FACTORS AFFECTING INFORMATION TECHNOLOGY STRATEGY IMPLEMENTATION AMONG RURAL BASED COOPERATIVE SOCIETIES IN BARINGO COUNTY

Catherine Jerono Tanui

Master of Business Administration, Jomo Kenyatta University of Agriculture and Technology, Kenya

Dr. Daniel Muendo

Jomo Kenyatta University of Agriculture and Technology, Kenya

International Academic Journal of Human Resource and Business Administration (IAJHRBA) | ISSN 2518-2374

Received: 19th October 2018

Accepted: 25th October 2018

Full Length Research

Available Online at:

http://www.iajournals.org/articles/iajhrba_v3_i3_311_332.pdf

Citation: Tanui, C. J. & Muendo, D. (2018). Factors affecting information technology strategy implementation among rural based cooperative societies in Baringo County. *International Academic Journal of Human Resource and Business Administration, 3*(3), 311-332

ABSTRACT

Strategies influence the results of an organizations performance. The IT strategy implementation is a plan which includes objectives, principles and tactics, relating to the use of the information technologies within the organization. The main objective of this study was to assess the factors affecting information technology strategy implementation among rural based cooperative societies in Baringo County. The specific objectives of this study were to establish the effect of clientele market characteristics on information technology strategy implementation among rural based cooperative societies in Baringo County. To determine the effect of employee competency on information technology strategy implementation among rural based cooperative societies in Baringo County; to determine the effect of financial resource adequacy on information technology strategy implementation among rural based cooperative societies in Baringo County; to establish the effect of organization culture on information technology strategy implementation among rural based cooperative societies in Baringo County. The study adopted a descriptive research design. This study focused on all the 105-active rural-based cooperative societies in Baringo County. For this study, there was no sampling instead a census study was conducted since the population was small. This study collected primary data. Collected data was compiled, sorted, edited, coded and analyzed using Statistical Package for Social Sciences (SPSS) Version 23.0 computer program to address the research objectives. The study established that clientele market characteristics (β=0.587, p=0.000<0.05); employee competency (β=0.110, p=0.000<0.05); financial resource adequacy (β=0.371, p=0.000<0.05) and organization culture (β=0.097, p=0.002<0.05) all had positive and significant effect on IT strategy implementation. The study concludes that clientele market characteristics had positive and significant effect on IT strategy implementation. Employee competency had a positive and significant influence on IT strategy implementation among rural based SACCOs. Financial resource adequacy had positive and significant effect on IT strategy implementation among rural based SACCOs. Organizational culture had a positive and significant effect on IT strategy implementation. The study recommends that the senior management team of all rural based SACCOs operating in Kenya should improve on their clientele market characteristics for positive IT strategy implementation. The top management team all rural based SACCOs should increase investment in employee competency in order to positively influence IT strategy implementation. The management team at the head offices of all rural based SACCOs should avail sufficient financial resources to these institutions to positively influence IT strategy implementation. The management of all rural based SACCOs should work to establish a strong organizational culture among employees which shall positively influence IT strategy implementation.

Key Words: *information technology strategy, implementation, rural based cooperative societies, Baringo County*

INTRODUCTION

Global perspective of Information Technology Strategy Implementation

In china as noted by Tian (2016) on managing international business in China looked into using information technology to manage international businesses from all sectors of the economy. Noting that as the world and both the international and local markets become more open, the Chinese quest to become a global manufacturing base is becoming a challenge dream unless, the industry invests heavily in the use of advanced technology and artificial intelligence to increase productivity and cut operational costs. Tian (2016) further noted that relying on the consumption of resources, low labor costs, lack of independent innovation and brand, the majority of manufacturing companies are urgent to continuously develop and nurture their core competitiveness, in order to cope with increasingly fierce competitive environment, and to make China gradually develop from the manufacturing country into a manufacturing power. The information technology is the only way for the manufacturing enterprises to improve economic efficiency and competitiveness.

Successful strategy implementation is key for any organization's survival. Many organizations cannot sustain their competitive advantages, despite having a robust strategy formulation process, because they lack the processes in implementing the strategies. Considering the higher failure rates in implementation of strategies, more attention should be given by executives to implementing the strategy. Rajasekar (2014) in factors affecting effective strategy implementation in a service industry: A study of electricity distribution companies in the Sultanate of Oman. It further noted that leadership is by far the most important factor influencing successful implementation strategy in the service sector. A visionary leader is one with technical skills, understands the service industry well and is able to spearhead the organization into success in terms of strategy implementation in an effort to realize high returns on investment.

The incredible growth of the information systems (IS) and information technology (IT) in the last decade has had a huge impact on business performance. IT has become a strategic enabler for doing business as it plays the key role of doing business as noted by Helay (2012) on the impact of IS/IT strategy and business strategy alignment on business performance in the Palestinians firms. In addition, Technology such as the internet and E-business has made many companies to review their business and IT strategies and adopt the alignment philosophy to enhance their position, achieve business objectives and fully utilize the investment in the technology.

The failures to translate, adapt and sustain a strategy may thwart an organization's efforts to effectively bring its strategy to life. According to Radomska (2014), operational risk associated with the strategy implementation; too many organizations fail to be successful in their operations, procedures and performance majorly because of failing to fully understand and implement their set strategy. And even worse, in most cases these failures are virtually inevitable because they are the natural outcomes of the traditional approach to strategy implementation many enterprises use today.

In our world today, as seen by Al Shobaki and Naser (2016) in decision support systems and its role in developing the universities strategic management; the paper noted that organizations have no other option rather than to continuously adopt new technologies so as to sustain the competition in their current markets. Notably in their study, some of the causes of failure in implementation included behavioral characteristics of end users, technology features and organizational characteristics. In Australia, Prestridge (2014) looked at reflective blogging as part of ICT professional development to support pedagogical change; noting that organizations only used IT effectively in strategy formulation stage and not as well in assessing opportunities. The study highlights that IT provides opportunities such as alignment of organizations with stated goals, creating sustainable competitive advantages and enabling organizations to catch up with rivals. At the formulation stage, IT serves to increase quality and volume of essential information needs for planning and also enhances cost reduction in communication as well as labor costs. Generally, IT has a positive impact on strategy formulation stage.

Regional Perspective of Information Technology Strategy Implementation

Mensah (2016) in the study on an overview of E-government adoption and implementation in Ghana. The study reveals that understanding the strategy of the organization is a must for developing an effective information technology (IT) strategy. If the information technology (IT) strategy does not fit with the overall organization's vision, there will be constant conflict. Top leadership will need to invest valuable time in articulating the organizational vision and determining how information technology (IT) helps with meeting and sustaining that vision. While the organizational vision drives the information technology (IT) strategy, progressive-thinking leaders should also be cognizant of how information technology (IT) strategy can influence the organizational strategy. Technology redefines opportunities and the choices executives make to exploit those opportunities and establish new capabilities. As a result, organizations are able to evolve current business models and, in some cases, build new ones.

Sandada, Pooe and Dhurup (2014) in strategic planning and its relationship with business performance among small and medium enterprises in South Africa; mentions that for effective strategic planning, information technology implementation must be at the core of any organization, the team charged with developing a strategic technology plan should comprise individuals representing all the functional units of the organization. When all relevant parties within an organization and involved in IT; strategy adoption and implementation become easier and faster. Furthermore, Grindle (2017) avers that participation in the planning process by these members ensures that the technology plan coincides with the mission and goals of the organization as a whole, takes advantage of resources throughout the organization, and meets the needs of operational staff.

ICT strategy is meant to enable the business units, the government and non-governmental organizations to revitalize front living services for their clients, its households and end user, deliver better infrastructure and restore accountability within the organization, the business units and in governance. The use of IT strategy as a tool for any organizations embracing

change and transformation has become prominent and almost mandatory to the business community. According to Biruk, Yilma, Andualem and Tilahun (2014) in the paper titled, health professionals' readiness to implement electronic medical record system at three hospitals in Ethiopia: a cross sectional study. The study noted that ICT has become a strategic asset for any organization and the importance of IT-based innovations is recognized in bringing productivity improvements and competitive edge in any industry that an organization is in.

It has become apparent that information technology is the major component in organizational processes and activities through the intensified investment in computer-processing and data preparation appliances in different industries (Grindle, 2017). As there is an increase in IT implementation in literary all sectors of the economy and in all industries, IT has been seen as a significant force that has also caused several socio-economic changes resulting in challenges to some groups of the economy.

In today's environment, the organizations in the corporate and business world have discovered the value of information systems and once hooked information systems, technologies and applications become an essential element for enhancing business activities, according to Almalki, Al-fleit and Zafar (2017). Many organizations are seeking technology to strengthen their current business operations and create new business opportunities that would give them a competitive advantage at their market places.

Local Perspective of Information Technology Strategy Implementation

Effective strategy realization is essential in achieving strategic success. Most organizations know their businesses and the strategies required for success. However, many corporations struggle to translate the theory into action plans that enable the strategy to be successfully implemented and sustained; this according to Mbaka and Mugambi (2014) in the study on factors affecting successful strategy implementation in the Water Sector in Kenya.

In implementing the information technology strategy within the organization, it is important to have commitment from the executives. This is majorly due to the fact that the formulated IT strategy must parallel the organizational strategy and must be accepted by organization managers. Committed executives and managers would quickly push the junior staffs to affect the newly formulated IT strategy within their workings. Njoroge, Zurovac, Ogara, Chuma and Kirigia (2017) looked at the assessing the feasibility of eHealth and mHealth: a systematic review and analysis of initiatives implemented in Kenya. Health of citizens can be improved by adopting IT based applications and systems that are simple and easy to use. Further mentions that involving the top management during the decision-making process is necessary so that all issues are evaluated in a consistent manner, regardless of the application of the information technology to different unit. Consistency in decision-making is the only way an organization can be sure it is following the path to improvement through effectively using IT. It also shows that the IT department exists to support the organization as a whole, not as discrete entities.

Mwangi (2016) on the influence of strategy implementation on the performance of manufacturing small and medium firms in Kenya, results noted a positive and significant influence exist on strategy implementation and performance. The leadership styles, structural adaptations, human resources and technology embraced positively influenced the performance of the SME firm. The emphasis on the strategic direction of the firm was found to be statistically insignificant. The study also noted that the age and size of the firm does not significantly influence on the relationship between strategy implementation and performance of the SMEs in Kenya.

Tarus, Gichoya and Muumbo (2015) on the challenges of implementing e-learning in Kenya: A case of Kenyan public universities. The study noted that one of the biggest mistakes an organization can make is to restrict input on the IT decision to the executive level alone and not incorporate the views of other staffs. An organization keen on success must have a structured process established to promote communication at all levels. The executive level is still responsible for making the final decision. However, executives do not operate in a silo, and critical inputs from organizational members about how a decision affects existing processes that contribute to the success of the overall strategy.

Rural and Urban SACCOs in Kenya

The SACCOs are some of the important financial institution for the growth of the economy. This has been made possible through capital accumulation from members' contribution, which is later invested and increases the portfolio of that SACCO (Olando, Jagongo & Mbewa, 2013). They perform a critical and unique function as financial intermediaries. They are able to mobilize quite a big figure of money from daily, weekly and monthly savings from the SACCO members. These monies are channeled to small loans for members and for investment projects. The SACCOs also take part in community development projects which provide essential services and products to their communities, and may include water provision, bursaries for bright and needy children and health care services.

Before banks reached the interior areas of our country, the small community based SACCOs were already in operation (Magali, 2013). Therefore, the rural based SACCOs are credited with opening up remote areas to access financial services. The savings and credit cooperatives in the rural areas usually were organized with members who know each other and are bound by common interests such as members of one church, factory workers or farm help for tea or coffee. And these SACCOs are guided by the principle and practice of cooperative movement. According to Olando et al. (2013), the rural based savings and credit cooperatives differ from other financial cooperatives in the country, as these are linked in a social context as opposed to financial empowerment only.

The membership of SACCOs is high in the rural areas as nearly 80% of the residents and households are at least in one of the entity. Some are in self-help groups, producer cooperatives, SACCOs and other multi-purpose cooperatives. In any case, Magali (2013) revealed that over 70% of SACCOs are concentrated in low income zones which are generally less attractive to non-bank and bank financial institutions.

The urban savings and credit cooperatives are found in major towns and cities and attract members from the general public to join in making savings with them. Many people join SACCOs with the hope of getting low interest loans as opposed to the interest rates from banks which fluctuate according to the status of the economy (Kuria, 2011). The urban SACCOs and all other SACCOs are regulated by Sacco Societies Regulatory Authority (SASRA). These SACCOs are loyal to their customers and committed to service provision.

STATEMENT OF THE PROBLEM

The greatest challenge for rural areas is accessibility to technology as infrastructure in such set ups is not effective. According to Tarus et al. (2015), rural communities in Africa constitutes the larger percentage of the population whose information and developmental needs are not adequately met and consequently they have not been able to productively participate in the development process and enjoy the benefits. SACCOs within Baringo County did not implement ICT in their operations until 2013 after they learnt of the benefits that urban based SACCOs reaped from incorporating technology in their operations (Barus, 2013). The difficult part in Baringo County is strategy implementation as there are many factors that affect it like competency of staff in a firm, availability of resources, skills and techniques needed and compatibility of the strategy with the organization plans and the market situation. Several studies have been done on IT strategy implementation; such as Peppard, Galliers and Thorogood (2014) on information systems strategy as practice: Micro strategy and strategizing for IS. This study was done in a developed nation; its findings may not be applicable in the Kenyan setting and in its the financial sector services. Alali (2015) investigated on the factors affecting strategy implementation at St. Monica hospital, Kenya, this study looked at strategy implementation in general and fails to focus on information technology strategy implementation. On health, Jones, Rudin, Perry and Shekelle (2014) looked at health information technology: an updated systematic review with a focus on meaningful use. The study was done in the health sector and its findings may not be applicable in the financial sector. Elder (2015) on the right to inclusive education for students with disabilities in Kenya. The study noted that inclusivity in education can be achieved through the use of IT, the study looked at ICT in education sector but doesn't mention IT strategy implementation. In this regard none of the studies looked at factors affecting IT strategy implementation among rural based Sacco's and moreover in Baringo county which this study sorts to ascertain. None of the studies have locally looked at factors affecting information technology strategy implementation in Baringo county creating a research gap which this study wished to fill by assessing the factors affecting Information Technology strategy implementation among rural based cooperative societies in Baringo County.

GENERAL OBJECTIVE

To assess the factors affecting information technology strategy implementation among rural based cooperative societies in Baringo County

SPECIFIC OBJECTIVES

1. To establish the effect of clientele market characteristics on information technology strategy implementation among rural based cooperative societies in Baringo County.
2. To determine the effect of employee competency on information technology strategy implementation among rural based cooperative societies in Baringo County.
3. To determine the effect of financial resource adequacy on information technology strategy implementation among rural based cooperative societies in Baringo County.
4. To establish the effect of organizational culture on information technology strategy implementation among rural based cooperative societies in Baringo County.

THEORETICAL REVIEW

Game Theory

This school of thought was developed in economics with the aim of explaining static games and the dynamic background in an environment characterized by perfect and imperfect information. This school has been applied in analyzing sequential and highly dynamic decision-making environment at the tactical management levels (Binmore & Brandeburger, 1988). The school emphasizes the important of thinking ahead in a pro-active manner by considering existing alternatives while at the same time considering the likely response from competitors on company actions together with other organizations carrying on similar businesses in the industry (Brandenburger & Nalebuff, 1995).

The school of thought is commonly applied to explain ways that organizations compete in an industry, they way they relate with one another and react to cut throat competition. Normally, situations of cut throat competition see one firm gaining whereas another firm loses in a situation where the overall market share remains the same (Selten, 1975). In such circumstances, the choice of a strategy in normally informed by information that each organization has over industry dynamics. The information could either be perfect or imperfect which makes strategic actions simultaneous for the competing organizations (Brandenburger & Nalebuff, 1995). The prevailing circumstances make it difficult for organization within the industry to collude into a given similar decision because the choices are simultaneous. This game commonly referred to as zero sum game involves two players where one organization can be improved if and only if the other organization is made worse (Myerson, 2013).

Game theory is used to explain circumstances in different contexts especially in crafting competitive strategies through pricing, product innovations, research and development legal provisions, advertising and other decisions in areas of franchising, licensing or produce within. It is believed that better understanding of the game creates a win-win situation which enable an organization to stand better chances as compared to its competitors. Better understanding of the game also guarantees better change in rules, tactic and the extent of the game in favor of the organization concerned (Binmore & Brandeburger, 1988).

Applicability of Game Theory in ensuring competitive position is achieved is normally witnessed in an organization's choice of new technological applications and being among first movers into new spectrums which guarantee first movers' advantage. It also enables an organization to achieve a cost leadership advantage as it achieves cost optimization point (Hamel & Prahalad, 1990). This school of though has however been limited in its application excluding the oligopolistic industries. This school of thought will help explain the clientele market characteristics variable as it helps explain the importance of understanding the market and its characteristics to know how they will influence IT strategy implementation within the organization. It will enable the SACCO in understanding the market needs, wants, tastes and preferences and also create a win-win situation for its clients as well as the owners of the SACCO.

Resource Based View Theory

Resource Based View (RBV) theory was formulated by Barney (1991) to help explain the role played by unique resources owned and used byorganizations in their production processes. The school of thought argues that the bundle of unique resources which may not be easily replicated by the competition are important in the quest of such organization's search for competitiveness (Thompson, Peteraf, Gamble, Strickland III & Jain, 2008). These unique resources come in handy whenever the organization if formulating, implementing and monitoring its strategic management processes. This theory identifies the role played by capabilities in deployment of resources through internal processes to realize desired effects. The existence of these capabilities allows internal resources to be utilized optimally to generate outputs that meet the dynamic needs of customers. This theory identifies resources as an organization's capabilities which have the potential of enabling it gain a competitive position (Thompson et al., 2008).

The RBV model is of the view that the bundle of unique resources possessed by an institution form the foundation in establishing the growth path to competitive position which may not be matched by the competition. Schroeder, Bates and Junttila (2002) argue that resources encompass the entirety of assets, processes, internal capabilities or strengths, firm characteristics, knowledge and information in the control of the firm which if well utilized could enable the organization realize a competitive position in the market. This school of thought acknowledges the role played by resources in the control of the organization in creating the desired level of efficiency through cost minimization together with increasing the level of customers' willingness to part with higher consideration for product offerings of the firm (Pearce, Robinson & Subramanian, 2000).

A firm stands higher chances of improving its competitive position as compared to other firms in the industry. This theory is relevant as it helps explain the value of resources and how best they can be put to use to increase the performance. Finances are one of the important resources an organization has and it can be used to gain competitive advantage. This is relevant to financial resource adequacy as a variable to the study and also the theory is

relevant to the study since it will help draw the relationship that financial resources can be used in IT implementation in the rural SACCOs in Baringo County.

Dynamic Capability Theory

The concept of dynamic capability theory was defined by Teece, Pisano and Shuen (1997) as the firm's ability to reconfigure, build and integrate external and internal competences so as to address the rapidly changing environmental conditions. Dynamic capability theory assumes that the core competencies of a firm should be used in modifying the short-term competitive positions that can be used to build and develop long-term competitive advantage. Dynamic capability concept came as a result of the shortcomings of the resource-based view of the firm. The resource-based view of the firm has been criticized due to its ignoring of factors surrounding resources instead of assuming that the factors exist.

Dynamic capability theory acts as a buffer between the resources of a firm and the changing business environment so as to bridge the existing gap (Vogel & Güttel, 2013). The firm's dynamic resources adjust its resource mix resulting to creation, effectiveness and maintenance of an organizational competitive advantage. The theory of resource-based view emphasizes on the choice of resource to be used while the theory of dynamic capabilities emphasizes on the development and renewal of the resources (Hinterhuber, 2013). Resources can take many attributes of the dynamic capabilities which makes it easy for the firms to benefit from the operations in an environment that is rapidly changing. This implies that even if the resources do not directly bring about a superior position of sustained competitive advantage, they may however not be important to the long-term competitiveness of a firm in an environment that is unstable. If they help the organization and release their key resources in a given period of time, they will attain a competitive advantage. This theory is relevant to the study because it explains how the firm uses its strategies and competencies to modify the short-term competitive positions that can be used to build and develop long-term competitive advantage (Eisenhardt & Martin, 2000). This theory is relevant to the employee competency as the variable to the study and also it helps in expounding on the capabilities inherent in the employees which increases their competencies and leads to competition at the market place for the rural based SACCOs in Baringo County.

Social Identity and Self-Categorization Theory

Social Identity theory was first introduced by Tajfel (1978). The theory was further developed by Tajfel and Turner (1979). The theory proposes that individuals should categorize themselves in terms of belonging to different groups e.g. a professional group. Self-categorization on the other hand proposes that individuals evaluate the groups they feel they are members and the groups they do not feel they are members. The individuals need to categorize themselves in the groups they feel they are members and the groups they feel they are not members so that they can compare their values. The social identity of an individual is composed of group evaluation, social categorization and the value of group memberships for the self-concept. Positive social identity results to a positive self-esteem whereas a negative

social identity leads to an ongoing competition, social mobility behaviors and cognitive strategies. Social identity theory has been widely used to explain media effects.

Self-categorization theory was proposed by Turner (1999). The theory differentiates between social and personal identity. Social identity relies on the membership of an individual's group while personal identity is more or less independent of group memberships. According to self-categorization theory, the behavior of an individual is driven by either social or personal identity processes depending on the relative silence or importance of a certain situation. The identities can be both salient at the same time hence triggering the behavior that is motivated by a dynamic interplay of both. Both Social Identity and Self Categorization Theory can be based on their views on social and personal identity. Social Identity theory suggest a continuum of interpersonal versus intergroup behavior while Social Categorization theory pronounces that both social and personal indent processes may be at work simultaneously. However, the two theories are closely linked in that both are social psychological and social cognitive theories rooted in the same era of coal psychology and they both take a broad perspective on social process. This theory is significant in explaining the role of organizational culture which defines the social aspect on information technology strategy implementation.

RESEARCH METHODOLOGY

Research Design

A research design is the blueprint that guide the researcher in the process of answering the questions which define the purpose and consistency between the research questions and the proposed research method (Flick, 2015). There are three main research designs namely; descriptive research, exploratory research and causal research. Descriptive research describes a phenomenon as it exists, by taking raw data and tabulating it into a useable format (Creswell, & Creswell, 2017). Exploratory research refers to sections of a procedure that aids the researcher maintain a form of control over all variables affecting results of a particular experiment. Causal research is an effect that occurs when variation in the independent variable results in the variation of another variable (Creswell, 2014). The study adopted a descriptive research design. A descriptive study is one in which information is collected without changing the environment. It should answer five basic questions: who, what, why, when and where (Creswell, 2014). The design was deemed appropriate because of the observational nature of data that was collected from respondents who were senior staffs at the SACCOs in Baringo County as they described their perceptions on information technology strategy implementation.

Target Population

A population is defined as a collection of events, individuals or objects that bear common observable characteristics that make them unique from other populations (Yin, 2017). Target population is the group of elements with necessary information that can respond to the

research questions and of which the researcher is interested in. It is well-defined showing the groups, the elements and households that the researcher wishes to investigate (Creswell, 2013). Therefore, this study focused on all the 105-active rural-based cooperative societies in Baringo County. The target population included all senior management at the rural based cooperative societies in Baringo County. The study targeted the three (3) senior staffs from the three main areas directly charged with strategy implementation; human resource departments, the IT departments and the Operations department in the 105 active and registered rural-based cooperative societies who were free to delegate as they deem fit.

Sample Design and Sampling Technique

A sample is a sub-set or part of the target population; sampling is a process of selecting subjects or cases to be included in the study of the representative of the target population (Soy, 2015). A study sampling technique is a method that researchers use to select a representative list of respondents from the entire study population (Yin, 2013). This study adopted an appropriate technique in looking for sample size of the population. For this study, all the target population members were included in the study because the target population was not large and could be easily accessed within Baringo County. According to Fowler (2013) any population of 200 or less items, a census would be appropriate such that in this case, all the 105 societies were included in the study hence a census. Therefore, there was no sampling instead a census study was conducted. Yin (2013) further mentions that census is ideal in study generalization as opinions, views and perspectives of each element are included in the final study findings. Thus, all the 105 active and registered rural-based cooperative societies made the final sample list.

Data Collection Instruments

Data collection instruments, according to Ritchie, Lewis, Nicholls and Ormston (2013) are tools used for gathering empirical evidence in order to gain new insight about a situation and answers questions that prompt the undertaken research. They include: questionnaires, interviews, observations and focus group discussions. Data collection tools are the instruments which are used to collect the necessary information needed to serve or prove some facts (Bowling, 2014). This study collected primary data. The primary data was collected using a structured questionnaire. The questionnaire comprised of two sections. The first part was designed to determine fundamental issues including the demographic characteristics of the respondent, while the second part consisted of questions covering the four study variables of the study.

Data Collection Procedure

This is the process of selecting and developing measuring tools and methods that are appropriate to the study (Fowler, 2013). In this study, the primary data was collected through self-administered questionnaires, because it was cost effective for the researcher and the target population was also learned hence could easily read and understand the questions. The

procedure records a step-by-step that the researcher followed while collecting primary data in response to the research questions. The research instruments for the study were the questionnaires which were administered to all the respondents at their places of work. Since the respondents were anticipated to be busy the researcher employed 'a drop and pick later method'. The respondents were given three days to fill the questionnaires before the researcher was back to pick them for analysis. While dropping the questionnaires, the researcher obtained e-mail address and cell-phone numbers so as to do a follow up. Since any queries by the respondents were responded to either via e-mail or through telephone calls.

Data Analysis and Presentation

Collected data was compiled, sorted, edited, coded and analyzed using Statistical Package for Social Sciences (SPSS) Version 23.0 computer program to address the research objectives. Descriptive analysis was computed such that the study used mean, frequencies and percentages in the analysis. Regression analysis was used to test for the relationship between the independent variable (Clientele Market Characteristics, Employee Competency, Financial Resource Adequacy and organization culture) and the dependent variable (Information Technology Strategy Implementation). The Regression model is:

$$\mathbf{Y= a_1 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where: Y= Information Technology Strategy Implementation; a_1 = Constant; β_1, β_2, β_3 and β_4 are Coefficients of the factors affecting information technology strategy implementation among rural based cooperative societies in Baringo County; ε = error term; X_1= Clientele Market Characteristics; X_2= Employee Competency; X_3= Financial Resource Adequacy; X_4 = Organization Culture

Results were presented in tables and figures using percentages and frequencies to facilitate comparisons and further analysis.

RESEARCH RESULTS

The main objective of the study was to assess the factors affecting information technology strategy implementation among rural based cooperative societies in Baringo County. The study was informed by the following specific objectives; to establish the effect of clientele market characteristics on information technology strategy implementation among rural based cooperative societies in Baringo County; to determine the effect of employee competency on information technology strategy implementation among rural based cooperative societies in Baringo County; to determine the effect of financial resource adequacy on information technology strategy implementation among rural based cooperative societies in Baringo County; to establish the effect of organizational culture on information technology strategy implementation among rural based cooperative societies in Baringo County.

Clientele Market Characteristics

The first objective of the study was to determine the effect of clientele market characteristics on information technology strategy implementation among rural based cooperative societies in Baringo County. To achieve this objective, means, standard deviations and regression were used. From regression results, clientele market characteristics had positive and significant effect on IT strategy implementation. From descriptive statistics, most of the respondents agreed that clientele market characteristics had a large extent of influence on IT strategy implementation.

The findings of descriptive statistics further indicated that IT implementation in the operations had given the firm competitive edge over competitors. IT implementation was encouraged as it helped in quicker communication to clients. Using IT based systems improved efficiency while working. IT strategies were adjusted as per consumer market trends. The IT strategies were customer centered hence easy to implement. The leadership support had made respondents successfully implement IT strategy. IT was used when it came to communication in the organization.

Employee Competency

The second objective of the study assessed the effect of employee competency on information technology strategy implementation among rural based cooperative societies in Baringo County. From regression results, employee competency had a positive and significant influence on IT strategy implementation among rural based SACCOs. The study revealed that employee competency had a large influence on IT strategy implementation among rural based SACCOs.

Descriptive findings of the study showed that staffs' inputs and ideas were acknowledged in IT strategy implementation. Majority of the respondents agreed that the firm recognized the role of human resource in strategy implementation. Respondents agreed that employees were involved in IT strategy formulation making implementation easier. Most of the respondents agreed that staff were willing to implement plans to achieve success. Respondents agreed that staffs in their SACCO were IT literate hence could implement IT based strategies. Respondents further agreed that staffs were motivated to implement the IT strategy in the. Both the departments and employees were enthusiastic about IT strategy implementation.

Financial Resource Adequacy

The third objective was to determine how financial resource adequacy affected IT strategy implementation among rural based SACCOs. Regression results indicated that financial resource adequacy had positive and significant effect on IT strategy implementation among rural based SACCOs. Most of the respondents agreed that financial resource adequacy had a large extent of influence on IT strategy implementation among rural based SACCOs.

The findings of descriptive statistics also further indicated that the management did financial planning before commencement of projects. The study established that financial resources were located as per level of IT implementation. All the IT implementation costs were covered in the budget estimate. The IT strategy was aligned with the SACCO's resource capability. Most of the studied SACCOs had budget allocations to finance IT implementation in operations.

Organizational Culture

The last objective investigated how organizational culture affected IT strategy implementation among rural based SACCOs. The findings of regression analysis indicated that organizational culture had a positive and significant effect on IT strategy implementation. Most of the respondents agreed that organizational culture had a large extent of effect on IT strategy implementation among rural base SACCOs. Descriptive statistics showed that tight culture promoted strong employee value. The study established that a tight culture produced significant peer pressure to conform to the acceptable norms in an organization.

INFERENTIAL STATISTICS

The researcher conducted regression analysis to effectively determine how the identified factors influenced IT strategy implementation among rural based SACCOs. Table 1 shows the model summary of the study.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858[a]	.737	.701	2.22670

From the findings, the coefficient of determination R square was 0.737, which shows that 73.7% change in IT strategy implementation is explained by the identified factors (clientele market characteristics, employee competency, financial resource adequacy and organizational culture). This therefore implies that there are other factors not covered in the current study that has an influence on IT strategy implementation which future studies should be done to establish. Table 2 shows an Analysis of Variance conducted at 5% level of significance. It summarizes the value of F calculated with significance.

Table 2: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	590.163	4	147.541	53.245	.000[b]
Residual	210.601	76	2.771		
Total	800.764	80			

From Table 2, the value of F calculated is 53.245 while F critical is 2.492. Comparing the value of F critical and F calculated shows that F Critical is less than F (4, 76). This can be

interpreted to mean that the overall regression model was significant in estimating the factors affecting IT strategy implementation among rural based SACCOs. The findings of the regression coefficients for each of the variables of the study with their respective p values showing significance are shown in Table 3. The interpretation of p values was conducted at 5% level of significance.

Table 3: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	9.669	1.418		6.818	.000
Clientele Market Characteristics	.587	.079	.992	7.455	.000
Employee Competency	.110	.029	.256	3.793	.000
Financial Resource Adequacy	.371	.049	.485	7.571	.000
Organization Culture	.097	.031	.198	3.129	.002

From Table 3, the following equation is formulated;

$$\mathbf{Y= 9.669+0.587X_1+0.110X_2+0.371X_3+0.097X_4}$$

Where: Y= Information Technology Strategy Implementation; X_1= Clientele Market Characteristics; X_2= Employee Competency; X_3= Financial Resource Adequacy; X_4 = Organization Culture

Thus, holding all the identified factors constant, IT strategy implementation among rural based SACCOs would be at 9.669. At 5% level of significance, the study established that clientele market characteristics (β=0.587, p=0.000<0.05) had positive and significant effect on IT strategy implementation. This shows that an increase in clientele market characteristics would improve IT strategy implementation among rural based SACCOs by 0.587. According to Alali (2015), clientele characteristics are used to by firms to market products and during strategy implementation.

Employee competency (β=0.110, p=0.000<0.05) had positive and significant effect on IT strategy implementation. This shows that strengthening employee competency would result into an improvement in IT strategy implementation among rural based SACCOs by 0.110. The finding is in line with Upadhyay et al. (2013) who agreed that employee competence influences the element of willingness to implement the plans to achieve project success and this willingness happens only when personnel are well motivated.

For financial resource adequacy, the beta and p-values were (β=0.371, p=0.000<0.05). This shows that financial resource adequacy had a positive and significant influence on IT strategy implementation among rural based SACCOs. This finding contradicts with Mahat (2017) who established that resource availability was statistically insignificant with strategy implementation.

The study established that organization culture (β=0.097, p=0.002<0.05) had positive and significant effect on IT strategy implementation. The findings are in line with Mahat (2017) who carried concludes that there is statistically significant association between (organizational structure; leadership styles; organizational culture) and organizational performance.

CONCLUSIONS

The study concludes that clientele market characteristics had positive and significant effect on IT strategy implementation. Clientele market characteristics had a large extent of influence on IT strategy implementation. IT implementation in the operations had given the firm competitive edge over competitors. IT implementation was encouraged as it helped in quicker communication to clients. Using IT based systems improved efficiency while working. IT strategies were adjusted as per consumer market trends.

The study also concludes that employee competency had a positive and significant influence on IT strategy implementation among rural based SACCOs. Employee competency had a large influence on IT strategy implementation among rural based SACCOs. Staffs' inputs and ideas were acknowledged in IT strategy implementation. The firm recognized the role of human resource in strategy implementation. Employees were involved in IT strategy formulation making implementation easier. The staffs were willing to implement plans to achieve success. Staffs in thee SACCO were IT literate hence could implement IT based strategies.

The study further concludes that financial resource adequacy had positive and significant effect on IT strategy implementation among rural based SACCOs. Financial resource adequacy had a large extent of influence on IT strategy implementation among rural based SACCOs. The management did financial planning before commencement of projects. Financial resources were located as per level of IT implementation. All the IT implementation costs were covered in the budget estimate. The IT strategy was aligned with the SACCO's resource capability.

The study concludes that organizational culture had a positive and significant effect on IT strategy implementation. Organizational culture had a large extent of effect on IT strategy implementation among rural base SACCOs. A tight culture promoted strong employee value. A tight culture produced significant peer pressure to conform to the acceptable norms in an organization.

RECOMMENDATIONS

The study recommends that the senior management team of all rural based SACCOs operating in Kenya ought to improve on their clientele market characteristics for positive IT strategy implementation. The study also recommends that the top management team all rural based SACCOs need to increase investment in employee competency in order to positively influence IT strategy implementation. The management team at the head offices of all rural

based SACCOs need to avail sufficient financial resources to these institutions to positively influence IT strategy implementation. The study further recommends that the management of all rural based SACCOs ought work to establish a strong organizational culture among employees which shall positively influence IT strategy implementation.

REFERENCES

Al Shobaki, M. J., & Naser, S. S. A. (2016). Decision support systems and its role in developing the universities strategic management: Islamic university in Gaza as a case study.

Alali, S. I. (2015). *Factors affecting strategy implementation at St. Monica Hospital, Kenya* (Doctoral dissertation, School of Business, University of Nairobi)

Almalki, M., Al-fleit, S., & Zafar, A. (2017). Challenges in Implementation of Information System Strategies in Saudi Business Environment: A Case Study of a Bank.

Arvidsson, V., Holmström, J., & Lyytinen, K. (2014). Information systems use as strategy practice: A multi-dimensional view of strategic information system implementation and use. *The Journal of Strategic Information Systems*, *23*(1), 45-61.

Bamberger, P. A., Biron, M., & Meshoulam, I. (2014). *Human resource strategy: Formulation, implementation, and impact*. Routledge.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Barus, J. (2013). Relationship between alternative financing and growth of savings and credit and cooperatives societies in Baringo county.

Binmore, K., & Brandeburger, A. (1988). Common knowledge and game theory.

Biruk, S., Yilma, T., Andualem, M., & Tilahun, B. (2014). Health Professionals' readiness to implement electronic medical record system at three hospitals in Ethiopia: a cross sectional study. *BMC medical informatics and decision making*, *14*(1), 115.

Bowling, A. (2014). *Research methods in health: investigating health and health services*. McGraw-Hill Education (UK).

Brandenburger, A. M., & Nalebuff, B. J. (1995). *The right game: Use game theory to shape strategy* (pp. 57-71). Harvard Business Review.

Brinkschröder, N. (2014). *Strategy implementation: Key factors, challenges and solutions* (Bachelor's thesis, University of Twente).

Button, D., Harrington, A., & Belan, I. (2014). E-learning & information communication technology (ICT) in nursing education: A review of the literature. *Nurse Education Today*, *34*(10), 1311-1323.

Cassidy, A. (2016). *A practical guide to information systems strategic planning*. CRC press.

Cresswell, K., & Sheikh, A. (2013). Organizational issues in the implementation and adoption of health information technology innovations: an interpretative review. *International journal of medical informatics*, *82*(5), e73-e86.

Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study.

Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Sage Publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Dedy, N. J., Fecso, A. B., Szasz, P., Bonrath, E. M., & Grantcharov, T. P. (2016). Implementation of an effective strategy for teaching nontechnical skills in the operating room: a single-blinded nonrandomized trial. *Annals of surgery*, *263*(5), 937-941.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they?. *Strategic management journal*, 1105-1121.

Elder, B. C. (2015). Right to inclusive education for students with disabilities in Kenya. *Journal of International Special Needs Education*, *18*(1), 18-28.

Elliot, V., & Cäker, M. (2017). 13W One Regulation, Diverse Banks. *Bank Regulation: Effects on Strategy, Financial Accounting and Management Control*, *19*, 310.

Figliola, P. M., & Fischer, E. A. (2015). Overview and issues for implementation of the federal cloud computing initiative: Implications for federal information technology reform management. *US Congressional Research Service (CRS)*, *1*.

Flick, U. (2015). *Introducing research methodology: A beginner's guide to doing a research project*. Sage.

Fowler Jr, F. J. (2013). *Survey research methods*. Sage publications.

Grindle, M. S. (2017). *Politics and policy implementation in the Third World*. Princeton University Press.

Hamel, G., & Prahalad, C. K. (1990). Strategic intent. *Harvard Business Review*, *68*(3), 18-38.

Hashim, J. (2015). Information communication technology (ICT) adoption among SME owners in Malaysia. *International Journal of Business and Information*, *2*(2).

Helaly, M. (2012). *The impact of IS/IT strategy and business strategy alignment on business performance in the Palestinians firms* (Doctoral dissertation, Faculty of Graduate Studies The impact of IS/IT strategy and business strategy alignment on business performance in the Palestinians firms By Mohammad Helaly Supervisor Dr. Baker Abdalhaq This Thesis is Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Engineering Management, Faculty of Graduate Studies, An-Najah National University).

Helfat, C. E. (2007). Stylized facts, empirical research and theory development in management.

Jebukosia, J. (2013). Challenges of Strategy Implementation among Saccos in Nairobi. Retrieved from https://profiles.uonbi.ac.ke/.

Jones, S. S., Rudin, R. S., Perry, T., & Shekelle, P. G. (2014). Health information technology: an updated systematic review with a focus on meaningful use. *Annals of internal medicine*, *160*(1), 48-54.

Kamau, L. N. M. (2015). *Institutional factors influencing implementation of strategic plans in government hospitals in Kitui Central Sub-County, Kitui County, Kenya* (Doctoral dissertation).

Kong, S. C. (2014). Developing information literacy and critical thinking skills through domain knowledge learning in digital classrooms: An experience of practicing flipped classroom strategy. *Computers & Education, 78*, 160-173.

Kulundu, W. L. (2014). *Challenges of Procurement Strategy Implementation among Road Agencies in Kenya* (Doctoral dissertation, School Of Business, University Of Nairobi).

Kuria, N. C. (2011). Co-operatives in social development. *Group CEO-CIC Insurance Group Ltd, Kenya*.

Laudon, K. C., & Laudon, J. P. (2016). *Management information system*. Pearson Education India.

Löser, F. (2015). *Strategic information systems management for environmental sustainability: enhancing firm competitiveness with Green IS* (Vol. 6). Universitätsverlag der TU Berlin.

Magali, J. J. (2013). The influence of Rural Savings and Credits Cooperatives Societies (SACCOS‟) variables on loans default risks: The case study of Tanzania. *Research Journal of Finance and Accounting*, *4*(19), 77-91.

Makau, S. M., Wawire, N. H., & Ofafa, G. A. (2013). An Empirical Study on the Relationship between Organizational Factors and Adoption of ICT among Health-Related SMEs in Nairobi, Kenya. *International Journal of Arts and Commerce*, *2*(3), 1-16.

Mbaka, R. M., & Mugambi, F. (2014). Factors affecting successful strategy implementation in the Water Sector in Kenya. *IOSR Journal of Business and Management*, *16*(7), 61-68.

McGrath, S. P., Taenzer, A. H., Karon, N., & Blike, G. (2016). Surveillance Monitoring Management for General Care Units: Strategy, Design, and Implementation. *Joint Commission journal on quality and patient safety*, *42*(7), 293-302.

Mensah, I. K. (2016). Overview of E-government Adoption and Implementation in Ghana. *World Academy of Science, Engineering and Technology, International Science Index 109, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, *10*(1), 61-72.

Morden, T. (2016). *Principles of strategic management*. Routledge.

Mungania, A. (2015). Influence of Sacco's Leadership On Implementation of Strategic Plans in Sacco's A Survey of Sacco's in Meru County, Kenya International *Journal of Economics, Commerce and Management United Kingdom Vol. III, Issue 11*.

Mwangi, P. K. (2016). *Influence of Strategy Implementation on the Performance of Manufacturing Small and Medium Firms in Kenya* (Doctoral dissertation, JKUAT COHRED).

Myerson, R. B. (2013). *Game theory*. Harvard university press.

Njoroge, M., Zurovac, D., Ogara, E. A., Chuma, J., & Kirigia, D. (2017). Assessing the feasibility of eHealth and mHealth: a systematic review and analysis of initiatives implemented in Kenya. *BMC research notes*, *10*(1), 90.

Olando, C. O., Jagongo, A., & Mbewa, M. O. (2013). The contribution of SACCO financial stewardship to growth of SACCOS in Kenya. *International Journal of Humanities and Social Science*, *3*(17), 112-137.

Pearce, J. A., Robinson, R. B., & Subramanian, R. (2000). *Strategic management: Formulation, implementation, and control*. Columbus, OH: Irwin/McGraw-Hill.

Peppard, J., Galliers, R. D., & Thorogood, A. (2014). Information systems strategy as practice: Micro strategy and strategizing for IS. *J. Strategic Inf. Sys.*, *23*(1), 1-10.

Peters, D. H., Adam, T., Alonge, O., Agyepong, I. A., & Tran, N. (2013). Implementation research: what it is and how to do it. *Bmj*, *347*, f6753.

Piotrowicz, W., & Cuthbertson, R. (2014). Introduction to the special issue information technology in retail: Toward omnichannel retailing. *International Journal of Electronic Commerce*, *18*(4), 5-16.

Prestridge, S. J. (2014). Reflective blogging as part of ICT professional development to support pedagogical change. *Australian Journal of Teacher Education*, *39*(2), 6.

Radomska, J. (2014). Operational risk associated with the strategy implementation. *Management*, *18*(2), 31-43.

Rajasekar, J. (2014). Factors affecting effective strategy implementation in a service industry: A study of electricity distribution companies in the Sultanate of Oman. *International Journal of Business and Social Science*, *5*(9).

Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.

Rodriguez, M., Peterson, R. M., & Ajjan, H. (2015). CRM/social media technology: impact on customer orientation process and organizational sales performance. In *Ideas in Marketing: Finding the New and Polishing the Old* (pp. 636-638). Springer, Cham.

Sacco Societies Regulatory Authority (2016). An annual report on the operations and performance of deposit- taking Sacco Societies (DT- SACCOs) in Kenya. Retrieved from file:///C:/Users/Comp4/Downloads/ANNUAL%20SUPERVISION%20REPORT%202016.pdf

Sandada, M., Pooe, D., & Dhurup, M. (2014). Strategic planning and its relationship with business performance among small and medium enterprises in South Africa. *The International Business & Economics Research Journal (Online)*, *13*(3), 659.

Schroeder, R. G., Bates, K. A., & Junttila, M. A. (2002). A resource- based view of manufacturing strategy and the relationship to manufacturing performance. *Strategic management journal*, *23*(2), 105-117.

Selten, R. (1975). Reexamination of the perfectness concept for equilibrium points in extensive games. *International journal of game theory*, *4*(1), 25-55.

Sharman P.A. (2016) *Importance of Financial Planning to successful strategy implementation*

Soy, S. (2015). The case study as a research method.

Speculand, R. (2014). Bridging the strategy implementation skills gap. *Strategic direction*, *30*(1), 29-30.

Stadtler, H. (2015). Supply chain management: An overview. In *Supply chain management and advanced planning* (pp. 3-28). Springer, Berlin, Heidelberg.

Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *The International Review of Research in Open and Distributed Learning*, *16*(1).]

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Thompson, A., Peteraf, M., Gamble, J., Strickland III, A. J., & Jain, A. K. (2008). *Crafting & Executing Strategy 19/e: The Quest for Competitive Advantage: Concepts and Cases*. McGraw-Hill Education.

Tian, X. (2016). *Managing international business in China*. Cambridge University Press.

Tilahun, Z. (2015). *Assessment of practices and challenges of strategy planning process in the case of construction & business bank* (Doctoral dissertation, ST. Mary's University).

Upadhyay, A. Y. A., Upadhyay, A. K., & Palo, S. (2013). Strategy implementation using balanced scorecard: Achieving success through personal values of leaders and employees. *Management and Labour Studies*, *38*(4), 447-469.

Vassolo, R. S., & Anand, J. (2008). An examination of dynamic capabilities: Is evolutionary theory underdetermined?. *Management Research: Journal of the Iberoamerican Academy of Management*, *6*(1), 47-62.

Wang, Y., Chen, Y., & Benitez-Amado, J. (2015). How information technology influences environmental performance: Empirical evidence from China. *International Journal of Information Management*, *35*(2), 160-170.

Waititu, J. W (2016) Relationship between Strategy Implementation and Performance in Commercial Banks in Nairobi County Kenya. *International Journal of Business and Management; 11, 9; 2016*

Willcocks, L. (2013). *Information management: the evaluation of information systems investments*. Springer.

Wu, S. P. J., Straub, D. W., & Liang, T. P. (2015). How information technology governance mechanisms and strategic alignment influence organizational performance: Insights from a matched survey of business and IT managers. *Mis Quarterly*, *39*(2), 497-518.

Yin, R. K. (2017). *Case Study Research and Applications (international Student Edition): Design and Methods*. SAGE Publications, Incorporated.