SACCOs sustainable competitive advantage.

The study solely relied on primary data, alternative studies can be done using secondary sources for the different DT-SACCOs which could either support or contradict the current study. Finally, because of the limitations of regression models, other models such as the Vector Error Correction Model (VECM) can be utilized in analyzing the relation between the variables.

## REFERENCES

- Ab Rahman, A., Hamid, U. Z. A., & Chin, T. A. (2017). *Emerging Technologies with Disruptive Effects: A Review*)
- Aghion, P., Harris, C., Howitt, P., & Vickers, J. (2011). Competition, imitation and growth with step-by-step innovation. *The Review of Economic Studies*, 68(3), 467-492.
- Akaranga, S. I., & Makau, B. K. (2016). The Hermeneutics of Education Management Information Systems for Kitinga Primary School in Mwingi Central-Kenya. *Journal of Education and Practice*, 7(35), 36-40.
- Ang, M. C., Ramayah, T., & Amin, H. (2015). A theory of planned behavior perspective on hiring Malaysians with disabilities. *Equality, Diversity and Inclusion: An International Journal*, 34(3), 186-200.
- Aziz, N. N. A., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, 35, 256-266.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management science*, 32(10), 1231-1241.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of management*, 27(6), 643-650.
- Beck, Roman & Müller-Bloch, Christoph. (2017). Blockchain as Radical Innovation: A Framework for Engaging with Distributed Ledgers as Incumbent Organization. 10.24251/HICSS.2017.653.
- Besanko, D., & Dranove, D. en Shanley, M., 2000. *Economics of Strategy*, New York, John Wiley & Sons.

- Besanko, D., Dranove, D., Shanley, M., & Schaefer, S. (2010). *Economics of strategy*, 2000.
- Bessant, J. (2001). Radical Innovation: How Mature Companies can Outsmart Upstarts. *Technovation*, 21(10), 706-707.
- Bharadwaj, S. G., Varadarajan, P. R., & Fahy, J. (2013). Sustainable competitive advantage in service industries: a conceptual model and research propositions. *The Journal of Marketing*, 83-99.
- Brem, A., Maier, M., & Wimschneider, C. (2016). Competitive advantage through innovation: the case of Nespresso. *European Journal of Innovation Management*, 19(1), 133-148.
- Bwaley, M. (2011). *The relationship between innovation strategies and competitive advantage among banks listed in the Nairobi stock exchange*. Unpublished MBA thesis University of Nairobi.
- Campbell, A., & Luchs, K. S. (Eds.). (1997). *Core competency-based strategy*. Cengage Learning Business Press.
- Cegliński, P. (2016). The concept of competitive advantages. Logic, sources and durability. *Journal of Positive Management*, 7(3), 57-70.
- Central Bank of Kenya (2018). *The Kenya Financial Sector Stability Report 2018*. Nairobi, Kenya
- Chandler, G. N., & Hanks, S. H. (2014). Market attractiveness, resource-based capabilities, venture strategies, and venture performance. *Journal of Business Venturing*, 9(4), 331-349.
- Christensen, C., (1997). *The Innovator's Dilemma. The Revolutionary Book That Will Change the Way You Do Business*, 1st ed. Collins Business Essentials, New York
- Christensen, C. M., Wang, D. and Van Bever, D. (2013). 'Consulting on the cusp of disruption'. *Harvard Business Review*
- Christensen, C. M., McDonald, R. & Raynor, M. (2015). What Is Disruptive Innovation. *Harvard Business Review*

- Coccia, M. (2015). Radical innovations as drivers of breakthroughs: Characteristics and properties of the management of technology leading to superior organisational performance in the discovery process of R&D labs. *Technology Analysis & Strategic Management*, 28(4), 381-395.
- Coccia, M. (2017). Disruptive technologies and competitive advantage of firms in dynamic markets.
- Commer .P.J (2013). Effects of Innovation Types on Firm Performance: an Empirical Study on Pakistan's Manufacturing Sector. *Journal of Economic Literature*, 58, 6, 64-92.
- Conto, S. M. D., Júnior, A., Valle, J. A., & Vaccaro, G. L. R. (2016). Innovation as a competitive advantage issue: a cooperative study on an organic juice and wine producer. *Gestão & Produção*, 23(2), 397-407.
- Coyne, K. P. (2016). Sustainable competitive advantage—What it is, what it isn't. *Business horizons*, 29(1), 54-61.
- Damanpour, F. (2011). Global banking: developments in the market structure and activities of foreign banks in the United States. *Columbia Journal of World Business*, 26(3), 58-70.
- Davenport, T. H. (2013). *Process Innovation: Reengineering Work through Information Technology*. Harvard Business Press
- Davies, J., Toxall, G. R., & Pallister, J. (2002). Beyond the intention-behavior mythology: An integrated model of recycling. *Marketing Theory*, 2 (1), 29-113.
- Davila, T. (2014). *The innovation strategy big companies should pursue*. Harvard Business School Publishing
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–339.
- Dishaw, M. T. & Strong, D. M. (1999). Extending the technology acceptance model with task-technology fit constructs, *Information & Management*, 36(1), 9-21.

- Duncan, W. J., Ginter, P. M., & Swayne, L. E. (2018). Competitive advantage and internal organizational assessment. *Academy of Management Perspectives*, 12(3), 6-16.
- Fathali, A. (2016). The impact competitive strategies have on corporate revolutions in the automobile business of Iran. *International Journal of Asian Social Science*, 2016, 6(2): 135-145
- Fishbein, M & Ajzen, I. (2010). *Predicting and changing behavior. An introduction to theory and research*. Reading, MA: Addison-Wesley
- Forés, B. & Camisón, C. (2016). Does incremental and radical innovation performance depend on different types of knowledge accumulation capabilities and organizational size? *Journal of Business Research*, 69, 2, 831-848.
- Fraser, J., Fahlman, D. W., Arscott, J., & Guillot, I. (2018). Pilot Testing for Feasibility in a Study of Student Retention and Attrition in Online Undergraduate Programs. *The International Review of Research in Open and Distributed Learning*, 19(1).
- Gamal, D. (2011). *How to Measure organization innovativeness? An overview of Innovation measurement frameworks and Innovation Audit / Management tools*
- Gann, D. M. (2015). H. Chesbrough, *Open Innovation: The New Imperative For Creating And Profiting From Technology*, Harvard Business School Press, 2003 (272 pp., \$35.00, ISBN: 1-57851-837-7). *Research Policy*, 34(1), 122-123.
- Gaya, H. J., Struwig, M., & Smith, E. E. (2013). Creating a sustainable competitive advantage at a high performing firm in Kenya. *African journal of business management*, 7(21), 2049-2058.
- Gemici, E., & Alpan, L. (2015). An application of disruptive innovation theory to create a competitive strategy in Turkish air transportation industry. *Procedia-Social and Behavioral Sciences*, 207, 797-806.
- Hamel, G., & Prahalad, C. K. (1996). Competing in the new economy: Managing out of bounds. *Strategic management journal*, 17(3), 237-242.

- Hana, U. (2013) Competitive advantage through innovation and knowledge. *Journal of competitiveness*. 5(1), 82-96.
- Hill, C. W., & Rothaermel, F. T. (2003). The Performance of Incumbent Firms in the Face of Radical Technological Innovation. *The Academy of Management Review*, 28(2), 257.
- Ionescu, A., & Dumitru, N. R. (2015). The role of innovation in creating the company's competitive advantage. *Ecoforum Journal*, 4(1), 14.
- Işoraité, M. (2018). The competitive advantages theoretical aspects. *Ecoforum Journal*, 7(1).
- Kang, S. C., & Snell, S. A. (2009). Intellectual capital architectures and ambidextrous learning: a framework for human resource management. *Journal of Management Studies*, 46(1), 65-92.
- Karanja .F (2011). *Competitive advantage through innovation strategies in United Bank Of Africa Limited*, Unpublished MBA project, University of Nairobi
- Kendra, C. (2018). *Cross sectional Research Method. How does it Work?*
- Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. *American Journal of Health-System Pharmacy*, 65(23), 2276-2284.
- Kombo, D. K., & Tromp, D. L. (2011). A (2006) Proposal and Thesis Writing. *An Introduction. Nairobi. Pauline's publication Africa.*
- Korsakienė, R., & Tvaronavičienė, M. (2012). The internationalization of SMEs: an integrative approach. *Journal of business economics and management*, 13(2), 294-307.
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2014). The resource-based view: a review and assessment of its critiques. *Journal of management*, 36(1), 349-372.
- Ku, L. (2017). What is corporate innovation? Plug and play
- Labaree, R. V. (2013). Organizing your social sciences research paper. Available in: <http://libguides.usc.edu/content.php>.

- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Sage Publications.
- Lee, J. Y. (2011). *Incremental innovation and radical innovation: the impacts of human, structural, social, and relational capital elements*. Michigan State University. Operations and Sourcing Management.
- Lee, J. Y. (2011). *Incremental innovation and radical innovation: the impacts of human, structural, social, and relational capital elements*. Michigan State University. Operations and Sourcing Management.
- Lewis-Beck, M. S., Bryman, A., & Liao, T. F. (2013). Encyclopaedia of social science research methods: quantitative research. *PDF document*]. doi, 10, 9781412950589.
- Lewrick, M., Omar, M., Williams Jr, R., Tjandra, N. C., & Lee, Z. C. (2015). Radical and incremental innovation effectiveness in relation to market orientation in the retail industry: triggers, drivers, and supporters. In *Successful technological integration for competitive advantage in retail settings* (pp. 239-268). IGI Global.
- Li, Y., Wu, C., Luo, P., & Zhang, W. (2013). Exploring the characteristics of innovation adoption in social networks: structure, homophily, and strategy. *Entropy*, 15(7), 2662-2678.
- Lisangari, L, S. (2016). Effect Of Innovationstrategies On Competitive Advantage Among Savings And Credit Co-Operative Societies In Mombasa County, Kenya
- Madhani, P. M. (2010). The resource-based view (RBV): issues and perspectives.
- Masila, J. (2018). *Effect of electronic banking on efficiency of microfinance banks in Kenya*. Unpublished MSc research project, University of Nairobi
- MCKinsey (2016).The accelerating digitization of the US economy
- MoEST (2018). *Incremental innovations in Kenya*. Ministry of Education, Kenya
- Mustafa, H. K., & Yaakub, S. (2018). Innovation and Technology Adoption Challenges: Impact On SMES' Company Performance. *International Journal of Accounting*, 3(15), 57-65.

- Mutia, A. (2013). *Innovation Strategies and Competitive Advantage in the Telecommunication Industry in Kenya*. Unpublished MBA thesis university of Nairobi.
- Ng'ang'a Dn. M. (2017). Evaluation of Competitive Strategies Applied By Savings And Credit Co-Operatives In Enhancing Their Financial Performance: In Kiambu County Kenya.
- Ngugi, J. N. (2017). Effect of Competitive Strategies On Sustainable Competitive Advantage Of Savings And Credit Cooperative Societies In Kenya (A Survey Of Savings And Credit Cooperative Societies In Mombasa County). *Strategic Journal of Business & Change Management*, 4(2).
- Nur. F, Topsakal. Y., & Dogan.O (2014). Strategic innovation actions in hotels working in Antalya province. *Advances in Hospitality and Tourism Research (AHTR)*, 2(1): 16-29, 2014
- Okelo, M. (2014). Sustainable competitive advantage among savings and credit cooperative societies in Nairobi County. *Unpublished MBA Research Project, School of Business University of Nairobi, Kenya*.
- Owino, M. (2011). *Competitive Strategies Adopted by Savings and Credit Cooperatives in Mombasa County*. Unpublished MBA Project, University of Nairobi
- Pappenheim, B. S. C., Elibaly, M., Elkady, M., & Fakry, I. (2016). Incremental Innovation Effects on Consumer Perception.
- Parast, M. M. (2011). The effect of Six Sigma projects on innovation and firm performance. *International Journal of Project Management*, 29(1), 45-55.
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Perin, M. G., Sampaio, C. H., Jiménez-Jiménez, D., & Cegarra-Navarro, J. G. (2016). Network effects on radical innovation and financial performance: An open-mindedness approach. *BAR-Brazilian Administration Review*, 13(4).

Porter, M. E. (1989). How competitive forces shape strategy. In *Readings in strategic management* (133-143). Palgrave, London.

Rosemann, M., & Vom Brocke, J. (2015). *The six core elements of business process management*. In Handbook on business process management 1 (105-122). Springer Berlin Heidelberg.

Ruiz, D., D. Jain, and K. Grayson. 2012. "Subproblem Decomposition: An Exploratory Research Method for Effective Incremental New Product Development." *Journal of Product Innovation Management* 29 (3): 385–404.

SACCO Societies Regulations 2020

Sagwa, E. V., & Kembu, A. S. (2016). Effects of Competitive Strategy on the Performance of Deposit Taking SACCOs in Nairobi County, Kenya.

Saunders, M. N. (2011). *Research methods for business students, 5/e*. Pearson Education India.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.

Schumpeter, J. A. (1961). The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle (1912/1934). *Google Scholar*.

Sekliuckienė, J., & Langvinienė, N. (2011). Gaining the competitive advantage in services: aspect of human resources. *Ekonomika ir vadyba: aktualijos ir perspektyvos: mokslo straipsnių rinkinys*, (2), 26-34.

Shan, Y., & King, K. W. (2015). The effects of interpersonal tie strength and subjective norms on consumers' brand-related eWOM referral intentions. *Journal of Interactive Advertising*, 15(1), 16-27.

Sheehan, M., Garavan, T. N., & Carbery, R. (2014). Innovation and human resource

Song, M., & Thieme, J. (2009). The role of suppliers in market intelligence gathering for radical and incremental innovation. *Journal of Product Innovation Management*, 26(1), 43-57.

- Sun H. & Zhang P. (2006). The role of moderating factors in user technology acceptance, *Journal of Human-Computer Studies*, 64(1), 53-78.
- Tarus, V. Boit, R., & Korir, M. (2017). Incremental Innovation And Firm's Competitive Advantage: A Quantitative Analysis Approach *International Journal of Quantitative and Qualitative Research Methods*. 5 (1) 22-30
- Taylor, A., & Greve, H. R. (2016). Superman or the fantastic four? Knowledge combination and experience in innovative teams. *Academy of Management Journal*, 49(4), 723-740.
- Trochim, M. K., & Donnelly, J. P. (2014). Nonprobability sampling. The Research Methods Knowledge Base website.
- Tushman, M., & Nadler, D. (1986). Organizing for Innovation. *California Management Review*, 28(3), 74-92.
- Urbancová, H. (2013). *Innovation and competitive advantage in Czech Republic*, Unpublished Phd Thesis
- Varadarajan, R. (2009). Fortune at the bottom of the innovation pyramid: The strategic logic of incremental innovations. *Business Horizons*, 52,2, 341-356.
- Waloba, N. (2013). *Innovation as a basis of creating sustainable competitive advantage among shipping agents in Kenya*. Unpublished MBA thesis University of Nairobi.
- Wang, H. L. (2014). Theories for competitive advantage.
- Wang, H. L. (2014). *Theories for competitive advantage*.
- Wanyoike, M. P. (2016). *Relationship Between Innovation Strategies And Competitive Advantage In The Logistics Firms In Mombasa County, Kenya* (Doctoral Dissertation, School Of Business, University Of Nairobi).
- Windell, A. C. (2018). *The impact of disruptive technologies on designated organisations within the IT industry in South Africa* (Doctoral dissertation, University of Pretoria).

World Bank (2018). *Innovation statistics in the banking industry*. Washington DC. World Bank.

World Council of Credit Unions (WOCCU) (2018), *Statistical Report 2018*, World Council of Credit Unions, Madison, WI.



## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

Dear Sir/Madam,

My name is Salome Achieng. I am a post-graduate student from Strathmore University. I wish to conduct a research titled. *“The role of innovation in attaining sustainable competitive advantage among Deposit-Taking Savings and Credit Cooperatives (SACCOS) in Nairobi County, Kenya”*. A questionnaire has been developed to assist gathering relevant information for this study. I will ask you a few questions to assist in completion of this study. Whatever information you shall provide will be strictly confidential and will not be shown to any other persons. Participation in the study is voluntary.

Many thanks for your acceptance with regards to participation in this study

Yours Faithfully,

**Salome Grace Achieng**



## APPENDIX II: STRATHMORE UNIVERSITY ETHICAL APPROVAL



27<sup>th</sup> February 2020

Mrs Achieng, Salome  
sagmango@gmail.com

Dear Mrs Achieng,

**RE: The Role of Innovation in Attaining Sustainable Competitive Advantage Among Deposit-Taking Savings and Credit Cooperatives (Saccos) In Nairobi County, Kenya**


This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is SU-IERC0637/20. The approval period is **27<sup>th</sup> February, 2020 to 26<sup>th</sup> February, 2021.**

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

  
for: Dr Virginia Gichuru,  
Secretary; SU-IERC

Cc: Prof Fred Were,  
Chairperson; SU-IERC





## APPENDIX IV: RESEARCH QUESTIONNAIRE FOR MANAGERS

This questionnaire is structured to collect information on the role of innovations on sustainable competitive advantage among deposit-taking SACCOs in Nairobi County, Kenya. Kindly read the questions carefully and tick against the asked question as per your position or understanding and relevance to the study. Utmost confidentiality is assured as the data collected from this questionnaire will purely be used for academic purposes.

### **Section A: Demographic Information**

1. Please indicate your gender:

- (a) Male  (b) Female

2. What is your highest level of education?

- (a) Bachelor's degree  (b) Masters degree  (c) PhD

3. Please indicate your age bracket:

- (a) Less than 30years  (b) 31 - 40years   
 (c) 41 – 50years  (d) Above 50 years

5. How long have you worked in this position in this SACCO?

- (a) Less than 10years  
 (b) 11 to 20years  
 (c) 21 to 30years  
 (d) Over 30years

### **Section B: Incremental Innovation**

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: 1. *Strongly Disagree (SD)*, 2. *Disagree (D)*, 3. *Uncertain (U)*, 4. *Agree (A)*, 5. *Strongly Agree (SA)*

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Our SACCO has majored on digital identification					
Our SACCO has introduced transaction SMS alert to customers					
The SACCO continuously diversifies on the features in saving products					

Our SACCO regularly engages in digital marketing					
The initial products in our SACCO have been differentiated into cheaper products					
Our SACCO has diversified into big data analysis					

### **Section C: Disruptive Innovation**

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: 1. *Strongly Disagree (SD)*, 2. *Disagree (D)*, 3. *Uncertain (U)*, 4. *Agree (A)*, 5. *Strongly Agree (SA)*

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Our SACCO has adopted online loan processing					
Our SACCO has introduced digital onboarding					
We currently introduced use of mobile banking in our SACCO					
In our SACCO, we have introduced crop insurance					
Our SACCO has introduced internet banking					

### **Section D: Radical Innovation**

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: 1. *Strongly Disagree (SD)*, 2. *Disagree (D)*, 3. *Uncertain (U)*, 4. *Agree (A)*, 5. *Strongly Agree (SA)*

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
Our SACCO engages in new procedures, equipment and facilities					
Our SACCO has ventured into rising super platforms					
Financial regionalization has been practiced in our SACCO					
Our SACCO has introduced block chain in its operations					

**Section E: Sustainable Competitive Advantage**

Indicate your level of agreement with the following statements by ticking at the appropriate box. Use the rating criteria: 1. *Strongly Disagree (SD)*, 2. *Disagree (D)*, 3. *Uncertain (U)*, 4. *Agree (A)*, 5. *Strongly Agree (SA)*

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
The Sacco has experienced an reduction in its banking operations cost					
The Sacco has experienced an improvement in customer loyalty					
There is prompt and efficient service delivery in our SACCO					
The SACCO's profitability level is on the rise every year					
We are able to reach to a wider market than our competitors					



## APPENDIX V: DEPOSIT TAKING SACCOS IN NAIROBI

### NO. NAME OF SOCIETY

- |     |                                         |     |                                                   |
|-----|-----------------------------------------|-----|---------------------------------------------------|
| 1   | Afya Sacco Society Ltd                  | 23. | Nacico Sacco Society Ltd                          |
| 2   | Airports Sacco Society Ltd              | 24. | Nafaka Sacco Society Ltd                          |
| 3   | Ardhi Sacco Society Ltd                 | 25. | Nation Sacco Society Ltd                          |
| 4   | Asili Sacco Society Ltd                 | 26. | Nssf Sacco Society Ltd                            |
| 5.  | Chai Sacco Society Ltd                  | 27. | Nyati Sacco Society Ltd                           |
| 6   | Chuna Sacco Society Ltd                 | 28. | Safaricom Sacco Society Ltd                       |
| 7   | Comoco Sacco Society Ltd                | 29. | Sheria Sacco Society Ltd                          |
| 8   | Elimu Sacco Society Ltd                 | 30. | Shirika Sacco Society Ltd                         |
| 9   | Fundilima Sacco Society Ltd             | 31. | Shoppers Sacco Society Ltd                        |
| 10  | Harambee Sacco Society Ltd              | 32. | Stima Sacco Society Ltd                           |
| 11. | Hazina Sacco Society Ltd                | 33. | Taqwa Sacco Society Ltd                           |
| 12. | Jamii Sacco Society Ltd                 | 34. | Tembo Sacco Society Ltd                           |
| 13. | Kenpipe Sacco Society Ltd               | 35. | Ufanisi Sacco Society Ltd                         |
| 14. | Kenversity Sacco Society Ltd            | 36. | Ukristo Na Ufanisi Wa Anglicana Sacco Society Ltd |
| 15. | Kenya Bankers Sacco Society Ltd         | 37. | Ukulima Saco Society Ltd                          |
| 16. | Kenya Police Sacco Society Ltd          | 38. | Unaitas Sacco Society Ltd                         |
| 17. | Kingdom Sacco Society Ltd               | 39. | United Nations Sacco Society Ltd                  |
| 18. | Magereza Sacco Society Ltd              | 40. | Wana – Anga Sacco Society Ltd                     |
| 19. | Maisha Bora Sacco Society Ltd           | 41. | Wanandege Sacco Society Ltd                       |
| 20. | Metropolitan National Sacco Society Ltd | 42. | Waumini Sacco Society Ltd                         |
| 21. | Mwalimu National Sacco Society Ltd      |     |                                                   |
| 22. | Mwito Sacco Society Ltd                 |     |                                                   |

