EFFECTS OF HUMAN RESOURCE INFORMATION SYSTEMS ON THE PERFORMANCE OF SACCOS IN KENYA
A SURVEY OF SELECTED SACCOS.

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A Thesis Report Presented to the Institute of Postgraduate Studies of Kabarak University in Partial Fulfillment of the Requirements for the Award of Doctor of Philosophy Degree (Human Resource Management)

KABARAK UNIVERSITY

SEPTEMBER, 2018

DECLARATION

The research thesis is my own work and to the best of my knowledge it has not been presented for the award of a degree in any university or college.

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ACKNOWLEDGEMENT

I salute all those in one way or the other who contributed to the completion of this work. I appreciate the efforts made by my supervisors, Prof. Ronald Chepkilot and Prof. Isaac Ochieng who have seen me through the writing of this thesis report. All the lecturers of Kabarak University School of Business Dr John Gathii, Dr Hellen Sang Mr. Phillip Ragama, my colleagues Dr. Simon Kipchumba, Dr. Ali Khammah, Patrick Wandeto, Mr.Biwott Moses and Dr. Hillary Busolo and the typesetter Faith Mwangi and my immediate family Patrick Nyamu and Vincent Nyamu and more importantly my mum Mrs. Caren Njeje and my siblings for their moral and academic support throughout this research work. May God bless you all. Lastly to my late father who inspired my dreams in education and more importantly my PhD degree. I would wish to thank all the staff of the human resource department in the selected saccos for sparing their valuable time to fill the questionnaire and the interview schedules. Thanks to also John Hawuory who provided academic contribution to the work.

DEDICATION

This study has been dedicated to my family especially the late Lazaro Njeje, Caren Njeje, Teddy Njeje, Seline Njeje, Chris Njeje, Daniel Njeje, Patrick Mwangi, Vincent Nyamu Mwangi and Mr and Mrs Nyamu and family; I wish to extend my heartfelt gratitude to them for always standing by my side during my studies. This thesis report would not have been completed without their love and encouragement.

ABSTRACT

The human resource information system is a concept which utilizes the information technology for effective management of the human resource, its functions and applications. It has been established through empirical review that more of the organizations have not been able to use the HRIS for strategic decision making in human resource department. This study will benefit the Sacco management, human resource department and the human resource personnel and scholars in the human resource specialization in applying strategic decision making in human resource management based on the information obtained from HRIS. The main purpose of the research was to investigate the effects of human resource information system functions on organization performance a survey of selected Saccos in Kenya. This was necessitated by the fact that despite the Saccos having the HRIS modules there has not been a study to show on how these modules affect the organization performance. The study therefore aimed to explore the effect of e-training and development systems, e-performance management systems, e-staffing systems and e-human resource planning systems on organization performance in Saccos. The theories and models underpinning the study included technology acceptance model the systems theory and human resource information system model and the resource flow model. The study employed a cross sectional survey design which had the census technique which targeted 54 respondents and purposive sampling was used to select the 54 respondents who were mainly the employees in the human resource department. Questionnaires was used as the data collection instruments and data were qualitative and quantitative in nature. Data was analyzed using descriptive and inferential statistics and correlation and presented in tables. The validity and reliability of the instrument was determined by Cronbach alpha. The results showed that E-training and development, E-performance management and E-staffing have a significant effect on the performance of Saccos with the p value being 0.001, 0.004 and 0.023 respectively where p, <0.05 and E-Human resource planning had no significant effect on the organization performance with a p value of 0.432 where $p>0.05$. The study therefore recommended that management should engage more in strategic decision making using the HRIS system and provide further assistance in human resource planning and training in the use of HRIS.

Keywords; human resource information systems, e-training and development systems, e-performance management systems, e-staffing systems, e-human resource planning systems.

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LIST OF ABBREVIATIONS

DBMS	Database management systems
EEO	Equal employment opportunity
e-HRM	Electronic Human Resource Management
ERP	Enterprise resource planning
HMS	Hiring management system
HR	Human resource
HRIS	Human Resource Information System
HRM	Human Resource Management
HRSP	Human resource systems professionals
IBM	Information business management
ICT	Information communication technology
IS	Information systems
IT	Information technology
KBS	Knowledge based systems
LMS	Learning management system
MIS	Management information systems
MSS	Management support system
NACOSTI	National commission for science, technology and innovation
RMS	Recruitment management system
SHRDP	Strategic human resource development and planning
SISP	Strategic information systems planning
TAM	Technology acceptance model

OPERATIONAL DEFINATION OF TERMS

Early stage of HRIS	This refers to the stage in which the administrators use HRIS for administrative activities for record keeping in HR.
e-Human Resource Planning	It is an organizational system that analyses current staff situation, vacant position and qualification deficits.
e-Performance Management	It provides flexible application components to develop and establish individual performance policies, long-term performance management objectives used for appraisals.
e-Staffing	Is a software component that provides recruiters with the necessary data on vacant positions, the required skills, educational requirements and job descriptions to facilitate both internal and external job postings.
e-Training	Is a system that consists of planning, individual development plans and planning for training and development.
HRIS	This is systematic software that collects, stores, maintains and recovers data required by the organizations human resource.
Late Stages of HRIS	The HRIS is used as a decision expert system which always for strategic human resource management of HR functions
Middle stage of HRIS	This is whereby the HR administrators use the HRIS for operational activities in management information systems.
Organization performance	This is the analysis of the firms outcome in terms of the financial performance and market performance and its ability to meet the set goals and objectives.
Market Share	It's a company portion of sales within the entire market in which it operates and the market captured by the company products.
Efficiency	It's the ability to accomplish something with the least waste of time and effort in terms of money, energy and materials. It involves competency in performance.
Effectiveness	Is the ability to accomplish a purpose and producing the intended or expected results or desired output.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter included the introduction of the study and therefore included the following subsections such as the background of the study , introduction to human resource management, history and background of HRIS, Global and regional perspectives to the HRIS, components of the HRIS, Background of saccos both regionally and globally, history of saccos in Kenya, introduction to organization performance, statement of the problem, research objectives, research hypotheses, purpose of the study, significance of the study, scope off the study and the limitation of the study.

1.1 Background of the Study

The addition of information technology to the human resource industry had revolutionized the contemporary and modern workplace. The HR professionals now have an improved capacity not only to gather information, but also to store, sort and retrieve it in a timely and effective manner. This has not only increased the efficiency of the organization but also the effectiveness of the human resource management function and department (Mujtaba, Afza, & Habib, 2011).Human resource information is key to making strategic decisions on human resources and providing an opportunity for human resource professionals to contribute to organizational strategy. The provision of HRIS has increased quite significantly among organizations of different sizes due to their ability to enhance the strategic human resource management role in the company or firm.

Human Resource Information System (HRIS) is a concept which utilized the Information Technology for effective management of the human resource, its functions and applications in the firm. HRIS enables systematic procedure for collecting, sorting, storing, maintaining and recovering data required by the organizations about its human resources (Singh, Jindal, & Samim, 2011). Human Resource Information Systems (HRIS) is a computerized system typically comprised of a data base or inter related database that track and monitor employees and their employment specific information (Gill & Johnson, 2010). HRIS is a software package that provides a complete management information system for human resource activities in business and provides timely, accurate and diverse information to organization management based which enabled management to make quality strategic decisions related to the human resources .However the extent to which HRIS is used in a strategic management fashion differed across firms, with the majority of firms continuing to use HRIS just to mainly replace the manual processing of human resource records and reduce operational costs associated with manual transactions. (Bee & Bee, 2002).

The computerization of HRIS had resulted in an integrated database of human capital files which produced reports for the human resource function and department. For this, the human resource department needed accurate and timely data with regard to its human resources. HRIS supported organization planning, administration, decision making and control. The system supported modules and applications such as employee selection and placement, payroll, pension and benefits management, intake and training and development projections, career pathing, equity monitoring and productivity evaluation. The information systems increased administrative efficiency and reproduced reports

capable of improving decision making in human resources. HRIS had also helped with projecting staffing demand and supply needs, improving both data maintenance process and data input process within the firm. The HRIS improved the training process, eliminated procrastination of HR functions resulting to cost saving on the HR functions. The information generated from HRIS increased coordination between the HR department and the top administrators in organizations and mainly the operational managers.

The development of Information and Communication Technologies (ICTs) had radically changed the world's social and economic lives and has had a big effect on the way organizations are managed. As a result, the internal organization service providers, such as human resource (HR) department, have been forced to re-examine their own competencies in the light of a dramatic increase of organizational situational demands on the department (Gloet & Berrel, 2003). When using the HRIS data, the human resource department can make a dynamic contribution towards the strategy formulation in areas of human resource within an organization. With an efficient and effective HRIS the development and implementation of HR systems becomes faster and easier(Dessler, Griffiths, & Lloyd-Walker, 2004). The usages of HRIS have increased quite significantly among firms due to their enhancement of the strategic human resource management role in the company mainly by the management.

HRIS provided the HR function and the organization with the opportunity to build new avenues for contributing to organizational effectiveness through such means as knowledge management and the buildup of intellectual and social capital(Lengnick-Hall & Moritz, 2003). However, the HR function had lagged behind other organization internal

functions in its adoption of Information System (IS) and Information Technology (IT) innovations (Alleyne, Doherty, & Greenidge, 2007);(Martinsons, 1997). Other than that, the HR function has not been proactive in its use of Internet information technology in order to provide integrated services or to communicate more effectively with its customers to elicit and fulfill their changing expectations (Alleyne, Doherty, & Greenidge, 2007); (Elliott & Tevavichulada, 1999). The topic of HRIS in firms is certainly not becoming obsolete, and its full potential is still anticipated ((Ruel, Bondarouk, & Van der Velde, 2007), and therefore academic involvement in the topic needs to be exploited. (Ruel, Bondarouk, & Van der Velde, 2007)further stressed that research on HRIS is still in its "youth-phase" in most firms.

In the scholarly work of human resource management which dates back as early as mid-1990s, HRIS began to be seen as an information resource and the data collected from it could now provide management with a decision analysis tool as well a improved worker database as they provide detailed information in a variety of areas of human resource management. Therefore, through the management of information of human resource data, organizations are now able to carry out calculations on its effects on the business as a whole.(Kovach, Hughes, Fagan, & Maggitti, 2002)

When implementing an effective and efficient HRIS the organization kept the HR department in the right path to deliver more effective and efficient service to the organization. This is mainly done through standardized workflow processes which are evaluated through controlled process, system interfaces and database validation. The HRIS is a big improvement for top management and the human resource function

management in the HRIS helped to ensure a greater control over any HR management related processes. The human resource information systems enabled the users to follow through organizational tasks more easily(Ordóñez De Pablos, 2004).

(Bussler & Davis, 2002), the authors indicated that information system can transform human resource data and add value by converting it into useable information. This implied that HRIS could provide data driven human resource strategies and therefore moved the shift from human resource from being tactical and reactionary to being a more strategic role in the firm. HRIS had developed mainly from being more administrative and transactional, to that of IT organization in processes such as recruitment and selection, flexible reward systems and e-learning and development. As technology improved, firms could use information systems to manage a variable number of human resource processes in an increasingly effective and efficient manner and contribute to the availability of strategically significant information and knowledge, therefore which potentially improving the firm's competitiveness. Though studies done in Australia by Australian research council linkage grant in 2006 indicate that HRIS ability to deliver strategic human resource competences remained largely unestablished and that instead HRIS was mainly used to increase administrative efficiency which helped in delivery of the human resource department goals only and not only providing adequate support towards strategic decision making of the entire enterprise.

While there is some research survey evidence that electronic human resource was propelling human resource to be more strategic in nature by offloading routine human resource administration. The process was still very unstable and it often had bad

consequences in terms of dehumanizing the human resource function in the experience of its users. There seemed to be an absence of a comprehensive examination on the effect of information technology on human resource policies and practices and on the human resource function within the department itself. (Ulrich, 2009) concluded that the purpose of human resource function was to improve the firm's capability and individual production capability within the organization. HRIS had very much eased the functioning of human resource management (HRM) but it had also faced challenges of its implementation and its integration with management functions was proving to be quite difficult.

1.1.1 Introduction to human resource management.

Various many authors have reproduced various description of HRM and therefore there was no universal definition (Ngai, Law, Chan, & Wat, 2007). For example, HRM has been explained as a system of strategies and activities that focused on managing workers at all levels of a firm to attain organizational goals effectively (Byars & Rue, 2006)

(Redman & Wilkinson, 2009) were able to define HRM as the management of the issues of employment within a firm. (Boxall & Purcell, 2008) further explained HRM in the western world as all those integrated activities involving the management of human resources and its functionality for the fulfilment of the organization's mission, vision and policies. Specifically, the definition of HRM presented by (Boxall & Purcell, 2008)) sought to achieve the following key goals: performance, staffing, administration and change management. Mostly, human resources and HR professionals deliver these

organizational objectives. This, therefore, provided that HRM referred to the entire process of managing human resource talent to achieve the objectives of the firm.

Managing human resource talent through HRM mainly include the process of selection, recruitment, employee relations, the management of employees' health and safety, and talent development in organizations. Thereby, HRM is mainly not only restricted to hiring and firing, but it is also related to the improvement of talent by examining the training and development requirements of workers within an organization. According to Bourdreau and Ramstad (2005), the main organizational managers attention and HR investments were being moved to the management and retention of important talent which were considered vital determinants for the improved performance of firms. For instance, in the case of Westcoast Energy, a potential vital talent relates to an "employee who persistently has production which is significantly of high level. Confidence within the firm enabled an individual to move to the next job band within three years within the organization chart structure. (Chug and Bhatnagar 2006).

All these definitions originated mainly from western-based cultures and companies and neither of them can actually be mainly implemented in the higher educational environment of different nations due to cultural and perception differences. With regard to MENA countries, it was also propagated in theory, but in practice may lead to challenges in the traditions, principles and mentality of Middle Eastern countries.

Human resource management is a vital concept for any organization, as it is a main factor in accomplishing a competitive advantage (Gable, Sedera, & Chan, 2008). The most common type is strategic human resource management which has underpinning strategic approach on human resource activities. This sub-section of HRM has become an important topic for research. (Stroh & Caligiuri, 1990) indicated that strategic HRM had helped in the understanding of the relationship between strategy, HRM, human resource and firms performance. This idea had played a major role in management practice and academic research in the last

Three previous decades (Shin S. H., 2003). The major view of HRM practices is on the streamlining of the human capital of an organisation for its success. Workers are an important and crucial part of the organisation's performance (Gable & Reis, 2003). In higher learning institutions, such as universities, human capital were also referred to as the firm's intelligent capital. They improved the collective value to institutions and businesses by their skills, abilities, knowledge and life experiences, together with inspiration for the improvement of these firms (Ehnert, 2006)

Time and research have indicated that HRM could make significant practical differences in terms of profit, productivity and quality of production (Kiessling & Harvey, 2005). Institutions of higher education universally continue to be the pivot of intellectual skills and knowledge. Furthermore, universities also had their own HR Departments, which were mainly responsible for the efficiency of numerous organisational aspects, such as the human resources, the quality of staff teaching, and the smooth operation of administrative activities. The firms had HR Departments to deal mainly

with the management of their human capital and to enhance the achievement of competitive advantage in their main business sectors (Solomon, Bozga, & Mateescu, 2019).

Presently, majority of the HR divisions had assumed various major roles, moving from the traditional role of a holder of human resource information, to a more complex strategic activity, such as managing the vital assets of the firm (Sikora and Ferris 2014). The organization HR Departments not only practice HR management roles but also, in other sections of the firms practice, deal mainly with HR policies and activities (Khan, Khan, & Mahmood, 2012). The wider HRM covered a huge range of activities in different sections, including incentives and work structuring. This mainly implies that an organisation without a HR Department will fall from within.

There are some major expectations with deep regard to HRM and its relation to workers, which include making use of the abilities, talents and skills of the employees in order to obtain the goals of the company. Another expectation related mainly to the provision of a conducive and secure organization working environment where mainly the employees feel appreciated and thereby contribute to the expansion of the organisation (Sean & Diane, 2005). HRM had majorly become more than just a hiring and firing department. It had mainly moved into a section where people find solutions for their queries on work related issues and even deal with social issues (Kehoe & Wright, 2013). This, therefore, showed that the human capital of an organisation can be managed

Strategically towards the organization objectives. In the modern technology-driven era, this could be obtained through the integration of the organization information system (IS) into HRM activities. Many modern-day firms had decided to the adopt an IS to make them have a competitive advantage in the market (Al-Shawabkeh, 2015).

To understand HRM in the context of Arabic region, it is vital to gain a comprehensive overview of the HRM and business organization systems in the Middle East region in general, as it could be assumed that they can be very similar in each of the western countries. Nowadays, the middle east region is made to be more economic and political significant because of its extensive natural resources and a combined population of more than 400 million. However, the Middle East is more less developed in terms of cross-cultural and international research. It is mainly assumed to be a developing region of the world with a relatively minimal history, and to be developing in the areas of higher education, business experience, legislature and jurisdiction (Ali, 2010). According to (Ali, 2010) and (Aycan, Miriam, & Michele, 2007), the region was still struggling with religion-based wars and conflicts. Therefore, this had very much affected this particular region and it had mainly more significantly less preparation and experience in managing human capital and following more western examples (Budhwar & Debrah, 2001).

While comparative and international HRM matters have been discussed and empirically examined by various authors in developed countries for about a decade, their research has so far majorly concentrated on mainly a very limited range of countries and regions, such as European and American institutions. Middle Eastern countries have not

been very much considered. It is an absolute truth that HRM and its major implementation in the Middle East region have been abandoned and are not yet fully established (Metcalfe, 2007). Although effective and efficient HRM activities had become a vital component of the progress of a few Middle Eastern countries in the last few years, their HRM had been rebuked in many studies, especially in particular to the effectiveness of its execution. Until recently, Saudi Arabia had quite a few policies and framework towards HRM practices and activities.

However, since the Saudi Government had very much established that natural and oil resources will maybe not be produced forever, the country had understood the importance of developing other sectors of economic growth, including the use of human resource.

The academic work in higher education institutions is mainly the areas where HRM employs a vital role in maintaining national stability; the other nations sectors that can contribute to the utilization of human potential are the tourism and hospitality sectors. However, most of the empirical research has looked at efficient and effective execution of HRM with the help of information systems (McNabb & Whitfield, 1990), Budhwar and Debrah 2001).

The main context for HRM development in the region was restricted by national and organizational policies from the late 1960s until the year 2000, and only in recent years have approaches and attitude towards modern way shifted (Kamel, 2007). However, the role of HRM in the region is still unrealized and remained more

undeveloped. For instance, a survey conducted by (Fadhel, 2007) provided that out of 52 Saudi companies, only 63.5 per cent of the respondents had an extensive HRM organization structure, with only 40.4 percent had a HR development (HRD) program. Further, some organization HRM activities, including training and development activities, were implemented by different organization structures, such as the finance or sales departments, which mainly meant that many of the small and medium enterprises had no established professional HRM structures. Additionally, the survey also found out that 78.8 per cent of the training and development programs were provided in the form of on-the-job training by other departments, rather than being provided by the HR Department. This meant that this training was being carried out by unskilled people rather than by HR executives. In modern times, the human resource department was facing dramatic changes in organization leadership mentality. The HRM and HRD have begun to establish momentum, especially in large firms (Achoui, 2009). The importance of dealing with employability challenges and to manage local human talent had forced institutional and commercial firms to sought help with HR policies and their implementation of human resource management strategies, so as to continue being competitive and profitable in the international market (ibid).

Furthermore, due to cultural, religious and traditional components, the modern working environment was quite male-oriented, with a shortfall of female contributions. This was mainly due to external constraints, mentality and, most importantly, placed limitations. Female participation in job opportunities is quite often restrained mainly due to religious beliefs, and most likely resulted in an insufficient work force. There was

thereby a need to look for foreign workers to balance the workforce in Saudi Arabia (Achoui 2009).

On the other hand, due to the ineffective establishment of HRM policies, there is an increase in the level of unemployment (Al-Gassim, Barry, & Mc Phail, 2014). Thus, unemployment is the most vital matters concerning HR strategic planning in Saudi Arabia, reaching 25 per cent in the year 2003 and increasing to 30 per cent in the year 2008. Though this was mainly expected to hugely increase to 36 percent in the year 2014.

The government had not been quite passive, and more significant effort had been established (especially within the ten years) to build up the HR by having foreign employees with Saudis (Nasief, 2015). However, specifically the private sectors still needed to keep obtaining foreigners. The main reasons for this was the not so positive perceptions carried by Saudi businesswomen and men that Saudi citizens' labour were more expensive and less r e productive than that of guest employees.

Therefore, it seemed to be quite important to explain the benefits from sufficient HRM practices and their influence on workers' behaviour and employers' profits. Effective HRM activities may quite positively influence workers' accomplishments, which may have resulted in improved performance. As a consequence, unique and effective HRM activities could be a major source of competitive advantage for firms (Kazlauskaite and Buciuniene 2008).

The various studies had established a more positive association between specific HRM practices and financial organization outcome. The reality of that fact could play an important role in Saudi Arabia's position in international markets, being mainly supplied by local work force in order to improve local employability.

Research had majorly also established a positive association between perception of HRM activities and consumer satisfaction with service, as well as with metrics of the firm's performance (Alfes, Truss, Soane, Rees, & Gatenby, 2013). The author also in the study established the proposition that perception of HRM activities determined the overall behaviour of an aircrew towards the clients, because perceived effectiveness of HRM activities had an influence on the overall culture of the organization service. This may also contribute to maintaining and building nations position on the international trade market and to produce an image of a more competitive and reliable working environment where workers' satisfaction was reflected in the quality and prosperity of the service.

Effective and efficient HRM activities established an environment of wellbeing for workers, which usually resulted in a bigger effective delivery of services (Schneider and Bowen 1993). Studies mainly in the context of service firms have established that the causal association between HRM activities and service major qualities had an influence on overall firm performance. Therefore, besides service qualities and consumer satisfaction, the existence of effective and efficient HRM activities had also amounted to the firms commitment.

The modern Saudi government seemed to understand such matters, and it utilizes oil proceeds to extend social services and to develop schools, roads, telecommunications, and other nation infrastructural structures (Mellahi and Wbod 2001). In order to establish these improvements, the nation was able to hire huge numbers of employees and executives from abroad. The Saudi nationals occupied all middle- and upper-level government service-oriented positions, while most clerical employees, workers, and lower-level service industry employees came from other countries in other continents. Executives and technical jobs are divided roughly evenly among Saudi nationals and expatriates (Nasief 2015). According to the World Bank in 2015, the estimated workers in Saudi Arabia consisted of 10 million employees. In the same year, agriculture was able to employ about 19 per cent of the workers, industry about 20 per cent, and services 61 per cent. Majority of the Women consisted only 18 per cent of the labour force in the year 2015, with Saudi women represented a small percentage, but grew very fast.

Therefore, it is mostly of great significance to provide native citizens with knowledge and skills so that they can engage in their working duties in an efficient and effective way. This can be mainly established by giving them education and training to the highest international standards. Therefore, these firms and universities should be equipped with HR Departments and follow their organization strategies to receive and provide the prominent service and preparation for their future generations (Mellahi, 2007).

Unfortunately, in Saudi Arabia, very few studies had been carried out on HRIS in public universities, and this provided great an opportunity for investigation. The

previous studies were undertaken in other various institutions such as hotels in the hospitality sector (AlGassim et al. 2014). Higher education institutions were very much significant in the nations development as they are specific places containing national intellectual talent. The future of each country must depend and rely on their individual intelligence and work in order to develop, grow and establish any other sectors (Alamri, 2011). Higher education institutions are majorly not only areas of study, development and innovation, but should also be perceived the great business opportunity to produce and establish relevant income as significant part of the national budget (Krieger 2007). Instead of studying abroad, nationals p r e f e r r e d to establish local universities to study. This mainly happened when the standard of education had been established significantly, therefore attracting international students from abroad, which definitely made a great contribution to national income. These major improvements would have to be broadcast to available students at home and abroad.

The biggest challenge that the government and business owners greatly realized in modern firms was that workers are the main entity in any firm as they establish vital tasks within it (AlGassim et al. 2014, Budhwar and Debrah 2013). The main establishment of HRM can assist to support and manage the human resources and this was always playing a pivotal role in the institution. The main Emphasis ought to be placed on the achievements that can be established by ensuring that all of the workers' needs are met, and that the workers have control over their work lives. Besides this, the authors also suggested that every firm should establish the necessity to give information, allow workers to air their opinions, and be flexible. This enhanced the firms ability to obtain

success. Therefore, there is a big possibility to establish such an approach in the firms found in the higher education sector.

HRM research revealed that Human resource practices play an essential role in supporting and promoting firm outcomes, by developing the attitudes and behaviours of their workers (Armstrong, 2010). This is established by shaping the perceptions towards the firm with most of the workers. In the Saudi Arabian example this can have great influence on establishing high morale among Saudi workers, who quite often would feel demoralized by the competitors from abroad. This is mainly because they would gain greater international experience and awareness, more especially with degrees from great and globally recognized higher education institutions.

It is of vital importance that future local employees and their employers understood that HR activities impacted on the effectiveness of a firm by encouraging workers to even work hard and accomplish organisational objectives (Armstrong, 2010).

According to Huselid (1995), in a study that involved 900 different firms, HR activities could be placed into two groups: those HR activities that improved the workers' skills and those that improved their motivation. These two major groups, specifically in a developing nation in the context of higher education and university environment, can have an important influence on the success or failure of their performances and outcomes.

The association between HR activities and firms performance had been established by research in the private sector firms, established that the HR systems had great organization strategic potential and would drive firms efficiency (Zin, 2012). The results obtained established that public institutions such as universities had begun to move towards establishing and providing HRM activities. Their major focus had been the ultimate need to improve workers' performance and competencies. This had resulted in the reproduction of a HR system with both horizontal and vertical alignment around those competencies and talents.

The research on which most of the literature review is usually based always and located in western countries, where the level of establishment in IT and the HR sector had already been established and appreciated. However, such research had never been undertaken in developing countries until recently mainly, when the activities and research of HR began to become noticeable. This is because some vital investments and innovations had been implemented (Obeidat, 2009).

Several efforts had been made to establish the prominent HR activities, and several activities were established, all being under the two categories mentioned in this context. According to Griffin (2013), there are many key factors in HRM that establish the effective performance of workers in any firm. These included recruitment strategies, workers' pay and benefits philosophy, training and workers' career development systems, workers' support programs, and the firms structure and culture, among other factors. Therefore, mainly in order to effectively maintain high-quality workers in a firm, these factors would be managed harmoniously.

All the major factors mentioned above would be of importance, especially in middle- or low-income paying firms such as universities. This lead to the establishment of the need to address the use of IT in human resource department, which introduces the concept of an IT/IS in the world context, which can assist to establish a suitable ground for the successful implementation and adoption of current HR development

1.1.2History and Background of HRIS

The history of HRIS began from payroll systems in the late 1950s and continued into the 1960s where the first automated employee data were being used ((Kavanagh, Gueutal, & Tannenbaum, 1990), (Martinsons, 1997). HRIS has a very humble historical organizational origin. Even though there were some exceptions, prior to World War 2 HR Professionals performed basic human resource employee record keeping as a service and support function with limited interaction on core firms mission and goals.

Initially efforts to manage information about human resource were minimized to employee names and addresses and perhaps employee history written on job cards (Kavanagh, Gueutal, & Tannenbaum, 1990).Between 1945 and 1960, firms became more aware of human capital issues and began to develop very formal processes for selection and development of employees .During the same time organizations began to realize the importance of employee morale on the firms overall performance .During the next twenty years (1960 to 1980) HR was integrated into the core business mission and goals , at the same period, government and regulatory reporting requirements for employees increased significantly. The human resource department became one of the most vital users of the

computing system. Even though HRIS systems were computerized and grew extensively in size and scope during this period, they remained mainly record-keeping systems (Kavanagh, Gueutal, & Tannenbaum, 1990).

Therefore, the first personnel systems were made to store a huge amount of data for record keeping and reporting associated with human resource management. In the duration of time, the development of HR activities generated the design, development and the successful implementation of various computer-oriented HRIS (Martinsons, 1997). (Kavanagh, Gueutal, & Tannenbaum, 1990) presented their conception of the development of HRIS introducing the historical eras in HR from the pre-World War II era to the late 1980s and how the various eras have affected the development of HRIS.

The scholarly research community of e-HRM is in its early beginning. Therefore, e-HRM was defined as a means of implementing HR strategies, policies, and practices in firms through a continuous and directed support of human resource function by use of web-technology-based channels", as indicated by (Ruel, Bondarouk, & Van der Velde, 2007) The electronic human resource management was both technically networked and supported, shared and organized performing of HRM tasks through at least two organizational actors (Strohmeier, 2007).

According to Ruel, Bondarauk and Van Der Velde (2007) the authors presented that the word 'implementing' in that context had a meaning, such as making something work, putting something into practice, or having something realized". (Strohmeier, 2007), the author also explained as the 'spatial segregation' means the situation where the actors and

the HR application are in different places. The ‘Technical network’ meant that actors may work in the same room or on different continents and use the same application. ‘Technical support’ usually consisted of the use of staff e-mail. ‘Shared organization’ and ‘at least two actors’ mean that the work is shared between several actors. The ‘Performing of HRM tasks’ included the basic work processes, such as staffing, performance management, recruiting, training and development and compensation of the employees.

1.1.3 Global and regional perspective to the HRIS.

The use of strategy is a real driver behind technology. The human resource managers and executives who are accountable for the success of the global enterprise should be able to support the global HRIS effort (Sommer, 2006). The global HRIS can put huge amounts of multinational workers data to strategic use and the global database is automatically updated by the local databases. The global HRIS can be utilized to plan and budget for employee training, expatriate assignments and succession planning. The multinational organization with a global HRIS can very quickly and easily obtain the right person to fill particular positions. The ability to get best qualified employees provides a competitive advantage to the firm. (Hussein, et al ,2007). The Colgate Palmolive global HRIS mainly has information on each managers experiences and knowledge on the different cultures. (Obeidat, 2009).

The HRIS can be used to compensate globally by being aware of the differences in compensation for similar jobs in different countries. The compensation plans can also be reviewed based on local currencies and languages. The Cadbury Schweppes Ltd has provided global HRIS that provide the managers with a compensation model with

complete direct and indirect reports on compensation. It also provides the local and global budgets and expenditures. The Global HRIS should be rooted in the global business strategy. The HRIS has simple spreadsheets that can perform complex calculations easily which can have an effect on the business as a whole (Perry, 2010).

The firm may have proper human resource management data and perform various calculations such as pay benefit as a percentage of operating expenses, health care costs per employee, cost per hire, return on training, human value added, return on human capital invested and turnover rates and costs. This has realized cost reduction in the human resource activities. If the system is designed appropriately then it manages the employee data which is in line with how the firm is managed. (Troshani, Jerram, & Rao). Swift technology projection in relation to globalization has made the organization to be more knowledge oriented. This has led to efficiency in the HR department within the global and regional firms.

Africa has been working on issues of technology since the 1960s and should now be able to embrace the rest of the world and especially in managing the human resources. Though the HR function in Africa has not been proactive in the use of technology to provide integrated communication effectively. Like in areas such as Europe and America, the human resource functions in Africa should be able to utilize available information and communication technology to transform human resource internal operations. (Sadri & Chatterjee, 2008) established that the firm lacked the information on the effects of HRIS on organization performance and also availability of adequate resources from the government to support the use of HRIS in various private and public firms. The human

resource managers should use the intranet as a support tool for communication on issues of human resource activities within the firm.

1.1.4 The Major Subcomponents of the HRIS

HRIS is used to maintain personal information of all the employees who are working within the company Managers in organizations are mainly also interested in maintaining their employees' qualifications, experiences, technical and functional skills and aboard experiences as they want to make use of the employee skills when the organization needs them. HRIS provided the adequate and proper information to decision makers to make strategic decisions in areas of human resources. HRM processes are involved in the execution of the human resource functions namely human resource planning, recruitment, selection, orientation and training, performance management, employee compensation and occupational health and safety processes. (ibid)

E-training and development system is a system that consisted of tools to undertake career and succession planning, individual development plans, appraisal systems monitoring skills profile in the organization and planning of training events and schedules. The use of technology in training and development had contributed positively to organization such as IBM Corp, which generated over $ 100 million in cost saving due to online training and development (Nielson, 2002).

E-performance management system provided flexible application components to established and developed performance management and established individual

performance policies, long term performance management objectives and performance-oriented compensation strategies for the employees.

E-human resource planning systems is a system which looks at the organization model and structure and provides way of modifying it to reflect its dynamic development hence can be used to determine the current staffing situation, future requirements, vacant positions and qualification deficits. This is an automatic planning tool that is used to provide an overview of the HR available at a given moment. It helps in the planning of the employee shifts, recording working time and compliance of labor laws (Khera & Gulati, 2012). In their research they focused on HRIS roles on human resource planning and conducted their study in top IT firms. They found out that HRIS was more useful for strategic activities of human resource managers and officers and more needed in training, succession planning, recruitment and selection and manpower planning.

E-staffing system is a component that provides recruiters with the necessary data on vacant positions, the requisite skills, educational background and job descriptions to facilitate both internal and external job postings. This IT tool enables managers to achieve a streamlined and fully integrated HR data structures. Further the system empowers employees to view data, create and maintain their own data at any time and wherever they are .Through proper human resource information systems management of firms are able to perform calculations that have an effect on business as a whole such as healthcare costs per employee, pay benefits as a percentage of operating expenses, cost per hire, returns on training, time required to fill certain positions, return on human resource capital investments and human value added (Asafo, 2007).

1.1.5 Background of Saccos both regionally and globally.

The first Co-operative Society in the entire world was made possible by Rochdale Pioneers in 1844 in Rochdale village, England. This initially were the times when Britain was undergoing the business industrial revolution. The Rochdale Pioneers managed to draw up some rules which would later on guide their operations as a Co-operative Society. They produced the co- operative principles which are mainly used although they have developed over time (Gardeklint, 2009). Currently, the Co-operative Movement has membership of over 800 million people globally and nearly 3 billion people or half of the world's population depends on co-operative enterprises. These enterprises mainly have continued to play important roles both economically and socially in the communities (International Co-operative Alliance, 2009)

The first Savings and Credit Co-operative Society originated in Germany by 1849 developed by Herman Schulze and William Raiffersen. The SACCO Society was to adopted to assist residents to overcome economic challenges during the prominent times of famine that was prevailing there during that time. In 1850 in England, employees in a mill factory began savings and processing loans, to assist each other. Later, in the twentieth century, the idea was spread to North America. As time progressed, the first SACCO Society was started in Canada in 1901 by Alphonse Desjardine and later in the USA by E. Filen, a Boston merchant specifically for the employees. This brought about a vast establishment of the cooperative movement in Europe, Canada, United States, Australia and Ireland. In fact, in most regions of these countries, SACCOs became quite large than the commercial banks.

In 1970, the World Council of Credit Unions were established with their Headquarters in Madson Wisconsin, USA, to develop an International Forum mainly for discussion and association, it provided help to new and developed movements, provided insurance and membership training on a large amount. In the world there are approximately 100 million individual members in nearly 60 countries across the world (Savings Plus, 2010). The first SACCO Society was developed in Africa by Father John Mcnulty who came from Ghana during the 1950, s. The SACCO were mainly to help villagers promote their economic situations (Ng'ombe & Mikwamba, 2004). English speaking countries were the pioneers in adopting SACCOs. The first beginners into SACCO movement included Ghana, Uganda, Nigeria, Tanzania, and Kenya. Majority of the Non-English-speaking countries in Africa started accepting the ideas of SACCOs in 1960s, with major boost into SACCO community in 1970s (Mwakajumilo, 2011). The formation of SACCO in Africa developed tremendously such that the African nations formed a continental association of SACCOs, Africa Confederation of Cooperative Society Savings and Credit Association (ACCOSSCA), in 1965. ACCOSSCA was initiated with the major principal goal of promoting the SACCO principles, develop SACCO insurance, and train members on SACCO matters. (Ng'ombe and Mikwamba, 2004).

SACCOs in the continent of Africa are still stagnant as they are newcomers, mainly those offering savings and credit. In deed they have little share in providing financial services, their market share is minimal in comparison to other player who

also provide financial service (Mwakajumilo, 2011). The regional perspective show that 28 countries in Africa have developed SACCOs (Savings Plus, 2010)

The first Co-operative Society in Kenya was Lumbwa Co-operative Society established in 1908 by mainly European Farmers with the initial goal of purchasing fertilizer, chemicals, seeds and other farm inputs and thereby marketing their produce in order t a k e advantage of economies of scale (Kenya Union of Saving and Credit Co-operatives (KUSCCO, 2006). In 1930, Kenya Farmers Association was established as a Co- operative Society to promote the role of supply of farm inputs developed by Lumbwa Co- operative Society (Gardeklint, 2009). Mainly the co-operatives were introduced, recognized and controlled by the government of Kenya (KUSCCO, 2006). During the independence period of 1963, the number of co-operative societies had improved to 1,030 with 655 predominant SACCOs with a total membership of 355,000 (Gardeklint, 2009).

In 1965, the Africa Confederation of Co-operative Society Savings and Credit Association (ACCOSSA) was established in Nairobi, Kenya as a Pan African body. Mainly it was established to promote the SACCO Society principles, develop an opportunity f o r discussion, provide vital i n s u r a n c e to SACCO Society members on life savings and loan protection and empower affiliate members on a wide range of credit union matters (Ng'ombe & Mikwamba, 2004).

By the time of independence, the Government of Kenya recognized co-operatives as important vehicles with established framework to achieve their aspirations and

engage in the economic growth of the country. Accordingly, vital steps were taken by the Government which saw the rapid development and spread of the SACCO Society movement in the nation. The various SACCOs provided a variety of financial services, most importantly loans against members share capital (Gardeklint, 2009). Mainly, in the period between 1964 and 1993, the overall policy was to develop the SACCOs as a means of promoting the nation economic development most specifically in the rural areas. In this regard, the government established grants and subsidies but regulated the operations of SACCOs to establish that they are properly managed to assist the nation development goals (KUSCCO, 2006).

Indeed, there are SACCO societies in every sector of the nation economy (Khumalo, 2008). In deed based on facts, the Kenyan co-operative movement is under consideration by the government as one of the economic strongholds of the nation. This is mainly in view of the very vital role it promotes in the growth of the economy and in uplifting the living standards of the majority of the Kenyan population, mainly in the rural and urban areas. More importantly, the co-operative movement provided over 30 per cent of the nation national savings (Ndung'u, 2010); Republic of Kenya (RoK), 2008). By the year 2010, Kenya had already over 5,000 registered SACCOs with both cooperate and individual membership of about 7 million. These all sector SACCO societies had mobilized savings of over Ksh.200billion (Ndung'u, 2010).

It is also vital to note that on average, SACCOs have KSHS. 25 million of deposits in 400 accounts. Three quarters (¾) of their members mostly have borrowed an approximate average of Kshs 64,000. To provide service to these clients, rural as well

as urban SACCOs have established Front Office Service Activities (FOSA) to serve as mainly banks for their members. FOSA is regarded also as one of the most profitable income- generating business event for SACCOs (KUSCCO, 2008)

In 1945, the Co-operative Ordinance Act was passed where the Government of Kenya (GoK) was able to legally control mainly the co-operatives. The act later on was amended in 1997 removing most of the control from the government through the Commissioner of Co-operatives.

1.1.6 History of Saccos in Kenya.

The SACCO sub sector occupies a strategic position in the social and economic development in the country. The Kenya cooperative sector is rated the best with the highest revenue mobilization in Africa and the 7th in the world. According to the survey carried out by international cooperative alliance (ICA, 2010).

In 1945, the famous act of Co-operative Ordinance Act was passed where mostly the Government of Kenya (GoK) legally had control over the co-operatives. The act was then amended in 1997 to include elements that would reduce the control of the government over these entities. The act was amended in 1997 removing most of the control from the government through the Commissioner of Co-operatives under the Co-operative Societies Act 1997. This Act was developed to introduce a policy framework for co-operative movement specifically in Kenya therefore removing these co-operatives from the control of the Government by necessitating the removal of state control over the co-operative movement. The main goal was to develop co-operatives

to be more autonomous, self-reliant, self-controlled and commercially viable institutions. The main role of the government was modified from one that sought to control co-operative development, to one that sought to regulate and further facilitate their autonomy. This mainly promoted the co-operatives to compete with other private enterprises in the promotion of agricultural produce (Republic of Kenya, 1997a). However, there were some major inconsistencies and inadequacies of the Act. For instance, the co-operatives were established without a clear regulatory mechanism to maintain the role that the government had previously used which saw the co-operatives produce cases of corruption and office mismanagement, such as: gross mismanagement by company officials; stealing of co-operative resources; dividing of viable co-operatives into smaller ineffectual units; failing of employers to surrender members‟ deposits to co-operatives (particularly SACCOs‟ failure to hold and conduct transparent elections);

Nepotism mainly in hiring and termination of staff; unauthorized access to co-operative investments; and unauthorized payments to the firms management committees (Manyara, 2003).

In response to these situations, the 1997 Act was reproduced in 2004 through the Co-operative Societies (Amendment) Act of 2004 which was enacted mainly to re-emphasize state regulation of the co-operative movement through the office of the Commissioner for Co-operatives Development. Accordingly, the legislation roles provided for by government included; establishing of co-operatives legal framework; improvement of growth and development of co-operatives, registration, operation

management, advancement of the firm and dissolution; development of co-operatives‟ partnership, and legislation and regulation. More provisions given to the Commissioners‟ included; promotion, inspection, enquiries, auditing, surcharge, debt collection, liquidation and provision of mainly technical extension services by the firms (Wanyama, 2009).

The SACCO Societies Act of 2008 was developed later to provide and assist the firm for the licensing, regulation, supervision and promotion of savings and credit co-operatives by the SACCO Societies Regulatory Authority. Thus, this Act makes provision for the establishment of the SACCO Societies Regulatory Authority (SASRA) whose work includes licensing SACCOs to carry out deposit-taking business as well as providing for regulation and supervision of SACCOs (Republic of Kenya, 2008b). The Authority will mainly also have mandate t o intervene in the management of a SACCO society that is deemed to be mismanaged by the firm officials. The Act also initiates for the establishment of the Deposit Guarantee Fund, which Safeguard each SACCO Society members‟ deposits (not including shares) up to an amount of KSHS. 100,000. The Act was intended to establish a framework for the effective management of SACCOs as financial institutions and make them sound competitors in the financial sector. The SASRA was also expected to set the minimum operational standards and prudential way of operations for the SACCOs. Nevertheless, some guidelines in the Act, such as the minimum capital requirement, are so strict that some SACCOs may be unable to operate the FOSA activity (Wanyama, 2009).

The Sacco subsector has witnessed a rapid growth from 2010 at the rate of 25% per year and has savings mobilization of over kshs 200 billion and an asset base of kshs 300 billion (Cooperative bank of Kenya, 2012). It is out of this outstanding contribution and growth that the researcher sought to evaluate the contribution of HRIS on the organization performance of the Saccos. There is therefore an urgent need by the Saccos to pay close attention to the services that they offer to their members and how this service is offered. Innovations in provision of the services is vital, Quality and user-friendly services are also the major determinants in the performance of an institution in the financial sector (Ademba, 2010).

HRIS has been in operation in the Sacco industry in Kenya and includes the following activities in human resource management; employee information systems, payroll administration, job analysis and job design. The Saccos in Kenya are in the early and middle stages of HRIS development since they had begun the use of the system in 2001. The typical HRIS users are the first line managers and the middle level managers. A human resource department if well maintained ensures that the employees are motivated and therefore ready to maximize their outputs. Sacco customers are selective and mind the services provided. Such services can only be offered by a well-managed workforce. A major problem is that most Saccos have not changed their service delivery systems despite the growing need for better services by its members (Mudibo, 2005).

Saccos in Kenya have incorporated HRIS and this includes 75% of the Saccos which include 18 of the Saccos which had started using the HRIS from 2001 to date. They mainly handle operational tasks and transactional tasks. Saccos such as Stima Sacco have reported

to be in the middle stages of HRIS which mainly deals with strategic decision making in human resource management. The other Saccos like Safaricom Sacco and Mwalimu national Sacco are in the early stages of HRIS which entails using HRIS for transactional activities in human resource management. Saccos which have been formed recently are in the early stages which deal more with employee information processing (Ireri, 2015). Many Saccos still use HRIS as database HR transactional tasks only and have not yet optimized the actual capability of HRIS.

1.1.7 Organizational Performance

Organizational performance is an analysis of a company, s outcome as compared to set goals and objectives (Business Dictionary, 2014). It is the extent to which an organization achieves a set of pre-defined targets unique to its mission, including both objectives and subjective indicators (Albert, 2011). Organizational performances tend to cover three areas of firm outcomes, that is, financial performance (profits, return on investment, and so forth), product market performance (sales, market share and so forth), shareholder return (economic value) (Richard, Roh, & Pieper, 2013).

According to Barney (2007) organizational performance had an outcome achieved when an organization successfully formulated and implemented a value creating strategy which enables clients receive a service or product of value bigger than what they are willing to pay for. Performance provided the basis for an organization to assess how well it is moving towards predetermined objectives, identify mainly areas of strength and weakness and decide on the future initiatives with the goal of how to initiate performance improvement and innovation among the firms products. (Vanweele, 2006).

Organizational performance included multiple activities that helped in establishing the goals of the organization, and monitoring of the progress towards the target (Johnson, et al, 2006). It is also used to make adjustments to accomplish goals more efficiently and effectively. Organization performance is mainly what business executives and owners are usually frustrated about. This is because even though the employees of the company are hardworking and are busy doing their tasks, their companies are unable to achieve the planned results. Results are achieved more mainly due to unplanned events and good fortune rather than the efforts made by the employees. However, for any business to be successful, functions must be clearly defined and accomplished. It is important for an organization to develop organization strategies that are well designed around the employee skills that would enhance the performance of the organization. Even though individual firms tend to mainly utilize firm specific performance metrics appropriate to their needs, for many firms the main performance metrics would typically include some combination of financial: market/customers: human resource; internal business process; and environmental metrics (Camp 2008). The organizational performance dimension that were dominant in this study was market share, operational efficiency and human resource department effectiveness. The market share may be measured in terms of increased sales volume, customer base and increased revenue base this mainly on the firms products.

1.2 Purpose of the Study

The main purpose of the study was to explore the extent to which the Saccos in Kenya have adopted human resource information system and to examine the current HRIS uses, benefits and barriers in these organizations. Therefore, the study investigated the

effect of HRIS on organizational performance by examining how HR professionals or and managers in different Saccos see the effects of HRIS on these organizational processes and organizational performance. It also helped the Saccos to develop a model of HRIS for the effective management of human resources in the organization.

1.3 Statement of the Problem

With the advent of ICT in the developing countries, there is a need for all the sectors in the economy to embrace information technology for improved efficiency and effectiveness in managing organizations. Approximately 75% of Saccos in Kenya have now embraced the use of information systems in organizations and more importantly in the operations of the firm. There has been a culture change from the use of a manual system of operations in the HR department to that of user of information technology to be able to retrieve data. Most of the Saccos in Kenya have implemented human resource information system within their firms by having the human resource portal which is only helpful in having the human resource inventory information. With the growing adoption of HRIS by organizations combined with the increased sophistication of the software, the human resource function has an opportunity to enhance its contribution to organization strategy. In this study the researcher examined the way in which HRIS was used to achieve human resource management strategy. Human resource management information systems challenges relating to ease of use of the system continue to hinder human resource delivery in the organizations even after the introduction of HRIS in firms. However, implementation of HRIS has been fraught with problems because the process of implementing HRIS across departments is not well understood. This is especially so because the HRIS consequences for human resource information systems subsystems

towards the overall organization output are not well understood by the main users of the system. And its strategic importance and relevance has not been well established in the firm as addressed by the various empirical reviews in this section.

Empirical studies as that of (Nyakoe, 2003) investigated the extent of use of information technology in large manufacturing firms in Kenya recognize the possibility of strategic benefits of HRIS but the study had failed to explain the way these benefits were realized and if they had an impact on the organization performance. HRIS utility is still not being fully recognized by management and thus preventing the system to be used to its fullest potential as indicated by a study done by (Kanini, 2008) which the author looked at the implementation of strategic information systems in commercial banks in Kenya and obtained that most of the firms were not using the human resource information systems to its fullest potential .According to (Opiyo & Abok, 2015) in her study indicated that e-training, e-recruitment, and e-performance appraisal had a positive and significant effect on organization performance of commercial banks in Kenya. HRIS studies done by (Chowdhury, Mohammad, Bhuiyan, & Kabir, 2013) which studied the effect of HRIS on the performance of banks in Bangladesh generally examined single HRIS applications focusing on changes in HRM processes and reliable empirical data on the organization with organizational performance impact of HRIS was lacking in most of the cases .Many Saccos were still using HRIS as a database pool as well as to complete basic HR transactional tasks only, and yet to optimize the actual strategic capability of HRIS. Therefore, this study examined the argument that though HRIS had the capacity to deliver accurate and timely metrics it can be able to contribute to developing business strategy and enhancing organization performance. In current business environment, many

organizations are more and more likely to introduce the technology environment into the workplace to sustain their competitiveness. Thorough analysis of the literature had revealed that more of the literature reviewed have dwelt more on the transactional aspects of HRIS and none have shown the relations of HRIS to strategic decision making in key areas of human resource management. (Kundu & Kadian, 2012) assessed the application of HRIS in HRM in companies operating in India and established that more firms use HRIS for performance and reward management, employee record keeping and less have applied it in strategic decision making in HRM. Therefore, this study intended to ascertain if the electronic performance management, training and development, human resource planning and staffing have an effect on the human resource functionality and ultimately the overall organization performance of the Saccos.

1.4 Research Objectives

1.4.1 Main Objective

The main objective of the study was to evaluate the effects of human resource information systems on organization performance in the Saccos in Kenya.

1.4.2 Specific Objectives

The specific objectives of the study included: -

i. To determine the effect of e-performance management systems on organization performance of selected Saccos in Kenya.
ii. To examine the effect of e-training and development systems on organization performance of the selected Saccos in Kenya.

iii. To assess the effect of e-human resource planning systems on organization performance of the selected saccos in Kenya.

iv. To examine the effect of e-staffing systems on the organization performance of the selected Saccos in Kenya.

1.5 Research Hypotheses

i. Ho; The e-performance management systems do not have statistical significant effect on organizational performance of selected Saccos in Kenya.

$H_{1;}$ The e-performance management systems do have statistical significant effect on organization performance of selected Saccos in Kenya.

ii. Ho; The e-training and development systems do not have statistical significant effect on organization performance of selected Saccos in Kenya.

$H_{1:}$ The e-training and development systems do have statistical significant effect on organization performance of selected Saccos in Kenya.

iii. Ho; The e-human resource planning systems do not have statistical significant effect on organization performance of selected Saccos in Kenya.

H_1: The e-human resource planning systems do have statistical significant effect on organization performance of selected Saccos in Kenya.

iv. Ho; The e-staffing systems do not have statistical significant effect on organization performance of selected Saccos in Kenya.

H_1: The e-staffing systems do have a statistical significant effect on the organization performance of selected Saccos in Kenya.

1.6 Significance of the Study

The findings of this study were of great significance to several parties. First, the management of the Saccos were abbe able to understand the importance of HRIS and how it can affect the organizational performance. They were able to improve on their records and enhance good decision making thus improve organizational performance.

To the employees of Saccos, HRIS was able to ensure that their records were well kept and maintained. This will serve as a reference point in case of any necessary action such as promotion, salary increment, transfers, and many others. This will help the employees gain confidence in the management of the organization and will go a long way in increasing motivation amongst the employees hence improvement of overall organization performance. The study aims at strengthening the body of knowledge on the theory about human resource management for Saccos.

The findings of the study will help developers of the HR information systems to develop customized and dependable HR systems which address the records management and decision-making concerns of Saccos in Kenya.

This study helped the HRIS users to approach the specification and effectiveness of their human resource systems in a more specific and more holistic manner. The findings of the study will help the human resource managers realize the importance of human resource systems.

Other researchers were able to use the findings of this study as a basis of their research on similar topics and provide a basis for empirical review on the area of HRIS implementation in organizations.

1.7 Scope of the Study

The study focused on the effect of HRIS on the performance of the organization. It entailed a study on the Kenyan Sacco sector and the respondents included the human resource officers and managers of the Saccos. The study was focused on selected Saccos which have implemented the system in Kenya this included Saccos in Nairobi region, central Kenya region, coast region, rift valley region and western Kenya region. The study was carried out from January 2017 to July 2018.

1.8 Delimitations of the Study

The main limitation was the scope since the study only dealt with the Saccos sector which does limit the generalization of the findings to only the few Saccos which also adopt and apply IT in HR, this was dealt with by the use of appropriate sampling and instrumentation. Other limitations that were encountered in the study were the challenges of cooperation from the staff. This was dealt with by explaining to them the need for the study and its nature and also assuring of the confidentiality of their responses and that the study was to be used for academic purposes only. The researcher and the assistants had to create a rapport with the managers to appreciate the value of the study. The limitation of the respondents not understanding the interview schedule was also encountered and the assistants had to clarify the elements in the sections so that it leads to a good response.

1.9 Assumptions of the study

The study assumed that there were only selected saccos in Kenya that were totally utilizing the human resource information systems and that they were in the late and middle stages of adoption of the system.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION.

This chapter presented a review of literature relating to HRIS and organization performance. It mainly dealt with the past studies and theories relating to e-human resource planning systems, e-staffing systems, e-performance management systems, e-training and development systems and organization performance. It was able to highlight the regional, global and national trends in Human resource information systems aspects and organization performance indicators. The theories addressed was that of the systems theory, resource-based theory, technology acceptance model and the human resource information systems model. It also provided the conceptual framework of the study variables and the knowledge that the study was able to fill mainly in the analysis of theoretical review and empirical review. This chapter also highlighted the main components that do exist in the human resource information systems and its applicability in obtaining the human resource department goals and organization goals. It also provided a summary of the literature review.

2.1 THEORETICAL REVIEW.

This section contained components of the theoretical aspects of the study by providing explanations on the systems theory, resource-based theory, technology acceptance model and human resource information model. It provided in-depth explanations of the independent variables and dependent variables association in relations to the theories.

Organizational context of human resource information systems. HRIS have developed from largely being used for administrative and transactional purposes, to its use in IT in processes such as recruitment and selection, flexible rewards system and e-learning. While technology improved, organizations used information systems to manage a huge number of human resource processes in an increasingly efficient manner to contribute to the availability of strategically significant information and knowledge, therefore potentially improving company competitiveness among firms. A number of authors have comments that use of technology within human resource not only make human resource activity more efficient, it may also facilitate a change in emphasis for HRM to become more strategic within the firm. Ensheret *al*. (2002) noted that technology can free up time that practitioners would traditionally have spent on administrative tasks, therefore allowing them to focus on more strategic business issues.

2.1.1 TECHNOLOGY ACCEPTANCE MODEL

The technology acceptance model is the information systems theory that shows how users come to accept and use technology broadly it emphasize that the intensity of an individual intention to use a technology can be explained jointly by his or her perception about the technologies usefulness and attitude towards the technology in the firm (Chau & Hu, 2001).The model suggested that when organization users are presented with a new technology, a number of issues influence their decision about how and when they will use the technology, perceived usefulness and perceived ease of use (Bagozzi, Davis, & Warshaw, 2012).King& He (2006) concluded in a statistical meta-analysis of the technology acceptance model as applied in various fields analyzed88 published studies that provided sufficient data to be credible. The results showed that TAM was a valid and

robust model that has been largely used, but which potentially has wider implications in organizations.

The original TAM according to (Fu *et al*., 2006) was developed using the setting of MIS usage within firm's boundaries, where availability of technological resources, training of staff, MIS experience and expectations of users were homogeneous to some extents. TAM would be used to guide in the conceptualization of the adoption of information systems in Saccos. As guided by the theory, adoption would be used to measure in terms of the actual usage of IT in human resource management functions mainly in performance management, staffing, training and development and human resource planning within the firm. The human resource has not been proactive in internet use to provide integrated services or to communicate more effectively with the internal customers and most importantly meet their changing expectations. The electronic human resource management system may be less effective when used in nations with different cultures. Management of human resource in the firm usually does not operate smoothly if the HRIS is not adopted properly. The system has to be well adopted by the firm in order for it to improve its performance.

(Desanctis & Poole, 1994) were able to use Giddens theory to study association of groups and information technology and made it to be adaptive structural theory which provides a critic to the techno view of technology use and advocated more for social aspects. The groups within the organization use information technology for their work and thereby creating perceptions about the role and utility of the technology and its application

in various activities. These perceptions reproduce the way HRIS is utilized and have an influence on the organization performance.

This section discussed mainly the TAM model, which was developed by (Davis, 1989) . TAM was developed by the combination of the theory of reasoned action and the theory of planned behaviour to determine the information technology users' acceptance (Fishbein and Ajzen 1975). The TAM model has been used majorly and extensively to study HRIS adoption and acceptance within firms (Sun, Wang, Guo, & Peng, 2013). Based on the TAM model, when all things are kept equal or constant, users will adopt and use HRIS when they perceive or consider the system to be easier and manageable. The TAM model was mainly used to predict user acceptance and usage behaviour; therefore, users were more likely to accept and adopt an IS when they perceive that the system would be easy to use and useful for daily tasks. Davis (1989) originally established that there was a strong link between the behavioural intention and the perceived usefulness of technology. Therefore, there was a weak link between attitude and perceived usefulness measures, thereby resulting in the major exclusion of the attitude factor from the final TAM model. The revised version of TAM consisted of two stages: a pre-implementation stage and a post-implementation stage. In both stages, according to Davis (1989), acceptance behaviour was directed by the perceived ease in terms of use and perceived usefulness; therefore, these measures could lead to IS adoption by a specific organisation or institution. In this assumption, TAM had evolved as an effective model with the major ability to determine the acceptance behaviour of users majorly on the perceived behavioural intention and perceived usefulness to the individual.

(Wixom & Todd, 2005) emphasized that minimal studies have been established to investigate the usefulness of TAM by involving the organization system and information dimensions as characteristics of the perceived usefulness and perceived behavioural intentions. Similarly, (Venkatesh, Morris, & Davis, 2003) concluded that the literature on TAM by considering organization information and system elements, which might affect the main values of TAM. The TAM model was able to be used to examine the acceptance of HRIS in the major banking sector in South Korea (Suh & Han, 2003). The authors (2002) established that the ease of use and perceived usefulness elements of the TAM model worked on the acceptance of technology in the major banking sector of South Korea, motivating clients to use the system much frequently. The same conclusion was also obtained by the study of (Pikkarainen, Pikkarainen, Karjaluoto, & Pahnila, 2004), who utilized the TAM model and indicated that bank customers in Finland agreed to use online banking services because of the ease of use and perceived usefulness. Hari (2012) also utilized TAM in a study to determine the influence of customer relationship management software on micro retail businesses. These findings obtained that both elements – perceived ease of use and perceived usefulness – affected users' intentions to utilize the system, which in turn determined the actual organization usage.

Davis (1989) obtained a weak association between attitude and the perceived usefulness, while a strong association had been found between behavioural intention and perceived usefulness. In this way, it can be proposed that the TAM model had two stages: pre-implementation and post-implementation. However, in both stages of the model, both perceived ease of use and perceived usefulness form the basis of the

development of acceptance organization behaviour among the system users (Davis, 1989). This assumption influenced the development of IS models designed to gauge HRIS success and effectiveness. It can be established that TAM was the very first model to drive research efforts into the elements of the formulation of IS success models. Similarly, (Sentosa, Nejatian, Piaralal, & Faisal, 2011) utilized TAM to examine the adoption of the Internet by micro and medium entrepreneurs in Malaysia. Their study established empirical evidence that showed the two dimensions in the TAM model – perceived ease of use and perceived usefulness – influenced users' attitudes towards organization system usage. These findings established several other studies that are described above. This therefore established that when the development of HRIS is complex and when it is difficult to utilize, the system users will not accept or adopt it. However, when the organization system was easy to use, the organization users would obtain benefits from using the system and also show readiness to adopt and accept the entire system.

Even though the TAM model has been used in many contemporary research work, it can never be used in every case due to its huge limitations. The biggest setback is the surprising removal of any practical implementation and explanation, which was greatly pointed out by Chuttur (2009). In the various research, the TAM model was not devoid of criticism; for example, Bagozzi (2007) determined that TAM removed the vital social processes of implementation and growth of technology which were both important elements in examining any success or achievement. The other limitation was that mostly described by Venkatesh and Davis (2000) is the amount and percentage of real practice and accurate system usage.

On the other hand, Adams, Nelson and Todd (1992) got to find positive elements of the model especially considering: 'spreadsheets, word processors, v-mail, graphics and e-mail' and obtained that it assisted to prevent ambiguity and variety, specifically with regard to the organization performance of users. Various authors also tried to compare two models (TAM and the Theory of Planned Behaviour [TPB]), using research based on examining the accurate levels of satisfaction of their users. The authors also established that the TAM was relatively clear and easy to use, thus providing technological acceptance among the system users.

Challenges with measurement are the most common, since it is quite hard to determine a measurement tool to examine satisfaction, attitude and initial reaction (Agarwal and Prasad 1998). Thereby, the reliability and validity of the firms procedures can always be questioned and could not be in many cases be assumed to be a reliable source of data, especially with minimal samples on a relatively smaller scale. This seemed to be of the largest disadvantage of the model which was the accuracy of the self-provided report. Unfortunately, when the data collected was determined by human factors in such a way, it was very much difficult to be generalise its outcomes (Legris, Ingham, & Collerette, 2003). The TAM structure itself could also be questioned, as it could highlight the tendencies that the respondents may very much subconsciously follow (Todd and Taylor 1995, (Venkatesh, Morris, & Davis, 2003).

What had been proved above was the fact that, with regard to the investigation of HRIS, it is increasingly difficult to obtain and decide on the appropriate research

instruments, as none had been utilized before and they all lack some sort of precise accuracy.

The other challenges could be the way in which HRIS had been introduced to many firms. The attitude towards it may be different, specifically in a conservative environment in which such modernisation had been externally created without earlier notification, preparation and training. On the other view it cannot be forgotten that TAM in many incidents had been the most outstanding model in IS/IT research (e.g. Davis 1989, Yi and Hwang 2003). Nonetheless, its utilization may be problematic in an examination of HRIS as it does not provide system users the liberty and may result in not acceptable data collection.

The TAM element of user satisfaction had been explained as a very vital indicator used to determine HRIS effectiveness and success in many firms, according to the number of tasks performed with HRIS as opposed to earlier methods (Zviran & Erlich, 2003). User satisfaction had been defined by several authors in the IS literature by establishing an association between the behaviour or attitude of system users towards the utilization of an IS. For example, the definition introduced by the author is the "extent to which users believe the information systems provided to them meet the organization information requirements". In the earlier definition, the attitude perspective of an IS had been associated to the user's satisfaction. Unlike the literature on technology acceptance, the empirical literature on user system satisfaction had been given a great amount of thought and empirical evidence to describing the system and information dimensions as vital elements of user satisfaction (DeLone & Mclean, 1992). The authors

established that user satisfaction was an attitude established by system users towards an IS. In addition, the essence of user satisfaction in terms of measuring both downstream and upstream activities in the firms value chain. Upstream activities were majorly explained as dependent variables which establish user satisfaction; however, the downstream elements refer to the behaviours provided by satisfaction itself, where user satisfaction was established as an independent factor.

Following a survey of the literature on user satisfaction, (Sanchez & Aguayo, 2007) established that more of the literature was dedicated to measuring upstream activities, but there is a minimal amount of literature related to determining downstream elements in the value chain. In a similar threshold, studies to measure the performance-related behavior were conducted in organizations.

While those pertaining to users' satisfaction were also narrow. In the literature, studies that attempted to measure user satisfaction were driven by the assumption that IS effectiveness was directly proportional to user satisfaction. However, the studies of (Gatian, 1994) provided that the earlier assumption was not accurate and does not hold any significant empirical value. The author also argued in detail that IS effectiveness depended on the firm support structure for workers, and it may be able to have an effective HRIS without having the dimensions of user satisfaction. Thong and Yap (1996) provided a similar finding, which provided that user satisfaction alone cannot be used to indicate IS effectiveness, which was affected by a complex variety of variables. Furthermore, in an article published by (Gatian, 1994), he proposed that HRIS effectiveness could not be indicated by the main consideration of users' satisfaction,

which does not cover e v e r y aspect of user behaviour. The challenges of linking user satisfaction with performance-related behaviour had remained a vital issue in the IS literature. The authors have argued that performance- related behaviour dimensions might be tied to individual systems and subsequently could be established in the specific case within a particular firm rather than being applied generally in major assessment of user satisfaction.

(DeLone & Mclean, 1992) established one of the most extensively used models to explain IS success in various organisational set-ups. The main objective of DeLone and McLean's (1992) model was to downsize the bulk of variables that had been developed to assess HRIS adoption and success. The existence of so many different variables to measure the accomplishment of HRIS adoption had made it difficult to compare the results of similar studies and to build a comprehensive body of empirical knowledge (DeLone and McLean, 1992).

The model was developed when DeLone and McLean (1992) revisited the IS studies of other authors from 1981 to 1987; this provided the creation of the taxonomy of an IS success model based on the analysis. The obtained model provided six interrelated variables to measure IS success: information quality, system quality, system's use, user satisfaction, individual impact and firm impact. The six variables were not independent but rather interdependent; however, information quality and system quality jointly or independently affect user use and satisfaction. Since the development of the DeLone and McLean model (1992), several researchers had used it to examine HRIS

adoption, acceptance and success (Landrum & Prybutok, 2004, Hosnavi & Ramezan, 2010, Al-Shibly 2011).

The information quality is a variable which was applied to assess the outcome of the IS and is usually measured with the inclusion of elements such as uniqueness, usefulness, reliability and clarity. The information quality is a variable which was used to evaluate the output of the IS and was usually determined with the inclusion of elements such as uniqueness, usefulness, clarity, reliability, readability, relevance, accuracy, precision, entirety and report format. The system's quality was used to determine the overall performance of IS instruments by measuring against dimensions such as reliability, flexibility, time taken to complete the task, resourcefulness and ease of use. The "use" variable was the most widely utilized in terms of measuring the accomplishment of an IS. This was measured with dimensions such as the number of sessions taken by the user to use IS tools, number of day per week, number of hours per day, number of reports produced, charges for the use, and frequency of the time and number of functions established in completing one task.

This matter with measuring the "use" dimension is reported in firms that made the use of the IS compulsory. In such situations, the information quality and system quality became the less favorable way. Therefore, user satisfaction is the most vital dimension of the IS success model (DeLone and McLean, 1992). User satisfaction was normally measured by considering elements such as the level of satisfaction of users with the IS output by drawing up a multi-item scale. Individual influence was another variable that was used to measure the influence level on the IS user and therefore leading to the measurement of IS accomplishment. Multiple items were used to measure the

individual influence, such as the effectiveness of organization decisions, time utilized to make decisions, information recall, learning, efficiency and test scores in the accomplishment of tasks. The organisational influence measured the overall influence of IS use on the performance of the firm and it considered various elements to measure the influence, such as profits, revenues generated, innovations, inventories, human resource and quality of the tasks being made successful.

The DeLone and McLean (1992) IS success model had been widely utilized, either as originally structured, or modified to establish valuable contributions to the literature on HRIS success. According to (Shannon & Weaver, 1949), information output, or the message in a communication, could be established on effectiveness, semantic and technical levels. The organization System quality was established at a technical level, while information quality was established at a semantic level, and use, user satisfaction, individual influence and firm influence were measured at the effectiveness level. Shannon and Weaver (1949) clearly explained that information output would be efficient and accurate, as being able to successfully transmit the intended meaning when necessary. Based on Shannon and Weaver's (1949) studies, DeLone and McLean (1992) established that information flows through various states from its production through its utility or consumption to its impact on individual and/or general organisational performance. The authors also developed the six variables of the HRIS success model out of Shannon and Weaver's (1949) three items. These variables were able to match Shannon and Weaver's (1949) three-construct model including system quality at the technical level, information quality at the semantic level, and use, user satisfaction, individual influence and firms influence at the effectiveness and

efficiency level. (Rai, Lang, & Welker, 2002) used the DeLone and McLean (1992) model to assess successful IS adoption in an organisation. Their research findings majorly supported for DeLone and McLean's (1992) proposal that HRIS success models would be carefully indicated in a given context to determine the success of adoption. (Shin, 2003) utilized the DeLone and McLean (1992) model to assess the effectiveness of HRIS accomplishment in terms of information quality, systems quality and service quality on user satisfaction in the data warehouse.

They utilized survey questionnaires and interviews to obtain information from respondents and confirmed that the DeLone and McLean (1992) model was mostly able to explain the effectiveness of HRIS success. (Thatcher & Oliver, 2001) assessed the influence of technology investments on performance in firms, using product quality, production efficiency and firm productivity levels. Thatcher and Oliver's (2001) research findings were inclusive and explained whether IS investment improved performance. Since its inception, DeLone and McLean's success model (1992) had received various criticism from many researchers, who suggested that the model would incorporate service quality. This is because service quality was a variable that was able to explain IS accomplishments. (Seddon, 1997) established that system use would be removed from the model because system use does not indicate IS success, but rather it indicated behaviour; thus, it is very appropriate to include system use in a process model than in a causal model. Other authors have majorly supported these suggestions, including Kettinger and Lee (1994) and Wilkin and Hewitt (1999). The authors determined that service quality should be included into the model to determine IS accomplishment. Moreover, other researchers in this area have reconstructed DeLone and McLean's

(1992) success model and used it to assess the success of knowledge management (Wu and Wang, 2006). Livari (1987) reconstructed the same model and used the model to examine IS success and established that perceived system quality and perceived information quality were the significant determinants of user satisfaction, but not system use. The model Received various constructive criticism from Seddon (1997), who reconstructed the DeLone and McLean's model by indicating interpretations to each variable and some additional variables, such as the measurement of HRIS adoption use for firms, community and individuals.

Seddon in his study provided major interpretations and a definition for the variables used in his IS success model; however, these elements cannot be found in DeLone and McLean's model. Seddon elaborated on various variables in his model in this way: information quality was linked with relevance and timeliness, accuracy; system quality was related to reliability, maintenance of codes and programs, user interface, users' ease of use and the amount of bugs in the system; the variable – perceived usefulness – dealt with the perception of system usability to improve the performance of individual tasks; user satisfaction evaluated the output of the system's use in a subjective manner; and the HRIS adoptions part of the model measured the IS HRIS adoptions to firms, individuals and society (Seddon, 1997).

Based on the criticisms and recommendations of various IS researchers, DeLone and McLean (2003) reshaped their 1992 model and constructed a brand-new model that incorporated service quality as one of the variables to explain IS accomplishment. They established that service quality, system quality and information quality affected

system use and user satisfaction Another major update proposed into the new model was HRIS adoptions, which replaced firm and individual impact. This is because the IS influenced majorly firms and individuals and therefore affected firms, work groups and individuals (Seddon et al. 1999). The various Researchers that have utilized the DeLone and McLean (2003) model to explained information success included Landdrum and Prybutok (2004), and Almutairi and Subramanian (2005). Landrum and Prybutok (2004) tested DeLone and McLean's (2003) success model by collecting 385 results from two U.S. Engineer Army Corps cases of successful use of libraries. They established that system quality, service quality and information quality had a positive significant influence on user satisfaction and usefulness. In another study, Almutairi and Subramanian (2005) utilized the DeLone and McLean (2003) success model to assess private sector firms in Kuwait. The authors established that system and information quality influence user satisfaction greatly and that system use had a prominent impact on individuals. This therefore established that DeLone and McLean (2003) responded to the criticism and recommendations made by other empirical researchers and reproduced a more advanced model.

Therefore, what must have established is the fact that none of these models have ever been actually tested in the context of developing countries like Saudi Arabia (Imran et al. 2005), which due to their history, culture and traditions are exceptional and even more profound to have an insight into. The major cultural differences can therefore make it a challenge to follow western models of assessment in a nation that in its essence is quite different. A clearly different mechanism is thus required in order to fulfil the background and citizenship requirements. What might be of a great significance to the

final output is majorly the nature of HRIS implementations. It seemed to be important to take into consideration whether the nature of these organization changes is voluntary or compulsory. Finally, there has been no single research into HRIS adoption at public universities mainly using the D&M model as a framework. Considering all the mentioned factors, this study is going to use this model to establish more of the perceived usefulness of the system to the administrators in the human resource department and the ease of use of the system to perform operational activities in the firm.

The reasons for regarding the D&M model as the most likely to be utilized in this research is that it seemed to provide the most elaborative information evaluation in areas of performance management, human resource planning, training and development and staffing functions in the firm which is also presented in the literature related to this work. The many previous scholars who tried to deal with the IS phenomenon utilized it with positive feedback and relatively reliable data collection. The framework reproduced and utilized in this model has a predominant tradition and was an inspiration for various research conducted under variable circumstances in a variety of cultural circles of different nations, including nations such as Kuwait, Taiwan and Iran (Alshaliby 2010). Therefore, it may even be established as a greater surprise to learn that such a model had never been explained, presented and utilized in the firms in the various sectors in the middle east. This is another major valuable discussion for the fact that there was a great need to test its validity in that country (Petter & McLean, 2009).

Even though the nature of this thesis and the research foundation is different from other IS-based research investigated from the literature above, it can be assumed

that this D&M updated IS success model should be successfully utilized in study on the successful adoption of HRIS among selected saccos in Kenya However, the model is not free from limitations, as can be seen from the updated version. The D&M updated model was established and promoted based on vital review in the human resource information system use in a variety of contexts among different saccos form different sectors with the inclusion of dimensions that present social and technical challenges.

As a result of the literature review concerning the conceptual variables it has therefore been decided that in order to gather comprehensive and reliable data, more than one conceptual variables must be taken into consideration. It had been established that the updated D&M IS success model would have been the better reference.

Additionally, it had been established that such a conceptual model would supply the study with the biggest number of vital components in order to examine to what extent the adoption and use of HRIS in forms have been successful or not. These multi-dimensional associations would embrace interconnected dimensions such as system use, system quality, service quality, information quality, system user satisfaction and HRIS adoption.

In general, the overall evaluation can be sub-divided into three dimensions: information that was stored, supplied and provided, the system as a set of connections, network within which one needed to operate and the service with such software and distribution provided and serves within the firm. Thus, what was assumed to be of the highest importance, specifically which focused on the cultural peculiarity of the firm,

was user satisfaction. The nation has a stereotypical look of being in opposition to quick modernisation and development, too often linked with the culturally totally almost similar to the western world, and this therefore makes it an interesting place for the study.

The accomplishment of any HRIS adoption and use depended strongly upon the usefulness, perceived ease of use usefulness, service quality, information quality, system quality, user satisfaction, and attitudes of individuals towards the firms systems. Reviewing the literature on HRIS has revealed the need for the model to explain how well the employees have accepted the system and how well can they be able to use it in making strategic decisions in areas of human resource management.

2.1.2 HRIS Model

HRIS designed for human resource management plays a vital role in implementing the strategic business objectives of the organization, and in running the daily functions effectively and efficiently to improve the productivity and proficiency. HRIS has been addressed as a tool that organizations use to solve and manage a variety of issues and processes connected to the management of people. On the one hand, technology may be used for different purposes within particular human resource functions – for recruitment and selection, performance evaluation, compensation and benefits, training and development, health and safety, employee relation and legal issues, retention and work life balance (Enshur *et al.*, 2002). On the other hand, a company that uses a complex mix of HRIS solutions enables the human resource function to manage in human resources as well as employees' information flow in an integrated approach across the entire employment cycle of each individual, thus shifting the attention from a process centered

human resource to a customer (employee) centered human resource management. The HRIS model is outlined in the figure 2.1 below.

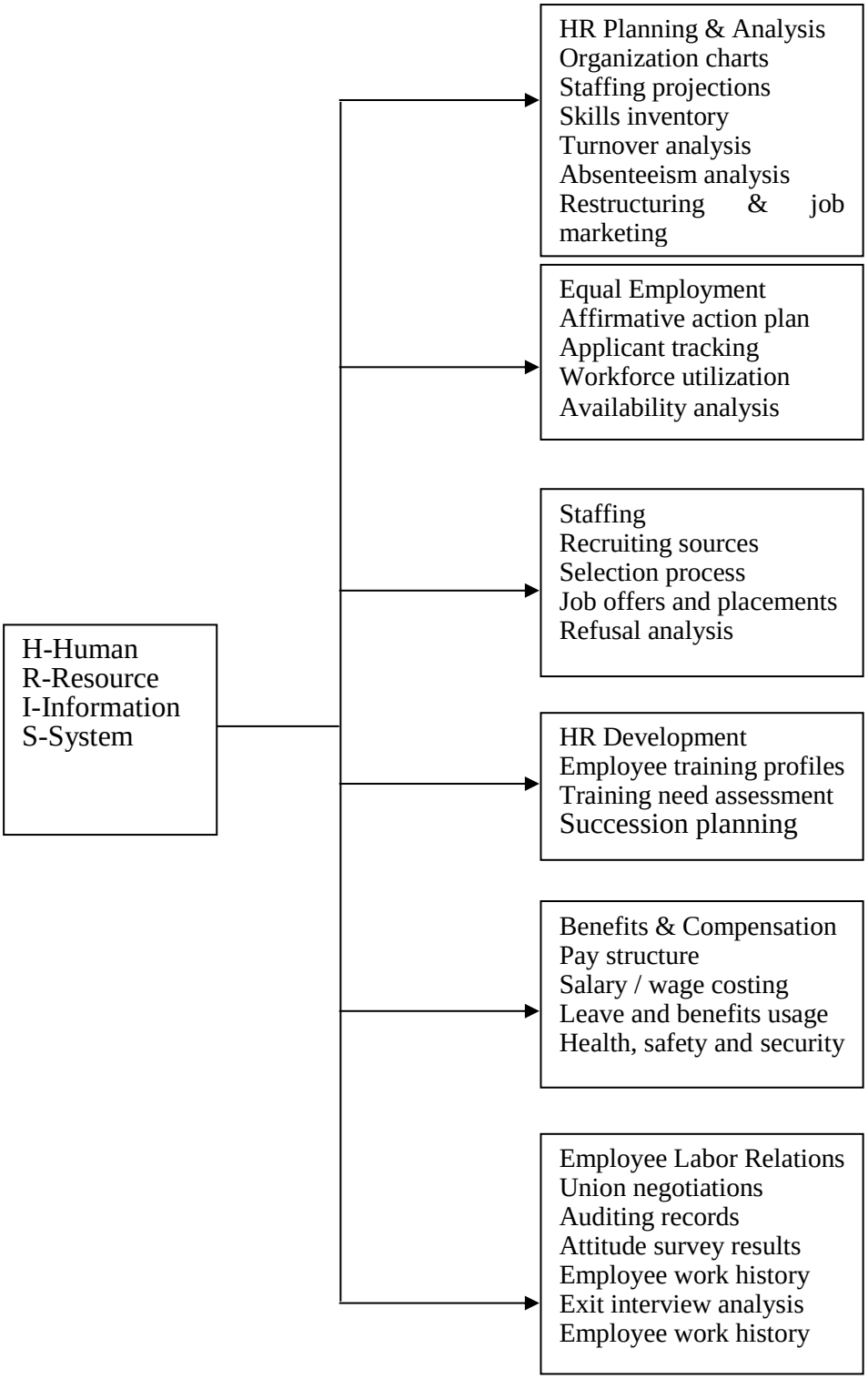

Figure 2.1: HRIS Model
source; Mayfield (2003)

2.1.3 History and Background of HRIS

The history of HRIS begins from payroll systems in the late 1950s and continues into the 1960s when the first automated employee data was used within the firm (Kavanagh *et al.* 1990, Walker 1993, Martinsons 1997). Initially efforts to manage information about human resource were frequently limited to employee names and addresses and perhaps employee history entailed on Job cards (Kavanaugh, Gueutal & Tannenbaum, 1990). Between 1945 and 1960, firms became more informed of human capital issues and began to improve formal processes for selection and development of employees. At the same time organizations began to realize the essence of employee morale on the firms overall effectiveness. HR was integrated into the core business mission and at the same time period, government and regulatory reporting requirements for employees increased greatly. The human resource department became the most important users of the computing system. Although HRIS systems were computerized and grew extensively in base and scope during this period, they remained mainly record-keeping systems (Karanaugh *et al.*,1990).

Thus, the first human resource systems were made to maintain a tremendous amount of data for record keeping and reporting associated with human resource administration and management. In the course of time, the development of HR activities generated the design, development and the successful implementation of various computer-based HRIS (Martinsons, 1997). Kavanagh *et al.* (1990) presented their conception of the development of HRIS introducing the historical period in HR from the pre-World War II era to the 1980s and how the eras have affected the improvements of HRIS.

Ruël *et al*. (2004) presented that "the word 'implementing' in that context has a meaning, such as making things work, putting something into action, or having something realized". Strohmeier (2005) explained that 'spatial segregation' means the situation where the actors and the HR application are in different departments. 'Technical network' means that actors may work in the same office or on different continents and use the same application. 'Technical support' usually consisted the use of e-mail. 'Shared organization' and 'at least two actors' mean that the work is shared between several actors. 'Performing of HRM tasks' includes the primary work processes, such as recruiting, development and compensation. Based on the above it is only possible to conclude that today the development of HRIS is still an on-going process both in practice and in science.

2.1.4 HRIS and Data

The majorly used interpretation is that the purpose of HRIS is to store, manipulate and provide data on employees in the firm. In addition, HRIS have been developed to accomplish most of the routine and transactional HR tasks that help to improve necessary HR knowledge in databases. Therefore, HRIS is mostly developed for knowledge management of HRM. The reason for that is the desire to control as well as maintain basic data of personnel, which creates challenges to a profitable and effective organization. For example, strategic human resource development and planning (SHRDP) is focused on mainly strategic management, organizational behavior and also HRM. It also linked business strategy and organizational strategy to the organization management skills. Strategic information systems planning (SISP) supported the process of SHRDP, and knowledge-based system (KBS) which helps deliver HRM qualitative results as well as increases both employee and customer satisfaction (Grundy 1997, Martinsons 1997, Basu,

Hartono, Lederer and Sethi, 2002). Therefore, for SHRDP reliable data and knowledge are important issues. HRIS are of three areas such as electronic data processing (data storage, processing payroll and basic personnel information), Management information systems and third is mainly decision support systems. Some firms use all three and some use it partially in terms of employee data storage.

Mainly HRIS have been developed to store, manipulate and provide data of employees for the organizational use. Employee names, addresses, phone numbers, education background, training, career development and documents of the personal development discussion are typical employee data in HRIS. The different private or semi-private data could have been placed in the system. Herein it should be taken into account that because of the company automation, data can be available in a different form than in manual systems and requires more emphasis of data security and sensitivity than earlier. Therefore, at least the raised factors should be considered when designing, implementing and maintaining the HRIS (Hubbard *et al.* 1998).

2.1.5 Effects of HRIS on Organizations

HRIS software and hardware can be portrayed as both investments and costs for the organization. Top management and stakeholders of the organization expect mostly that the investment becomes a benefit to the organization. At the same time the organization costs should be kept in reasonable amounts. Therefore, costs and benefits are the subjects of discussions when employment and device investments are in question in an organization. Therefore, the discussions of the costs and benefits of the employees and HRIS are employed when addressing the effects of HRIS on organization activities.

Only large firms may use personnel systems because they are able to invest in both computers hardware and software. The development of technology influenced the prices of big computers. In the 1970s new inventions such as microcomputers, databases and personal computers (PC) made the cost of computers to decline. Now companies were also able to invest in different IS due to the decrease in costs of technology. In addition, small companies became interested in automating their HR ac and making them more effective and efficient (DeSanctis, 1986; Kavanagh *et al.,* 1990; Walker 1993.)

Simultaneously, legislation of human resource functions as well as the demands and needs of different administrative issues and reports developed significantly due to the varying nature of the organization the Human resource costs started to increase leading to careful consideration when investing in IS. Even though technology was cheap, a company had to budget money for human resource expenses. The design and implementation of other organizational IS needed more resources especially financial resources.

In addition to costs and benefits, the computerization of HR activities and tasks has other influences as well. First, a well-designed, workable and effective HR information system brings out a company's competitiveness. Developed and sophisticated HRIS do not only reduce overall HR costs but also help to make it easy the way the customers, managers and employees access and use information systems both locally and globally. Secondly, globalization provides an extra challenge to HRIS. Simultaneously the organization has been familiar with global and organizational cultural differences which

should be taken into consideration in designing the HR information system (Stroh & Caligiuri, 1998).

Thirdly, the computerization of HR activities and tasks has influence on the implementation of HR technology. The process should be started progressively, and necessary resources provided by the management, i.e. devices and workforce, should be allocated for the process. As well as, it is important to inform personnel in detail about the implementation and the remaking of the system as well as to organize training to all levels to confirm capability to use the new system. The correlation between HR and IT experts keeps the users' ideas in practical shape and help all of them in problematic situations (Axel, 1998).

As IS in other firm's application areas, HRIS also bring about changes in the activities and functions of HRM. The changes affect not only daily processes but also the skills of managers, leaders and HR professionals. It is vital that HR people understand what an information system is about and what is required to design, accomplish and to implement HRIS. The competence level to understand database management help HR professionals to understand what data is stored and how it is stored as well as why and how that data can be utilized, for example, how to make reports for decision-making especially in human resource management. It would be a vital advantage if managers, leaders and HR professionals were aware of how to specify data technically and what the changes to the old system are. If technological development and changes are not taken into account, an organization may lose a lot of money and organization resources (Axel, 1998).

2.1.6 HR and IS Professionals and HRIS Design

Due to the novelty of HRIS research, some significant areas have not yet been studied thoroughly. Most of the research papers to be referenced are so far few in numbers. Mainly the discussed research areas show the relationship between HR and IS professionals and HRIS design. An overview is made using the referenced scientific publications of HRIS, as most papers of practical and semi-scientific studies of HRIS are after the year 2000. When exploring and summarizing the published issues, issues of designing HRIS as well as on HR and IS professionalism are found. According to the summation, HRIS transform both the information process and the managerial role of human resources. They change human resource processes, job specifications and employee relations. When thinking about demands on HR and IS in an organization, HR professionals are concerned for effectiveness of HR processes and, how an information system aims at making an organizational process more efficient. Those who are constructing HRIS should understand both. Ordinarily, HRIS projects in an organization are run by cross-functional teams and the implementation of a system can be regarded as an organization process. (Ball, 2001)

2.1.7 Use and Exploitation of HRIS

Since the 1960s due to the growth of computerized HRIS, HR managers and professionals have spent a lot of time establishing, maintaining and using HR databases. Before the computerization of the HR data, HR managers needed a lot of time to identify which employees need certain technical skills, which need supervisory skills or management skills. However, Today HRIS is supported by mechanisms which help

recognize the needs of training and allow tracing suitable training for employees and executives. HR people spend very few times on day-to-day administrative tasks and have more time on strategic organization decision making and planning in human resource management. HRIS have become more sophisticated. The researchers stated that HRM and HRIS are ready to assume a far greater strategic enterprise role. The HR information system is a tool that assists HR management functions and helps managers in managing their human resources more effectively than earlier (Targowski and Deshpande, 2001.) New technologies give more new possibilities to solve administrative and transactional work effectively and efficiently. In organizations HRIS are mainly created for HR people, also employees and managers should be able to use the human resource system.

Technology mainly offers effective tools to implement and use IS. Still, users can be skeptical when using IT and IS. They also wonder how the technology works, when the provided data is reliable and if they are familiar with the information technology. Lippert and Swiercz (2005) introduced their model which offers 11 propositions to establish the relationship between HRIS technology trust and implementation success. *"*Technology trust can be emphasized as an individual's willingness to be vulnerable to a technology based on person-specific expectations of the technology's predictability, reliability, and utility by the human resource predisposition to trust the organization technology" (Lippert and Swiercz, 2005).

Lippert & Swiercz (2005) commented that the TAM model formed a framework to verify the relationship empirically. They also emphasize that the theoretical development of the model brings out several significant conclusions. For example, by understanding

the technology, user satisfaction may increase. By also understanding of the determinants of HRIS and its functions may improve overall organizational performance. Various organizational factors and organizational qualities make an organization use HRIS. The number of human resource is the first issue. In a large organization usually both individual, management and organizational knowledge of HR functions are computerized. Secondly, using HRIS provides human resource needs to add new useful modules to the system. For example, some organizations used HRIS when hiring people and therefore HRIS are developed widely in HR staffing and administrative activities. There are also organizations using HRIS in training, development, career management and recruitment. They began developing HRIS by dividing it from HR administration and more of strategic human resource management (Ball, 2001).

It is vital for both managers, leaders and HR professionals to be involved together as working mates when drawing up and developing HRIS with the help of IT professionals. This may cause co-operative challenges between managers, leaders and HR people, but this also gives an opportunity for possible hidden features of HRM to be presented. Still, technology provides many possibilities to operate with data than manual systems (Kovach, Hughes, Fagan and Maggitti 2002, Lippert & Swiercz 2005).

2.1.8 HRIS and Management Work

As emphasized numerous times before, initially HRIS have been planned for both managerial and HR work. Their use had produced uncertainty and worry about the division of labor between managers and HR staff. Managers have been responsible for employee data maintenance and thus have made a conclusion that it has been on their

shoulders to update administrative information. On the other hand, HR professionals in the firm, who have maintained the control of HR issues, have not been happy with the change provided by managers' and employees' more active roles in HR more administrative and also transactional work. The HR information system can be implemented in order to ease use by everyone and it will not be a burden or a loss to anyone. The questions that are considered for HRIS design are: How does the HR information system assist managerial functions? How can employees update their own profiles in the system? How is HR staff's responsibility in using the HR information system? HR professionals mainly work with management because HRM is part of the managers' job. When the HR function is shared between the managers and HR staff, the HR professionals have elaborated time to develop HR strategy in the organization (Kossek *et al.;* 1994, Axel,1998; (Hussain, Wallace, & Cornelius, 2007).

The HR department and HR management have been regarded as less of a priority than sales, marketing or finance in today's organization, even though technology had been implemented and HRIS established. Human resources have been considered a business function, but still have remained behind in the technological advancement. Currently, HR activities have been mainly of a business partner and they have met mainly financial and strategic objectives instead of having only more of the role of decision support and information broker (Kossek *et al.,* 1994; Axel, 1998; & Hussain *et al.,* 2007)

Technology and computerization may also cause the managers work to transfer from managers to HR professionals. If executives are not appreciative with the HR information system and if they do not access needed data, they will not use the system. Furthermore,

the managers with more job experience may be less satisfied with the HR information system. It is important to pay attention to the management level and provide the usefulness of the HR information system. The HR professionals with more robust IS experience may encourage users at higher levels. Information systems User satisfaction and system usage have become common measures of system success in HR functions. Even though managers and HR professionals may have good skills to construct HRIS, it does not automatically mean they are effective and sufficiently good users of systems. A HR information system is emphasized to be a tool to support HRM functions and assistance to support managers in managing their human resources effectively. HRIS also develop the management capabilities both locally and globally. Therefore, organizations should be familiar with cultural diversity to identify them in HRIS. Globally integrated HRIS should be effective by building human resource management in the increasingly competitive multinational global markets (Haines and Petit, 1997; Stroh *et al.*, 1998; Hussain *et al.*, 2007).

2.1.9 HRIS Functions

Functional HRIS provides an information system that enables an assimilation of policies and procedures used to manage the firm's human capital as well as the procedure necessary to operate the computer hardware and software applications (Hendrickson, 2003). The information technology affects Human Resource (HR) practices (Lengick-Hall *et al*., 2003) HRIS and HRIS administration comprise of supporting function within HR. Some of the HRIS functions include the following:

2.1.2.0 Integrating the Technologies of HR

Is a fact, that developments in Information Technology have immensely affected traditional HR functions with nearly all HR function (example, compensation, staffing, and training) experiencing some sort of reengineering of its processes. However, this process of change has created significant challenges for HR professionals leading to the transformation of traditional processes into on-line processes.

2.1.2.1 Increased Efficiency

Rapid computing technology has allowed more transactions to occur with less fixed resources. Typical examples are payroll, flexible benefits administration, and health benefits processing. Though technologies of early days provided significant efficiencies in these areas, the difference is that the record processing efficiencies that were once only available to large firms are now readily available to any organization size (Ulrich, 2001).

2.1.2.2 Increased Effectiveness

Most often, as with processes, computer technology is developed to improve effectiveness in terms of the accuracy of information or by using the technology to simplify the process. This is especially the case where large data sets require reconciliation. However, manual reconciliation processes may be executed faster, but also with near perfect accuracy using automated systems. For example, pension and profit sharing applications, benefits administration, and employee activities are just to mention but a few. Using computer technology in the processes ensures precise results and offer substantial simplification and timeliness over manual processing. Consequently, the

majority of HR functions have had some degree of automation applied in order to gain both efficiency and effectiveness.

2.1.2.3 IT-Enabled Processes

While many of the application areas have had increased effectiveness and efficiency over manual processing, some are only possible using modern technologies. Most notably, computer-based (web-based) training is a growing area of HR practice that was not available until computer software was created. Even computer-based training was not as practical as today because it was globally dispersed until the training was upgraded from computer-based to web-accessible training. However, by taking traditional computer-based training programs and making them accessible on the Internet, firms have created an important tool to upgrade and assess employee skill sets. Moreover, many other traditional HR functions have emerged Information Technology (IT) dependent components with the advent of the Internet. On-line recruitment centers, along with the ability to conduct virtual interviews, background basic checks, and human resource tests on-line have dramatically changed those processes, increasing the geographic reach of firms for potential employees.

2.1.2.4 The Purposes and Uses of HRIS

Many organizations have adopted HRIS to assist their daily personnel operations. HRIS must align and satisfy the needs of the organization and its uses in order to be successful (Noor & Razali, 2011). Organizations looking into internet enabling of their HR business should assess the authentication, security, assess rules and audit trails related to service providers networks, servers and applications (Karakanian, 2000).

Kovach and Cathcart (1999) noted that, an HRIS can be used, first, mainly for administrative purposes in organizations. This purpose is related to administrative and operational efficiency, which reduces costs and time. The authors also categorized two types of HRIS usage according to their degree of sophistication. He suggested that payroll and benefits administration and employee absence records were electronically "unsophisticated" because of their "electronic replication of the contents" for a HR department. For instance, the Kabarak University at Nakuru can generate a payroll distribution report, which identifies university employees' salaries from different accounts such as academic department accounts and research grant accounts. Such a report typically takes thirty hours to generate, but now it can be done in minutes by the end users with the use of an HRIS.

HRIS support main activities such as identifying potential employees, maintaining complete employee records on existing employees and creating programs to develop employee talents and skills. HR systems help top management to identify the manpower requirements in order to meet organization strategic goals. Middle level management uses human resource systems to monitor and analyze the recruitment, allocation and compensation of employees. Operational management uses HR systems to trail the recruitment and placement of the employees. HRIS can also help various HR practices such as workforce planning, staffing, compensation, salary forecasts, pay budgets and employee relations. HRIS has evolved into more sophisticated information expert systems featuring analytical tools to support decision making in managing human capital (Ostermann, Staudinger and Staudinger, 2009).

Information technology provided help for mainly administrative activities such as payroll and attendance management. It built recruitment sub processes such as long and short-term candidate attraction, prescreening and processing of applications or the contracting and on boarding of new hires. Online job advertisement on corporate websites and internet job boards, online CV databases, corporate skills database, and IS supported workflows used to support the recruitment process (Keim and Weitzel, 2009).

In HR planning it is better to follow workforce gaps, the quality and quantity of the labour force and to plan future human resource requirements with the help of HR knowledge systems (Dessler, 2005). HRIS can support long range planning with information for labour force planning and supply and demand forecasts; staffing with information on equal employment, separations and applicants qualification; and development with information on training programs, salary forecasts, pay budgets and employee relations with information on contract negotiations and employment assistant needs (Shirbly, 2011).

HRIS notably helps the provision of executive reports and summaries for top managers and is critical for learning organizations that see their workforce as proving a major competitive advantage. HRIS can be implemented at three different levels i.e. the obtaining of information, automation of transactions and finally the transforming the entire working of the human resource department so it plays a more strategic role and adds more value to the organization (Lengnick-hall and Moritz, 2003).

Furthermore, Kovach and Cathcart (1999) stated that the second purpose of an HRIS is to provide more analytical decision support. The purpose is related to administrative and operational effectiveness (Mathis and Jackson, 2002). This purpose is more strategic and related to HR planning. Top management as well as managers of departments in organizations can make decisions based on a greater degree of information from an HRIS. Ball (2002) identifies "sophisticated" HRIS functions with the use of IT in recruitment and selection, training and development, HR planning and performance appraisal because these functions will utilize information obtained from experts for decision making processes within the firm.

Interestingly, Ball (2002) further obtained that an HRIS is seldom used in training and recruitment because core HR database modules had small space for the storage of information about training and recruitment. Moreover, small firms do not see these additional functions as an investment. Therefore, an HRIS is seen to be used for administrative ends rather than analytical ends.

2.1.2.5 Organization Performance

The idea of overall performance of firms is very broad. It can be any outcomes, ranging from marketing, operations, human resources, customer service and so on. The concept of firm performance has been addressed in various ways. There are many indicators that organizational performance can be defined such as the achievement of firms' increase in productivity (employee productivity and operational productivity), employee efficiency, employee turnover, financial performance (return on investment, ROI, return on asset, ROA), and market share, economic performance, customer

satisfaction level, profitability, and so forth. Of course, popularity among researchers of firm performance is financial performance depending on some indicators from financial and accounting point of views. Some other criteria can be used to measure non-firm performance, such as employee turnover, the concept of productivity, such as rework cost, scrap rate, defective rate, sales per employee, and so on.

Achieving better organizational performance requires efficient and effective use of organizational resources to gain sustainable competitive advantage. This involves strategic element of organizational planning which creates and increases organizational effectiveness and competitive advantage to achieve overall performance goals. According to Guest *et al*. (2003) a major challenge for organizations in the future seems likely to be an ever more urgent search for competitive advantage. It is increasingly argued that the organizations best able to meet this challenge will be those that can acquire and utilize valuable, scarce and inimitable resources (Barney, 1995). Employees can fall into this category, it is argued, particularly if they are effectively deployed through appropriate human resource practices and the management of organizational culture (Barney and Wright, 1998; Guest *et al*., 2003).

Ordonez (2004) suggests that implementing an effective HRIS keeps the HR Department in the right path to deliver more effective and streamlined service to the organization. This is done by streamlining workflow processes making top management and function management have greater control over human resource management related processes, enabling users to follow through tasks more easily.

2.1.2.6 Measuring Organizational Performance

Performance measurement is a current issue in academia, as well as in business community (Wegelius-Lehtonen, 2001). The conceptualization and measurement of organizational performance is a complicated area (Wright and Sherman, 1999) and various performance outcomes identified and used in empirical research, have been relatively un-problematical but do not yet tell us anything about the overall financial performance of organizations (Ehrnrooth, 2002). HR measurement is complex, difficult, and at times confusing, but it can and must be done. When HR professionals start with a clear understanding of business goals (often measured in financial terms), they can turn those business goals into measurable HR practices (Ulrich, 1997).

The extent to which HRIS provides a competitive advantage to an organization is contingent on the role of human resource department within that organization. Overall more needs to be done and further research needs to be conducted to discover how HRIS can better be utilized to strategically benefit the entire organization. Organizational performance is one of the most important variables in the management research and undoubtedly the most important indicator of organizational success. The first condition necessary to improve and achieve excellence in business is developing and implementing a system for measuring performance of the organization. According to (Kaplan, 2004), professor at Harvard Business School: “Each organization must create and communicate ways to measure performance to reflect its unique strategy.”

A performance measurement system has many roles (Kanji and Moura, 2002): the immediate role of a performance measurement is to check the organization's progress in

achieving its targets; another important role of a performance measurement system is to notify individuals the aspects that are important for organizational success and identifying the areas that need improvement; and finally, a performance measurement system enables the development of efficient and effective development strategy since, no matter how favorable are the results recorded by the organization is always room for improvement.

Organizational performance itself can be measured in four buckets. First is, Relevance; being the degree to which the organization's stakeholders think the company is relevant to their needs. Clients judge the relevance of products or services by buying them, employees by working hard, shareholders by buying and holding hares, and so on. Second is Effectiveness; being the degree to which the organization is successful in achieving its strategy, mission and vision. Third is Efficiency; being how well the organization uses its resources (financial, human, physical, information). Fourth is financial viability; being how viable the organizational is not only in the short (the next quarters' results) but also in the long term (how long has the company remained profitable? Has the company shown an ability to make good long-term investments?)

2.1.2.7 Systems Theory Approach to HRIS

According to (Mayfield, Mayfield, & Launce, 2003) he proposed the human resource information systems model. It is based on the general systems theory the general systems theory indicated that the systems are made up of the input, transformation and output systems which are interrelated and work towards the general good of the system

. The model addresses all the major HRIS components and offer information on how these facets interact to support each other and larger organization outcomes.

HRIS has three major functional components as shown below:

1. Input- It provides the capabilities needed to get the human resource data into the HRIS. It enters human resource information into the HRIS. The system should have the capability to easily update and change the data.
2. Data maintenance-It is responsible for the actual updating of data stored in the various storage devices. It updates and adds new data to the database after data has been entered into the system.
3. Output- It is concerned with the information and reports to be used by the system. In order to generate valuable output for computer users, HRIS processes output, makes necessary calculations and formats the presentation (Kovack, 2002).

The HRIS was made up of various components if one of the components does not work properly, this may cause the entire system to fail. When all the system components work correctly and efficiently the whole organization will be able to benefit. Therefore, the HRIS is mainly a part of the firms larger management information systems which would include marketing, production and accounting functions among also other various departments. The special aim of HRIS is to gather and analyse the data vital for the human resource department to do its job effectively and efficiently.

2.2 RESOURCE FLOW THEORY

Viewing phenomena in terms of resource flows is an example of systems theory, and several respected authors have taken such an approach. The first to achieve worldwide fame was Jay Forester of MIT (1962), who used resource flows as a basis of for his theory of industrial dynamics. Forester defined that his theory showed ‘’how company success depends the interaction between the flows of information, materials, money, manpower, and capital equipment which were major organization features (Forrester,1968).

Two University of Washington professors Stanely Brewer and James E. Rosenzweig, explains that the **rheumatics** describe the way materials flow through an organization (Brewer &Rosenzweig, 1993). The term was provided from a Greek “rhoe”, and “chrema” meaning materials. Rosenzweig also teamed with two other Washington professors to define a general approach to system design that included the identification of material, energy, and information flow [Johnson, 1963]. One of the most thorough definitions of the resource flow theory was provided by Richard J. Hopeman, of Syracuse University. In a 1969 text, he described the manufacturing process as a combination of material, machine, manpower, money and information flows (Hopeman, 1969).

Management theorist Henry Mintzberg adopted the concept of flows into the theory of organization. The researcher used the flows of authority, material, information and decision processes between line and staff units to illustrate organizational complexity (Mitzberg H, 1979). The resource-based view argued that firms possess resources, a subset of which enables them to achieve competitive advantages and a subset of those that lead to superior long-term organization performance. The four attributes of competitive

advantage included mainly access to capital, IT managerial skills, technical skills and proprietary technology. The resource-based view analyzed the firms resources and capabilities which are viewed as bundles of tangible and intangibles resources. The theory provided an economic basics for analyzing the role of human resource in firms competitive advantage. The theory also holds that firms can earn sustainable returns if they have superior resources and the resources protected by mechanisms that prevent their extinction.

A resource-flow view of the HRIS focused on the flow of human resources through the firm. It recognized that the firm's environment provided a pool of potential employees who are subjected to a screening process before joining the firm. While in the firms, the employees undergo training and education in order to perform their tasks and receive evaluations. The employees are compensated for their efforts with money and other non - monetary benefits. Eventually the employees terminate their employment and return to the environment which is the society. The employees who retire also continue to receive benefits. The task of the HRIS was to gather data that tracked this human resource flow, store the data until it is needed, and use the data to produce information that enabled persons both in the firm and its environment to monitor the flow.

The HRSP survey findings provided a rich database for use in studying the extent to which firms have implemented HRIS applications that can be used in a resource-flow manner. The resource-flow analysis was facilitated by reallocating the applications areas and renaming the major components as used in human resource management.

Workforce Planning occur mainly prior to the flow of human resources through the firm and provided the basis for that flow. The planning enabled the management to adjust its human resource activities so as to accomplish both short and long-term organization objectives. Recruiting enables the firm to bring new employees into the firm, and Workforce management consists of all activities that occur mainly during the time of employment, including such tasks as training, performance appraisal, and deployment. Also, during employment, employees receive compensation in such terms as hourly earnings, salary, and bonuses, and benefits in such forms as insurance and stock purchase plans. Many of the employee benefits continue through retirement.

The resource-based theory holds that the performance of the organization depends on the unique resources it possesses and mainly its competencies. (Moussa & Schware, 1992). The resources that are valuable lead to creation of superior long-term performance and competitive advantage. The information technology is a resource which can be easily duplicated and therefore the organization can do better if the organization has superior technical IT skills and IT managerial skills.

2.2.1 The Components of a Resource Flow HRIS Model

The view of the HRIS as taken by Hyde-Shafritz, Simon, and Manzi NI-Gridley (1963), that the HRIS incorporates input, processing, and output components is especially applicable to the design of compute –based systems and should be incorporated in a resource- flow model. This is done in the resource- flow model as illustrated in figure 2.4. The model consists of three subsystems devoted to data input, an HRIS database, and six subsystems devoted to transforming the data into information and making it available to

the users. The input data is obtained from both internal and environmental sources and the users consists of individuals and organizations both inside and outside the firm.

2.2.2 Input Subsystems

Three input subsystems enter data into the database. They are data processing, human resource research, and human resource intelligence. Each of these systems can include all types of data entry processes such as those involving keyboard and mouse input, and optical scanning (Stevens,1993). In certain cases, the input subsystems also include software that transforms input data into the required format for storage.

2.2.3 Data Processing Subsystems

This subsystem consists of those systems residing both in the accounting department and HR, which process data relating to human resources. The data consists of personnel data describing human resources transactions that occur during the resource flow, and also payroll data. The data processing subsystems gathers the data both from internal and environmental sources.

2.2.4 Human Resource Research Systems

This resource subsystem has the responsibility for conducting special studies to provide on the firm's human resource-related activities. For example, such data identified employees who are good candidates for position coming available because of transfer or termination and describes job content and the knowledge and skills that are required (Spirig,1990). In essence, the human resources research subsystems is the introspective

view taken by HR of its own operations. As with the data processing subsystems, input data can come from both inside and outside the firm.

2.2.5 Human Resource Intelligence Subsystems

This subsystem has the responsibility for keeping current on environmental activities that are especially important to human resource activities. Data and information are gathered describing activities of the government, labor unions, suppliers, the local and financial communities, and even competitors. Employment firms function as suppliers, funneling applicants to the firm. Applicants can also come from the local community and from competitors. The financial community provides data and information concerning the economic climate, whish influences the human resource plans. Much of the intelligence data can be obtained from commercial data bases (Lengnick-hall &Moritz, 2003).

2.2.6 The HRIS Database

All of the data and information provided by the input subsystems is held in computer storage. The storage units can reside in IS, HR, or other locations. The data relates primarily to the firm's employees, but also can describe the environmental elements with which HR interfaces. Database management systems (DBMS) software performs the maintenance processes.

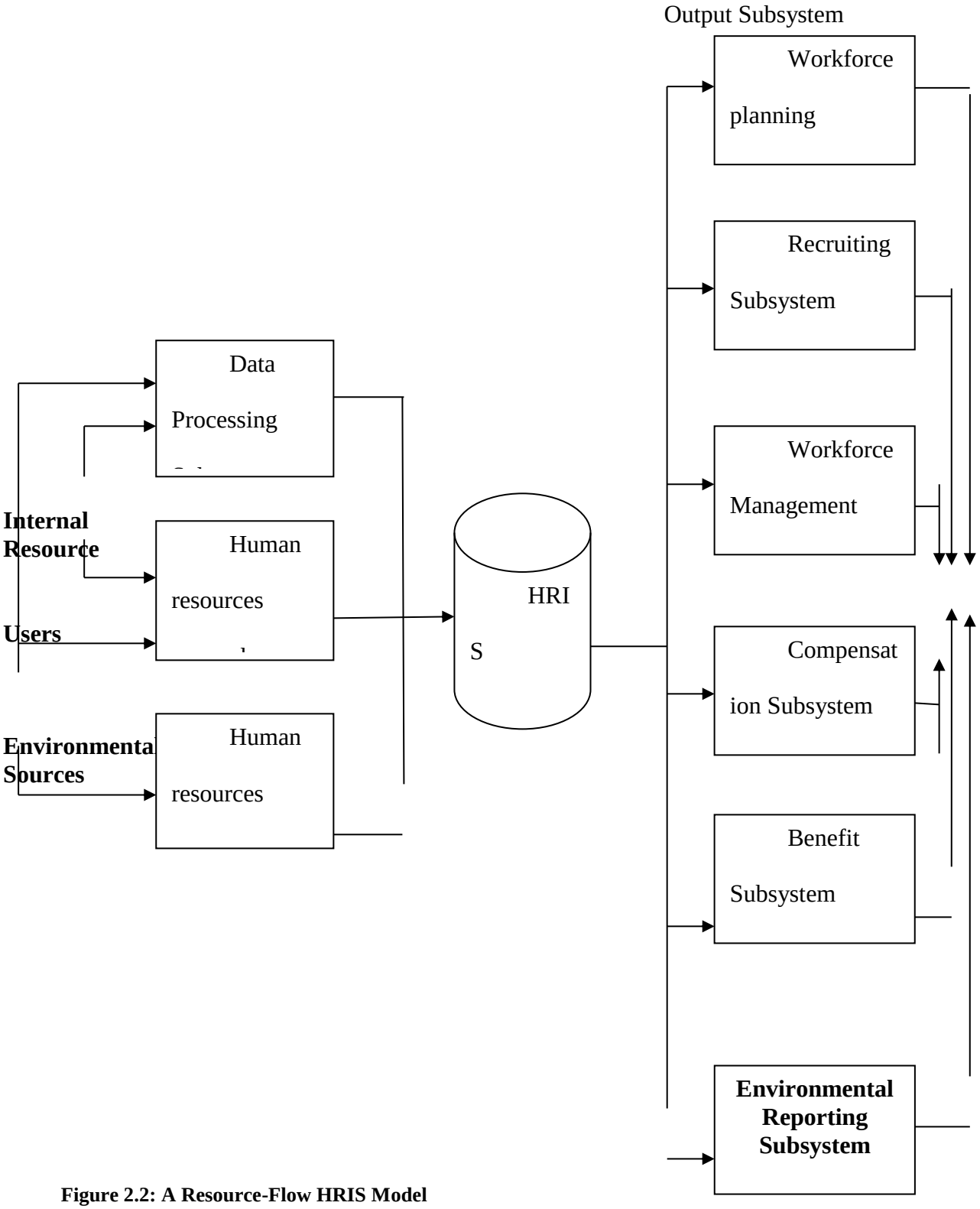

Figure 2.2: A Resource-Flow HRIS Model
source; Mayfield (2003)

2.3 Human Resource Information Systems (HRIS) in Organization

The Human Resource Information System is introduced by presenting the various definitions, development, costs and benefits, as well as their functions and relationship with HRM. In addition, different software providers and their solutions are presented. HRIS shapes an integration between human resource management (HRM) and Information Technology (IT). Even though these systems may rely on centralized hardware resources operationally, a small group of Information System specialists residing within the personnel department increasingly manage, support and maintain them. HRIS support planning, administration, decision-making and control. The system supports applications such as employee selection and placement, payroll, pension and benefits management, intake and training projections, career-pathing, equity monitoring and productivity evaluation. These information systems increase administrative efficiency and produce reports capable of improving decision-making (DeSanctis, 1986).

2.3.1 Types of HRIS

HRIS performs its functions in different forms. The various parts of HRIS are as follows:

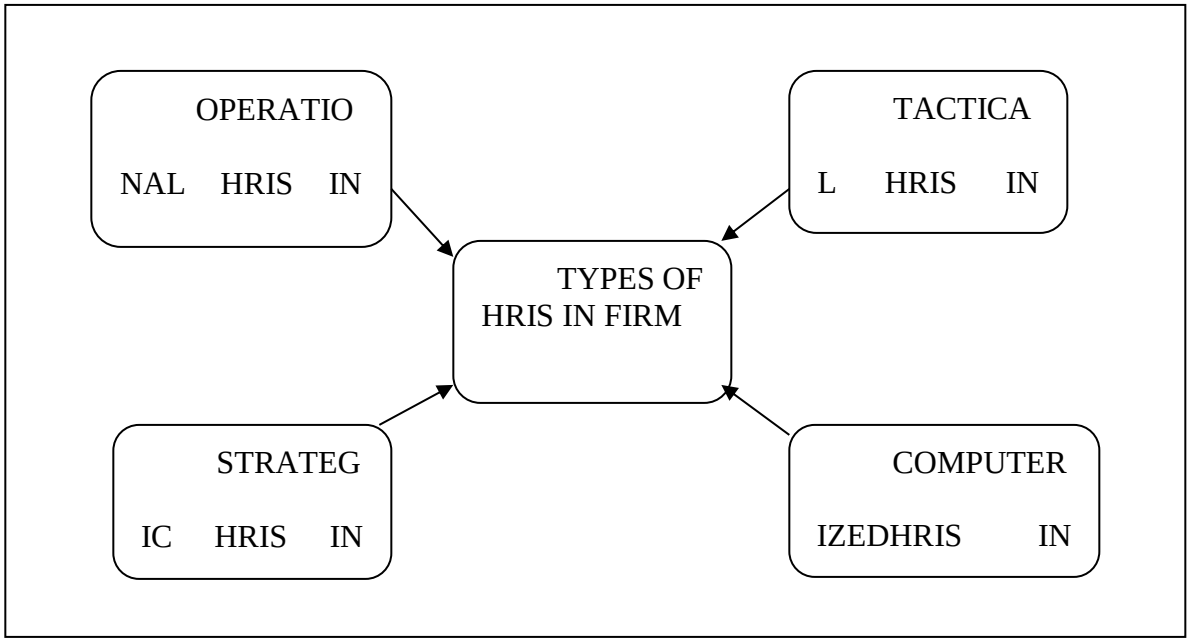

Figure 2.3: Parts of HRIS
Source; authors own compilation (2018)

2.3.2 Operational HRIS

Operational human resource information systems provide the manager with data to support routine and repetitive human resource decisions. A number of operational-level information systems collect the data relating to human resources including the information about the organization's positions, workforce and governmental regulations. Some of the system which is the part of operational systems is as follows:

Employee Information Systems - the human resource department must have the information on the organization's employee profile for taking various decisions. An employee

profile includes personal and organization-related information, such as name, address, sex, minority status, marital status, citizenship, years of service or seniority data, education and training, previous experience, employment history within the organization, salary rate, etc. (Sparrow, 2006).

Position Control Systems - a job is usually defined as a group of identical positions. A position, on the other hand, consists of tasks performed by one worker. The purpose of this system is to identify each position in the organization, the job title, its classification and the currently assigned to the position to the employees. This system allows a human resource manager to identify the details about vacant positions in the organization (Stone & Gueutal, 2005)

Applicant Selection and Placement Information Systems – used after manpower planning has been identified and then a suitable pool of job candidates has been recruited. For this purpose, the candidates must be screened, evaluated, selected and placed in the various positions in the organization. The primary purpose of the applicant selection and placement information system is to assist human resource staff in these tasks (Ibid).

Performance Appraisal Information Systems - these systems include performance related data and productivity information data. This data is used as evidence in employee grievance matters. Careful documentation of employee performance, method of measuring the performance of employees and reporting system, is the critical. Performance management information can lead to a number of decisions beyond merely supporting the operational

decision to retain, promote, transfer or terminate the employees in the organization (Stone &Gueutal, 2005).

2.3.3 Tactical HRIS

Tactical information systems are used to provide managers with support for decisions related with allocation of resources. Major important decisions in human resource management include recruitment decisions; job analysis and design decisions, training and development decisions, and employee compensation plan decisions.

Job Analysis and Design Information Systems - this system includes data from interviews with supervisors and workers and positive action guidelines and information from sources external to the firm, such as labor unions, competitors and government agencies. The outputs of the job analysis information system are job descriptions and job specifications which provide managers with the basis for many tactical human resource decisions (Berrel, 2003).

Information Systems for Recruitment - for the recruiting function, the organization needs to develop a recruiting plan. The plan specifies the positions to be filled and the skills required of the employees for these positions. For this purpose, a recruiting information system is necessary which collects and processes the many different types of information like a list of unfilled positions; the duties and requirements of these positions; lists of planned employee retirements, transfers or terminations; and summaries of employee appraisals. Other inputs to the recruiting plan include data about turnover rates and about the success of past placements (Kovach, 2002).

Compensation and Benefits Information Systems - the Compensation and Benefits Information Systems support a variety of tactical human resource decisions, especially when compensation and benefits information is related to information from internal and external sources. Compensation and benefit plans can play an important part in improving an organization's productivity (Kovach, 2002).

Training and Development Information Systems - training and development systems must meet the needs of jobs available in the organization as identified through the position control system and the job analysis and design system. The training should also be directed to the persons interested and should benefit them (Kovach, 2002)

2.3.4 Strategic HRIS

Strategic HRIS helps the organization in implementing strategic human resource management and especially in workforce planning and evaluation of activities.

Information Systems for Workforce Planning - organization involved in long term strategic planning, such as those planning to expand into new market areas, construct factories or offices in new locations and wants to add new products, will need information about the quantity and quality of the available workforce to achieve their goals. Information systems that support workforce planning serve this purpose (Fletcher, 2005).

Information Systems Supporting Labour Negotiations - negotiating with craft, maintenance, office and factory unions requires information gathered from many of the

human resource information systems. The human resource team completing the negotiating needs to be able to obtain numerous ad hoc reports that analyze the organization's and union's positions within the framework of both the industry and the current economic situation (Fletcher, 2005).

2.3.5 Specialized Human Resource Information Systems Software

A great deal of software has been specifically designed for the human resource function. This software is available for all types and sizes of computers, including microcomputers. Software specifically designed for human resource management function, can be divided into two categories: comprehensive human resource information systems software and limited-function packages that support one or a few human resource activities (Strohmeier, 2007).

Comprehensive and Computerized HRIS - in the last few years, the software industry has produced several products that organize the various human resource information systems into integrated software referred to as human resource information systems or HRIS, software. In general, the computerization of HRIS has resulted in an integrated database of human resource files like position files, employee files, job analysis and design files and many other human resources files are constructed in a coordinated manner using database management system software so that application programs can produce reports from any or all of the files (Brown, 2002).

Limited Function HRIS - numerous commercial software packages are sold for use on mainframes, minicomputers and microcomputers that are designed to handle one or a small number of human resource functions. Microcomputer versions of these single-function

software packages are relatively inexpensive and easy to operate and allow the human resource manager to automate function quickly and easily (Ibid).

Training Software - many training software packages are available for all types and sizes of computers to provide on-line training for employees. They include: Management training software; Sales training software; Microcomputer training software; and Word processing training software (Brown, 2002).

These software packages can be used in computer-based training programmes designed by human resource department for training specific employees in group and independent study programmes. Computer-based training aids often simplify the trainer's job and allow the trainer to individualize instruction more easily than in traditional, group-based training classes (Brown, 2002).

2.3.7 Components of HRIS

HRIS has major three functional components as shown in the figure below.

Figure 2.4: Components of Human Resource Information Systems
source; Mayfield (2003)

1. Input – input function provides the capabilities needed to get human resource data into the HRIS. It enters personnel information into the HRIS. First of all, procedures and processes are required to gather necessary data, once collected, these data must be entered

into the system. Edit tables can be used to determine if the data are acceptable. These tables contain approved values against which the data are automatically checked. The system should have the capability to easily update and change the edit tables. Now days scanning technology permits scanning and storage of an actual image of an organization document including signatures and handwritten notes.

2. Data Maintenance – data maintenance function is responsible for the actual updating the data stored in the various storage devices. As changes occur in human resource information, this information should be incorporated into the system, as new data are brought into the system it is often desirable to maintain the old data in the form of historical information. It updates and adds new data to the database after data have been entered into the HRIS.
3. Output – this function of HRIS is most visible one because the majority of HRIS uses are not involved with collecting, editing and updating human resource data; rather they are concerned with information and reports to be used by the systems. In order to generate valuable output for computer users, HRIS processes output, makes necessary calculations and formats the presentation (Bee & Bee, 2002).

HRIS is a computerized system that aids in the processing of information relating to human resource management. A well-knit HRIS acts as a worthy decision, a device; designed to fulfill the manpower information needs of the organization (Kovach and Cathcart, 1991).

2.3.8 The Nine Fisher, Schoenfeld and Shaw HRIS

The Nine Fischer, Schoenfeld and Shaw HRIS looks at the four automated components of the HRIS which covered personnel administration, workforce planning, compensation and affirmative action which included also areas of labor relations. This also addressed the subcomponents of the study which included e-human resource planning, e-performance management, e-staffing and e-training and development which also looks at the employee relations in the firm. This involved an analysis done by the human resource systems professionals who analyzed the major components that would be required for an automated HRIS.

Planning assists the management in planning future human resource needs by identifying deficiencies in the Current workforce so that hiring and training programmes can be planned. Job analysis analyzes job data for the purpose of identifying common characteristics and job families. This information is used to develop and refine job titles, salary structure, and promotion paths.

Equal Employment Opportunities (EEO) also monitors workforce data in terms of age, race and sex to identify adverse impacts on certain groups so that corrective action can be taken. Recruitment Scans both external and internal data bases for the purpose of identifying candidates for particular job openings Selection. Conducts computers-aided interviews, and scores performance on personality and cognitive ability tests as a means of determining which applicants will be hired. Training and development enables the employees to use the computer to engage in interactive training that is tailored to particular needs.

Performance appraisal assists raters in focusing on the important job-related criteria when conducting employee performance evaluations. Compensation and benefits Computes employee earnings by using attendance data, computers merit pay for performance-based jobs, and maintains and monitors benefits for employees. Organizational exit analyzes factors that influence turnover (Bussler & Davis, 2002).

2.3.9 The HRSP Automated Components

The professional organization that is most closely linked with the HRIS concept is the association of Human Resource Systems Professionals, or HRSP. HRSP conducts periodic surveys, hosts conferences, and disseminates publication aimed at keeping its members aware of trends in technology and methodology as applied to HR. Reports of its survey findings provide valuable benchmarks against which to evaluate HRIS management approaches and accomplishments (Ball, 2001).

In conjunction with HRSP, the authors conducted a survey of HRIS practices in a member firms around the world. This 1990-91 survey subdivided the HRIS into four automated components: personnel administration and workforce planning; compensation and affirmative action/EEO; benefits, employment, and recruiting; and health safety, payroll, and labor relations. Each component included several subsidiary application areas. In total there were 31 application areas. The HRSP classification was adequate for the survey, allowing respondents to indicate the status of each subsidiary application in their firms. The classification is noteworthy because it consisted of only four components, an extremely concise packing job considering the large number of applications (Lengnick-hall & Moritz, 2003).

However, conciseness was achieved by combining components in a manner that did not always provide a good fit. For example, in the third component, employment and recruiting deal with activities that occur before employees join the firm, and benefits apply while the employees are on the job and after they retire. In a similar manner, the payroll application in the fourth component appears to be better suited for the second component that deals with compensation (Lengnick-hall & Moritz, 2003).

Although concise, the components do not clearly reflect the planning that takes place prior to the time employees enter the firm, the activities that take place while the employees work for the firm, and the activities that take place after the employees retire. Since the primary task of the HRIS is to provide a conceptual representation of the firm's human resources as they flow through the firm, a resource flow view seems to be especially appropriate (Ibid)

2.4 EMPIRICAL REVIEW

This section comprised of studies that have been carried out to analyze the determinants of the human resource information systems and past studies that have been done by other authors in relation to e-performance management systems, e-training and development systems, e-human resource planning systems and e-staffing systems. It also analyzed also organization performance elements influence by the human resource information systems. The researcher sought relevant information through internet search on materials such as newspapers, journals, articles and research papers.

2.4.1 HRIS and Organization Performance

Rettly and Reily report (2003) gave reasons for adopting e-HR to include cost reduction and aiding operational efficiency and the desire of the HR function is to change the nature of its relationship with employees and line managers, the transformation of HR into a customer focus and responsive function and the ability to produce comprehensive and efficient management information which can be used in human resource. They also pointed out that IT was potentially able to lower administrative costs, increased outcomes, speedy responses, enhanced customer satisfaction and improved decision making. The module also provided employee productivity communications such as retirement services, employee manuals, corporate policies, health and safety benefits and training registration for the employees based on person's needs. Many authors have reported that HRIS use had constantly increased over the years, even in those companies where HR management does not have a strategic role.

Mayfield (2003) proposed the human resource information model. This model was based on the general systems theory. This model addressed all major HRIS components and offers information on how facets interact to support each other and affected larger organization outcomes. This was expected to be portrayed in this study as the various inputs of performance management, training, human resource planning and recruitment in HRIS and how they affected the larger organization outcome of organization performance and also how they have contributed to the strategic decision making in the organization. Geraldine de Santis (1986) made a survey of in 171 companies in the US to determine whether HRIS was independent of the centralized management system. The study concluded that the independent aspects of HRIS such as human resource planning, selection, administration, placement, payroll, pension and benefits management had a relation to the centralized management

system and therefore this study wants to establish if this relation can be applied in the Saccos sector in Kenya. According to the study by Shikha & Karishma Gulati (2012) in their research focused on HRIS roles on human resource planning and this was conducted among top IT firms in the world. They found out that HRIS was more useful for strategic activities of human resource managers and more strategic use if HRIS should be applied in training and development, succession planning, applicants tracking in recruitment and selection and manpower planning.

Also, according to Bader Yousef (2012) in his study conducted in five banks in Jordan. The study was conducted to know the human resource information system and human resource functionality relationship and it was found that performance management, knowledge management and records as a dimension of HRIS has a relation with human resource department delivery of service. Therefore, this study tends to ascertain if the functions of performance management, training, human resource planning and staffing have an effect on the human resource functionality and ultimately the overall organization performance.

The report indicates empirical research to divide the potential benefits of HRIS into 3 areas; Operational efficiency which includes reducing overhead costs, enhancing the accuracy of data, eliminating the costs of printing and disseminating information and enhancing the ability to distribute HR information; Relational impact- changing the nature of relationship between HR, line managers and employers; and Transformational impact- transform the HR role into that of strategic business partner(Ibid).

Similarly, Shrivastava and Shaw (2004) discussed the impact of technology in HR in terms of; operational impact (lowering variable transaction costs), relational impact (improve service levels and provide decision support systems) and transformational impact by creating a learning environment which assist in knowledge management and improving organization transformation. This implied that the HRIS not only make it possible for firms to importantly reduce the costs associated with human resource delivery. This mainly helps the firm to reassess the need for retaining internal human resource capabilities. The HRIS provides the human resource professionals with its ability to enhance their contribution to the strategic direction of the organization.

One of the fastest growing trends in the delivery of HR information was "employee self-service" with 80% of large US firms delivering some information to employees via an Electronic support system by 2000 (Geutal, 2003). ESS applications can give employees the ability to access and maintain HR information about themselves via the web. ESS systems have been extended to the design of the employees' own pay package within the total value of the job.

Likewise, managerial self-service provides a variety of HR tools and information for managers. These systems can provide managers with access to information about the subordinates and the ability to analyze information in order to improve managerial efficiency (Bissell, 2004).

The HR teams within cancer research UK and Norwich Union have had to learn consultancy and communication skills so that they can work with their customers effectively. They have also had to develop skills in analyzing and interpreting data so that they can make effective use of the information that is now available via HRIS and they have had to develop their strategic thinking and business writing skills (Ibid).

David *et al*. (2010) analyzed the main characteristics of efficient firms and the main sources of firms' efficiency through a sample of Catalan firms. The firm's efficiency shows significant improvements when advanced ICT used were combined with human resource practices. Dileep (2010) indicate that HRIS is an integration of HRM and information systems that exists within the firm.

The implementation of IT in developing countries is on the increase (Al-Qatawneh et al. 2012). Organisations in developing countries have recognised its importance, for example the ability of the system to process information on time and to help to solve developmental problems (Al-Shibly 2011). The IT influence in Saudi Arabia has created more awareness and organisations have recognised its benefits, so that both government and private sectors have improved their businesses by enhancing the use of technology (Al-Gahtani, 2003). Already the government of Saudi Arabia has invested in many projects, such as the Saudi National e-Government Portal (Alateyah, Crowder and Wills 2013). Nowadays, technology can assist in helping citizens and non-citizens to gain different services via the Internet, which was not possible over a decade ago (Alateyah, Crowder and Wills 2013). The majority of western countries familiarised themselves with the use of the Internet one or two decades ago, while in Saudi Arabia the Internet world is just beginning (Al-Shohaib

and Frederick 2010). There are still many Saudis who travel around the world in order to receive education or to do business, and due to easy Internet access, they can still control their business and talk to their relations. Also, academic performance has improved significantly due to the World Wide Web, which provides access to international data bases, publications, research engines and also e-learning platforms. These features have only just been introduced to developing countries (Stepanova 2011).

Therefore, organisations should implement IT solutions as part of their procedures and encourage employees to develop, maintain, progress and exchange information. IT has become a vital part in any business or public institution and it can help organisations to achieve their strategies and enhance the relationship between departments. For example, sharing inter-disciplinary knowledge within different institution has massive advantages (Edington and Shin 2006). However, in order to maintain satisfaction between IT users and providers, some conditions must be fulfilled. Three factors are important for the successful implementation of IT, which are: user satisfaction, top management commitment and IT experience (AL-Adaileh & AL-Makhadmeh, 2008). Many organisations can only benefit from this technology by discovering the main issues that can affect their IT (Alateyah, Crowder and Wills 2013).

Therefore, according to the Central Department of Statistics & Information (2013), in the context of Saudi Arabia specifically, where the economy is based mainly on oil production and the population is above 28 million, obtaining and maintaining the latest technology (especially computer technology) should be a major goal in the national computerisation program (Al-Zharani 2011). Moreover, IT has an important role in

improving the efficiency and productivity of private and government organisations (Al-Gahtani 2003). Successful IT adoption and implementation can result in a significant improvement in performance (Xiang et al. 2009, Abdullah et al. 2006, Kim et al. 2009). For example, in an empirical study which examined productivity levels before and after IT implementation, it was found that there was an increase of between 15 and 34 per cent (Al-Gahtani 2003).

It is only sensible to state that an increasing deployment of IT in developing countries could help to solve their developmental problems. Innovative IT solutions in Saudi Arabia can help to boost productivity growth and are also an essential component of controlling the working sector and national employability (Al-Khaldi and Wallace 1999, Alsheha 2007).

However, there are still many obstacles that should be overcome and fought against, such as consistency in the implementation and management of HRIS in Saudi Arabia. Unfortunately, there are still many organisations or institutions that have incomplete installations of hardware and software, which cause a series of technical problems. On the other hand, what can be assumed as a positive symptom is the general tendency to rely and trust new equipment and services (Cash et al. 1992).

Nevertheless, there are still examples of research conducted a few years ago that investigated the implementation of IT in Saudi Arabia. Al-Zharani (2011) found that there was a lack of trained personnel and skills to manage the use of information systems, a lack of available technology training programs, and a lack of coordination among

organisations that sought better ICT in the KSA. One critical element is the digital division within Saudi Arabia; in 2010, only around 3.1 million people, or 12 per cent of the total population, used the Internet (Johnson 2010).

Even so, in 2010, users of e-commerce in Saudi Arabia spent approximately US$3 billion on transactions relating to goods and services through e-commerce. Furthermore, it has been identified that in Saudi Arabia, the e-information technology sector is growing at a rate of 9.3 per cent annually (Al Rasheed and Mirza 2011). There was an increase in the number of users who could access the Internet over the five-year period from 2009 to 2014, from 27.1 per cent to 65.9 per cent.

According to Assad (2006), consumerism has already spread to the Arab countries, and particularly to the Gulf States; this is as a result of an increase in national income and it has led to an increase in individual income, changing people's consumption. Al Rasheed and Mirza (2011) report that the KSA is ranked first in relation to the sale of personal computers in the Arab world.

In the KSA, the culture is based on long traditional principles and there is a belief that there are situations where prejudice may win over progress and innovation (Al-Maskari and Sanderson 2011). There are still examples where it has been argued that computer system technology should be evaluated in terms of higher operational efficiency and reduction of paper work (Kerr and Hiltz 2013). In developing countries like Saudi Arabia, public organisations find it difficult to challenge other private companies when attracting qualified personnel, because the authorities do not offer a competitive salary and also because of the

limitations of resources, which are restricted by religion, laws, regulations and habits (Al-Shehri & Drew, 2012).

In Saudi Arabia, even qualified IT people are usually looking for attractive jobs that will give them a good salary, and better training and support (Al-Dmour & Zubi, 2014). This affects government institutes because they pay less than private sector. Jobs with less opportunity will not be attractive. Therefore, IT evolution has progressed slowly in Saudi Arabia, affected by human factors. On the positive side, the country continues to invest in development. As has been mentioned before, there is a positive relationship between organisational performance and IT investments (Al-zharani 2011). On one hand, it is clear that it is not only the money that is needed for successful IT development, but many factors can work together to achieve the common goal (ibid.).

Following modern global standards, international companies use technology in their operations to help them achieve their clients' requirements regardless of their geographical base. Difficulties in obtaining information about IT productivity in developing countries has been described by (Bianchi, 2001) as follows: *"almost all findings on IT productivity are based on data collected in developed countries"*. It has been argued that investment in IT is a high priority, and fortunately Saudi Arabia's government is ready to increase their investment in IT by up to 40 per cent (Alateyah et al. 2013, Alshehri et al. 2012).

The financial aspect cannot guarantee success in IT implementation; it actually depends on the approach, training and mentality. However, as many research studies have shown,

informational and technical improvement could be beneficial and will always bring profits in return.

Information technology is an important element of today's business environment. Many IT and IS professionals have used these terms interchangeably. An IS involves executing and reporting information that will support the decision-making process. On the other hand, Wiblen and Dery (2010) defined an IS as a set of ordered procedures that provide information to support decision making and control in the organisation. Thus, this suggests that an IS is the interaction of human beings with computer software and hardware to perform tasks in an organisation. An IS is crucial in today's business environment because of the high level of implementation of business concepts that drive competition and technological changes. The next section is on social influence and it will provide a detailed analysis of how users' perceptions about others may affect different functions in an organisation.

Haines & Petit (1997) studied the presence of IT department and IT professionals during a design process. They concluded that the presence increased and strengthened both the system itself and the user satisfaction. When the organization, tasks and the system were in balance, people used HRIS and were satisfied. In addition, inputs of the stakeholders were relevant for the development of HRIS services. However, Haines & Petit (1997) emphasized that the external user support, i.e. the analysis of organization needs and the ease of use and usefulness, should be studied more.

When managers and HR professionals consider designing and implementing HRIS in an organization, they focus on administrative tasks and costs as well as on business and

competitive goals. HR people have their own conception who should use the system, what activities should be supported and what data collected. Accessibility of the system is an important issue.

2.4.2 HRIS and Human Resource Functions

Gerardine De Sanctis (1986) made a survey in 171 U.S Companies, to know whether the HRIS is independent of the centralized MIS. According to the study if an organization choose HRIS, it supports human resource planning, selection, administration, decision making, placement, payroll, pension and benefits management.

Bader Yousef Obeidat (2012) conducted a study in five different banks in Jordan at the rate of 61.5 percent and questionnaires were distributed to the human resource department. The study was conducted to know the human resource information systems and HR functionality relationship and it was established that performance development, knowledge management and records and compliance as dimensions of human resource information systems have a relationship with human resource functionalities but the rest of the other functions were found not to be significant.

Dr. Shikha N Khera, Karishma Gulati (2012) in their research they focused on HRIS roles on human resource planning and they conducted the study in top 7 IT companies. I t was found out that HRIS was most useful for strategic activities of the human resource managers and more was needed in training and development, succession planning, applicants tracking in recruitment and selection and manpower planning.

Kundu & Kadian (2012) in their research anticipated to assess the application of HRIS in HRM in companies operating in India. Most of the respondents felt that technical and strategic HRM and performance and reward management were very important and on the other hand employee records, payroll and corporate communication were found to be important for the organization.

According to Rajesh (2012) in his study to ascertain HRIS impact on human resource processes. He endeavored to relate HRIS with human resource planning, recruitment, selection, training and development, compensation processes and other variables. He concluded that the usage of HRIS had a positive impact on the various facets of human resource processes in the sample companies studied in an overall way. The study also conducted by (Wachira, 2010) assess the reasons for introducing HRIS and the findings indicated that most firms recognized a reduction of costs of 79% in operational activities in the human resource department.

Ball (2011) concluded that HR had missed the strategic opportunity provided by HRIS. The study also looks at the effectiveness of HRIS to achieve organization efficiency and positive effect on human resource functions. More recent research shows greater use of HRIS in support of strategic decision making by human resource management. However, the extent to which HRIS is used in strategic fashion differs across organizations with the vast majority of organization continuing to use HRIS simply to replace manual processing and reduce costs (Bee &Bee, 2002, Brown, 2002).

2.4.3 Effects of E-performance Management Systems on Organization Performance

In the organizational context, performance is usually defined as the extent to which an organization member contributes to the achieving of organizational objectives. Employees are a primary source of competitive advantage in service-oriented organizations (Luthans and Stajkovic 1999). In addition, commitment performance approach views employees as resources or assets, and values their voice. Employee performance plays an important role for organization performance. The performance appraisal is a procedure which involved setting work related standard while assess the employee actual performance and providing feedback to the employee in order to remove performance deficiencies. The performance need to be clear for all so that the performance management process can be understood by both the management and the employees. Most of the studies have indicated that private and government sector firms use IT for activities related to the performance appraisal of employees and benefit administration. The benefit administration provided the administration of employee participation in the dimensions of benefits. This can be illustrated in case where the retired public servants would find it hard to claim pension payments due to lack of adequate records to show what they are entitled to in the ministries.

The payroll systems organization software package is able to calculate the time and days of the workers at work, tracks their absence reports, organize tax reports, and finally reproduce salary slips for each worker after regular deductions, this is done in an automated manner. This HRIS subsystem is also integrated into the organization financial management system to allow for the measurement of employee outcomes and productivity, mainly

using the input data regarding employees' absences, time mostly spent at work and adherence with the regulatory framework of the firm.

The benefits administration software provided the employment records of all the employee benefit schemes offered by the company. It provides online access to employees about insurance policies, pension plans, health benefits, the distribution of company shares and dividend shares. This fulfils the regulatory duty of the company to keep all of its employees aware of their rights and benefits.

Employee performance plays an important role for organizational performance. The concepts of performance are studied through evaluation of overall performance and the management of the performance and the evaluation of performance is the process classifying certain outcomes within a definite timeframe (Coens & Jenkins, 2002). The balance scorecard was able to connect measures throughout an organization to translate high level objectives into lower level activities. Then measures are imposed on individual employees to monitor their performance of their activities (Platts & Sobotka, 2010). Performance criteria used need to be unambiguous, clearly explained and more importantly relevant to the work tasks undertaken by employees and is achievable.

According to Huselid (1995) employees within firms contribute for organization performance and HRM practices can affect individual employee performance through their influence over employee skills and motivation at the work place and through organization structures that allow employees on how their jobs are performed which affect the pay

structure. However, Opiyo (2015) established that e-payroll administration has a significant effect on the performance of banks in Kenya.

The payroll system in the organization is perhaps the most established among back-office HR modules. Despite the ever-increasing modernization of HR technology, payroll has the one component above all others that should work correctly. The main functions of payroll software are as follows: permitting the data entry of all payments and deductions; calculating employee gross and net pay; generating employee payments via electronic processing of financial transactions. Generating worker pay-slips; payroll reporting to the administrators; payroll organization accounting and integration with the finance system; processing of employee weekly and monthly payrolls; allowing organization supplementary payments, after the main payroll run; year-end organization procedures, reporting and data transfer. processing the organization pensioners' payrolls; processing the firms payrolls; processing the multinationals expatriate payments; interfacing with the organization internal and external benefits providers, including pensions. As discussed earlier, unless organizational challenges dictate otherwise, it is appropriate for the payroll system to be integrated with the main HR system, since there is considerable integration of data and process within the firm.

Compensation management programs were mostly among the earliest HR applications of ERP. As IT advances, compensation software has evolved rapidly in the past decade. Recently, major organization ERP vendors brought in the Internet technology in their modern products. This Web solution is modernizing how compensation systems are managed in firms now and in the near future. Provided are some key features and

benefits of such a module within an ERP system: 24/7 accessibility: A Web solution means firms users can access the program using a standard Web browser wherever and whenever they can Compensation administrators no longer need to sit in front of their desktops at central offices in order to process information. Workers can view their pay and benefits information and update their personal profile at home.

Integrated functionality: Compensation systems are integrated with various other HR and non-HR systems within the organization. For instance, a compensation officer can track up-to-date worker attendance information or performance reviews to make appropriate changes in compensation.

Data automation: Automation of existing procedures and processes had cost saving benefits. Significant data automation relieved HR executives from tedious routine activities such as data entry, filing, and report writing. Data importing and exporting were made easy between another firm applications software.

Streamlined workflow: The Web solution streamlines all major elements of compensation planning and implementation, including plan design, modelling and budgeting, plans review and approval, and mainly data exporting to payroll. In addition, by posting new information regarding compensation policies, pro- gram description, eligibility explanation, new compensation forms, and mostly asked questions and answers on the Web, that individual worker can access the HR department and save a considerable portion of time, which the HR executives used to spend on responding to requests from workers.

Flexible analytical tools: New organization compensation software had strong analyzing and diagnostic capabilities. It provided organization users with online reviews of more compensation reviews that are established in the system. Customized organization annual reports are also available to meet specific needs. Managers and executives can view aggregated reports or peruse the reports by department, by work groups, or by individual workers (Dulebohn & Marler, 2005). The firm users can conduct what-if scenario designs and simulations in planning compensation budgets which establish the quality of strategic compensation decision making in the firm.

User-friendly interface: Established on relational data base structure, the Web-based compensation software provides the control of the system in hand of end-users with little technical skill needs. Unlike prior software systems, it had no system-specific training and provided IT support and maintenance at a minimal level within the firm.

Real-time accurate data: The HR department is no longer specifically the sole party responsible mainly for entering all the data. Employees and line managers are given the mandate to enter and update data on their side. Thus, information is being updated immediately on the Web as it occurs. All the analyses are established using real-time data (Brink & McDonnell, 2003).

One stop information center: Human resources home pages accessible via the firms Internet or company intranet provide links to Web sites of outsider service providers mainly worker stock administrators or health care providers (Gherson & Jackson, 2001).

Add-on applications: Self-service through organization ERP applications enabled HR executives, workers, and line managers to focus on their predominant value, allowing for more tasks and spending less time on administrative tasks. Line managers can perform online view salary budgets, compare firms budgeting against actual spending, and take various salary actions with ease by utilizing the self-service functions or corporate portals for human resource activities (Adamson & Zampetti, 2001). Organization Communications between management and workers are made easier. MSS mainly allows managers take major ownership in organization compensation decisions with easy-to-use analytical tools (Gueutal, 2003). Cedar's third annual self-service survey showed the continued expansion of self service organization applications on the Web, and most surveyed companies report great business accomplishment with HR self-service implementation (Cedar Survey, 2001).

The level of sophistication and the great speed of development of organization compensation software products indeed echo the rapid-changing, dynamic, and complex

Business sharp reality of nowadays organization compensation management. Individual pay is mainly no longer just monthly cash salary. Instead, it specifically takes various forms, including stock ownership and flexible benefits. Firms have had to be innovative in developing worker compensation packages to attract genuine talents. An effective organization compensation system is majorly designed to work on the business objectives and align with key strategic business operations (Gerhart, 2000). To stay

competitive, most firms require and need to constantly compare its compensation structure with major competitors in the market places and industry.

There are also major ever-changing external factors such as legal regulations and labour economy that a company has to closely check and monitor. Milkovich and Newman's (2005) four-component model majorly summarized key functions within a compensation system. The four elements include internal structure, external structure, pay for performance tools, and administration organization tasks. They adopt these four broad elements to compare major organization web-based software on specific compensation activities.

An internal structure included a firms hierarchy of job levels, pay differences among the job levels, and the methodology used to determine the pay differences (Milkovich & Newman, 2005). To assure the firms internal equity in its compensation system, the firm needed to conduct job evaluations, and also compiled pay grade and establishing competency analysis:

Job evaluation: A firms systematic job evaluation starts with job analysis. With a web-based compensation software, an in-house job analysis is mainly performed using an online questionnaire to collect information and data directly from workers, supervisors, HR, and outside subject matter experts. After the surveys are administered, the software mainly analyzes the data with established statistical methods and automatically produces a job description per job surveyed. Such job description/ analysis is usually utilized as bases for job evaluation. The e-performance management

systems component has been able to analyze the performance criteria and appraisal and how this affects the overall productivity of firms. This is by providing accurate metrics for the assessment of work done by the employees. This in turn will be able to influence the employee skill levels, motivation and pay structures which leads to effectiveness and efficiency in the firm. The improved skills level due to accurate feedback from the performance management will lead to improved market share for the firm.

2.4.4 Effects of E-training and development Systems on Organization Performance.

Many training software packages are available for all types and sizes of computers to provide online training for employees. They include management training software, sales training software, microcomputer training software and word processing training software. These software packages can be used in computer-based training programmes designed by human resource department for training specific employees in group and independent study programmes (Dutton, 2006). The human resource information systems have modules through the self-service portal makes persons aware of their personal career related attributes through the analysis of longtime series of activities that contribute to career fulfillment. This system provided individual responsibility for employees' own career interest, skills and values, sought out career information and resources, established career goals and plans. Smith and Kelly (1997) on their study on importance of HRIS to organizations which they found out the HRIS had enabled the firm to effectively attract, develop and retain the brightest human talent at the market place. Many of the human resource executives are busy taking care of their daily duties which are more administrative in nature.

The training software package is a very vital HRIS module which provides the following services to HRM personnel: mainly the storage of employees' educational certificates, assessments of deficiencies in training and learning, predictions of deficiencies, and recommendations for training courses for individual employees based on their skills needs. Also, this module provides online access to books and course materials for workers. This allows the firm to save a great deal of time and money in terms of delivering online courses and course material quickly for individual learning. This module can be bought majorly separately on the software market. The training is to give teaching to the new and present workers on the basic skills needed to undertake the jobs currently. The training should be able to prepare and educate the worker for future jobs. The training module and learning management systems provided the firm with an opportunity to track and administer worker training and development efforts.

The study carried out by Lengnick-Hall and Moritz (2003) revealed that training has a strong positive correlation with the financial performance of the organization. This is also supported by Opiyo (2015) who concluded that e-training had significant relations with the performance of commercial banks in Kenya. The e-training module had a web-based skill inventory which were designed to help develop a listing of specific skills sets as employee complete their own online individual assessment. Such automated skills inventory allows managers to identify employees with critical competences and ensure that training is connected to strategic business needs. They also helped track skills with the aim of getting the right talent, at the right time, to provide critical capabilities. The automated skills inventory become an integral part of competence management.

Learning management system (LMS) software is mainly available within HR packages or can be bought separately, requiring major integration with the main organization system. Web-based LMSs could be used by employees, managers and training staff to plan, organize and administer all kinds of learning intervention, for instance online courses, e- learning and coaching. Mainly such systems may hold a variety of data:

- a description of learning options, pre-requisites and course dates;
- a teaching and learning resource inventory;
- a record of learning costs incurred;
- competency/learning requirements in relation with positions/jobs (from the OM module), against which workers' competency appraisals may be profiled.
- employee learning specific data (organization learning plan, employee training history, employee competencies and qualifications) from the personnel administration database.
- LMSs are particularly required where an obtaining of qualifications is mandatory, for instance, in a regulatory environment.

E-learning can be launched various LMSs, and the results kept automatically upon completion of modules or the entire training course. This requires integration between the e-learning systems and the LMS, and many industry interface metrics are now available to organize this. Some LMSs involve authoring instruments for creating e-learning content, and this kind of more comprehensive package is referred to as an integrated learning system (ILS).

Performance management also propels itself to web-based HR systems or specialist add-ons, providing the recording and monitoring of objectives, training and development plans, appraisal and logs. Specialist organization succession planning software could also be utilized to record who are appointed for which jobs, and what development they would require before succeeding to them. These data can be displayed graphically to provide a predominantly high visual view of the succession plan, emphasizing where key gaps within the organization structure may exist. Learning and development (L&D) systems should also be able to provide basic operational management information, for instance, course at- IT use, plus a range of tactical and strategic management information.

With special regard to the real L&D management, workflow had mainly been improved through HRISs. The system helped to track skills, training and competencies. HR can utilize the system to manage human resource and optimize talent. The system keeps "electronic resumes" for each current employee within the firm, which gives the firm an electronic inventory of its human resources. It can track mainly where skills and competencies are in minimal supply and HR can design appropriate training. Rather than moving outside the company for talent, the system does the search looking for qualified internal respondents for each opening. Furthermore, workers can utilize the system to manage and organize their own careers. If an employee was interested in designated career path but had no certain skills, the worker can start appropriate training and the system tracks what type of courses have been accomplished. Ongoing training is more often linked to increased wages, thus the motivation to learn and morale increases in these organizations. If the organization placed value on their employees for their knowledge,

competence and skills, greater citizenship and commitment results which leads to improved organization outcomes and productivity.

In addition, many training accesses are offered online to workers as well as suppliers. Training layouts, training handouts, and course descriptions are placed on the company intranet. The advantage of online training is its mainly 24-hour availability, which is specifically crucial for global enterprises. Online training is also very cost effective, saves travel expenses and time spent away from the firm. However, the fear of the classroom atmosphere makes online learning attractive to some workers; it also allows them to remain semi-anonymous while asking training questions and allows them an ability to learn at their own pace. In the future, various training will be administered directly to the desktop through desktop video, adding interactions and more fun to the learning process (Bussler and Davis, 2001-2002). The e-training and development systems component had the training software which mainly used computer-based training programs which helped in providing accurate and specific training to individuals. This helps in reducing the costs associated with manual training and therefore providing efficiency in the human resource department and ultimately the organization efficiency. It also provided effectiveness in the meeting of the training objectives of the firm and also leads to improved skills and competences which results to the high market share of the firm.

2.4.5 Effects of E-human Resource Planning Systems on Organization Performance

Human resource planning consists of putting right number of people, right kind of people at the right place, right time, doing the right things for which they are suited for the

achievement of goals of the organization. It utilizes the following procedure first analyze the current manpower inventory, secondly making future manpower forecasts, thirdly developing employment programmes, fourthly design training programmes. It embraced analysis on supply demand, surplus, shortages and utilization of human resources. Its concepts are also concerned with the development of critical human competence skills and attitude necessary to the development of an organization guided by the corporate policies and objectives (Decenzo and Robbins, 1996). The HRIS is able to support long term planning with metrics for human resource planning in areas of supply and demand forecasts, support the staffing function with information on equal employment and training needs of the organization. Surveys have shown that more than 90% of the organization human resource department operated some form of computerized human resource management systems.

Nowadays, new information technology is constantly used to improve the whole process and organization overall competitiveness. This makes human resource professionals free from manual routine and provides scope for improving service function and strategic decision making of the organization (Duff, 1989). The HRIS helped with forecasting staffing needs resulting to improved training process with its ability to disseminate information within levels that are useful in the organization. The information generated from the HRIS increased coordination between the human resource officials and the top management in the organization which helps in strategic decision making in the firm. The human resource function is to improve organization capability and individual capability in the firm.

Human resource has received keen attention because of its recognition that better output could be gained from the use of information systems for managing human resources

effectively. A survey conducted on commercial banks in Kenya establishes that e-succession planning has a significant effect on organization performance (Opiyo and Abok 2015). The strategic human resource management helped to diagnose organization strategic plan and needs mainly required for implementation of competitive advantage and achieve operational goals. The strategic role changes the competencies that are able to define human resource officers' success.

The e-human resource planning systems had replacement charts which included performance appraisals data about how the subordinate staff would be ready to fill key managerial positions. The software solutions allow decision makers to determine which positions have sufficient strength and which requires further planning. The movement analysis is a technique which required the analysis of the human resource supply and identify the total number of vacant or open positions in the firm as well as the total number of human resource movements that are caused by replacement and filling the vacant positions. The human resource department should be able to move from transactional HRIS to more strategic HRIS and software which can be able to adequately perform performance management, succession planning, competency-based compensation and workforce analytics (Greengard, 2005). The strategic human resource covered the core HR processes – starters, leavers, transfers, absence, over- time and so on – which have traditionally been the exclusive domain of the HRIS. However, until recently at least, the firms HRIS had often been little more than a data repository, as a result of which the main HR processes have had to be brought out manually by HR administrators. With the organization web-enabled workflow-driven HR systems, however, these firm processes can be very streamlined so that task owners (workers, line managers, HR executives) are prompted automatically to establish

their major tasks using employee or manager self-service (ESS/MSS). As an instance of the above, a worker may submit a request for annual leave, which is followed through to their manager to authorize. The system prompts the manager that the worker has submitted the leave request and does so again and again if there is no response within an established timeframe. When the manager checks the request, the system establishes a summary of that unit's known absence for the period concerned to assist reach a decision. When a decision is provided, the system is updated as appropriate as possible and a note of the decision provided to the worker in the organization.

All of the above kinds of procedure are governed by user-programmable logic established into the system's workflow engine. Workflow functionality is also established by CRM systems or generic third-party automation tools, so an evaluation of IT architectural methods is vital when workflow engines are being established. Various add-ons may be utilized to supplement the HR administration elements of the main system. For instance, in a clocking-on work environment, a separate time and attendance system may be utilized to record absence details, which are then moved to the HRIS via an interface. The firms HRIS may also need to integrate with organization systems that are external to the HR department, such as accommodation, security and expenses and so on.

2.4.6 Effects of E-staffing Systems on Organization Performance

According to Ruel *et al* (2004) the importance of records systems is increasingly being recognized in organizations. Employees require information in order to carry out their official duties and responsibilities effectively and efficiently in a transparent manner. According to Northwest Territories (2002) the role of records system is to ensure that members of staff

involved in different operations have the information they need when necessary. Several studies on e-recruitment analysed online recruitment in which most of the firms were using and also to provide appropriate selection of the employees through the module this is in firms in Belgium, United Kingdom and Netherlands. Studies done by Fayyazi and Afshar (2013) on e-recruitment in Iran firms concluded that e-recruitment was mainly about cultural and behavioural change which viewed it as end to end process which required updated networks and advertisements. The studies by Kar and Bhattacharya (2009) where they were able to assess relationship between e-recruitment and job satisfaction which they found out that the job portals had been very efficient for applying jobs for candidates and provided adequate customer satisfaction. The HRIS automation has helped the corporate human resource departments to facilitate the outsourcing of human resources. (Barron et al, 2004)

The e-staffing systems contains an e-recruitment portal which is a subset of the HRIS system for applications for the recruiting and hiring functions. A good system will mainly automate the majority (70-80%) of the recruiting process. Companies usually used job boards like Monster.com or CareerBuilder and found large increases in applicant numbers, but many are unqualified for the positions due to the mass application being sent by the public. HRIS performs a record-keeping function. In this HRIS system, applicants' information and employees' data can be stored, retrieved and added to whenever the need arises. For example, if an HRM employee is asked to provide information on the academic documents of an applicant or employee, then he or she can quickly and efficiently search for this information in the data directory which contains details of thousands of employees (Kovach and Cathcart 1999). This module necessarily holds the following types of data about the

employees: wage history, emergency and regular contact details, education records, training and certificates, disciplinary actions, injuries or illness data, and so forth.

With the introduction of HRIS human resource management functions and processes are conducted electronically. The adoption of technology has allowed human resource managers not only to focus on administrative work but also develop well researched strategies and plans, enabling human resource planning to be aligned directly with overall business objectives. According to (Cheruto, 2005) in her study she was able to established that an effective e-recruitment model in a HRIS reduce hiring costs by 90% in organizations.

Through the intranet or web portal organizations can communicate changes in human resource policies and procedures more easily. Managers can access staff records and individual employees can access personal information about their work status and their entitlements. Self-service facilities can be provided so that staff members can manage their own personal data. Opiyo (2015) established that e-recruitment has a positive and significant relationship with organization performance in commercial banks in Kenya.

Empirical evidence showed that generally e-recruitment occurs at all levels of a job hierarchy but the prevalence of internal recruitment increases at higher levels though the online hires have more experience and education. The empirical evidence is consistent with using internal recruitment to create strong incentive for the firms workers, An internal recruitment policy may complement other human resource practices in particular those associated with encouraging long worker tenure. Internally hired workers have accumulated knowledge and skills that are particularly valued in the firm (Dess & Jason, 2010). The human

resource information systems helped in job rotation which entailed the lateral movements of employees between jobs in the organization. It involved change in job assignment but not necessarily more responsibility or money. The HRIS provided an overview of the departments therefore reducing the boredom and fatigue for the employees. It also helped in increasing the job and career prospects. The job rotation example is where the accountant rotates through both human resource department and operations in preparation for management positions since it helps in increasing the employee knowledge and skills.

According to Kaplan and Norton (2004) stated in the first decade of the twenty first century saw rapid growth in the use of online recruitment and the transformation of electronic into the fastest growing recruitment techniques. The most reported benefits of of electronic recruitment included wider applicant outreach, faster information exchange between potential employer and employee, lower costs of advertising, data accessibility and availability, reduced costs of communication and improved organizational attraction. The drawbacks of e-recruitment are associated mainly with resume overload, increased diversity of quality of applicants, lack of personalized response to applicants, and lack of confidentiality. Despite the widespread use of e-recruitment methods, a gap seems to have developed between research into and the practice of e-recruitment. Mainly, more focus on the design of corporate recruitment websites and e-recruitment system design.

Although recruitment by and for organizations is intended to improve organization performance, research on recruitment from an organizational perspective is still relatively rare. The companies have had extensive experiences of e-recruitment and deployed a broad range of electronic means in their recruitment practices. The introduction of e-recruitment

technology had affected both recruitment activities and the sequences of some recruitment tasks and subtasks. E-recruitment had been perceived as an umbrella term covering recruitment activities performed using various electronic means and the internet. The recruitment process can vary in complexity and degree of difficulty depending on the recruitment objectives and the recruitment sources chosen. An e-recruitment uses online job ads as the recruitment source, the focus is mainly on the recruitment process for sourcing applicants from advertisements. Traditional recruitment, which uses formal sources like job advertising, starts with the identification of the required applicants, their location and placement in the labour market, proceeds with activities to attract and persuade qualified applicants to apply. Jobs applications are then received, screened and sorted, then a shortlist is drawn. The process ends with communicating the pre-screening results to the applicants.

According to studies done by Ekwoaba (2015) who investigated the impact of recruitment criteria on organization performance of financial firms in Lagos, Nigeria. The researcher analysed 130 valid responses obtained through a questionnaire administered to selected respondents revealed that e-recruitment criteria had a significant effect on organizations performance. This implied that people are important to organizations as they offer values and attributes to organizational life and when managed effectively would be of benefit to the firm. Experiences also showed that successful appointment can produce results which impacted positively on the wider aspects of the organization. However, the recruitment of employees also provides an opportunity for the firm to present itself in a favourable light. It had also been argued that in order for firms to build and sustain the competitive advantage, proper staffing is critical (Djabatey, 2012).

According to (Gamage, 2015) the objectives of recruitment is to get the right person to the right job, establish and maintain a good image as a good employer and maintain the recruitment process as cost effective as possible .The recruitment practices will determine who is to hired and when properly designed will identify competent candidates and accurately match them to the job .Similarly, (Rauf, 2007) discovered that e-recruitment procedures are positively related to the performance of organizations .According to (Huselid, 2011) recruitment procedures that gave a large pool of qualified applicants , pared with a valid and reliable recruitment regime. This implied that an organizations policy, human resource policies and practices represent vital elements for shaping employee behavior and attitudes. (De Varo, 2012) demonstrated that e-recruitment can lead to positive organization outcome and help the firms to grow as they have been able to get the right people for their vacancies. The self-service in human resource information systems is a technology platform that enabled employees and managers to access and modify their personal data via web browser from a desktop or centralized kiosk. The managers may use the self-service to access authorized information about the employees, their supervisors and also be able to fill up an open position.

The managers may use the HRIS to compile employee absenteeism and turnover data, to forecast human resource demand and also to manage annual employee review and compensation planning. This enables the human resource consumers to no longer interact directly with the service providers. The employee profile may include the employee name, classifications, work status, work history, jobs held in the firm, education level, training, skills competence, areas of expertise, talents, history of performance appraisals, future jobs desired, hobbies and interests which may be used for organizational planning. There are two main types of e-recruiting systems. An organization applicant tracking system is able to track

demographic information, as well as the skills and competence of applicants and those in-Reviewed by the firm. The search major feature of applicant tracking systems could be screen out the qualified resumes based on certain established criteria, resulting in time saving for HR staff. Letters or e-mails can be automatically sent by the organization system to un- qualified applicants. The second major system is called a hiring management system (HMS). The primary difference between this and the applicant tracking system is that the HMS utilizes job boards and corporate websites to establish a match from a pool of applicants. An e- mail is sent to the firm when the system receives a resume that clearly matches the recruiter's desired qualifications. This means a quicker interview, which truly reduces time to hire. The major prospects can receive an offer more quickly, so a talented applicant does not go to another company.

Passive organization candidates are also reached through push technology, making them aware of vacancies that match their skills. Both types of systems provide similar functions, and the distinction among them is not so apparent. Indeed, the internet offers several and various major things: access, speed, precision, targeting ability, efficiency, cost and time effectiveness. A good recruiting system can be able to reduce the hiring time by two-thirds and lower costs by 90%. Undoubtedly, when compared with mostly newspaper ads, the internet offers very lower recruitment costs (Bussler and Davis, 2001-2002). Moreover, the firms internet provides functionalities within the HRIS or specialist recruitment management system (RMS). First of all, it assists in creating a vacancy, usually by transferring job data from the human resource module upon a position being shown as vacant, or potentially vacant. Secondly it is mainly possible to advertise the vacancy on the company's intranet or external web site, or via third-party recruitment sites. Furthermore

a RMS enables the firm to perform the recording and administering of applications and the entire management of the selection process, through workflows to route actions between managers, applicants and HR executives. A recruitment management system has also specific functionalities for establishing medicals, references and contracts for preferred candidates. Completing the final employment of the successful individuals is mainly facilitated by the transferring of their complete details onto the HR administration module via the starter process. Lastly a RMS can generate various types of reports, for instance, interview schedules, lists of positions currently being advertised and the possible vacant posts. Other more specialist resourcing applications may be established as part of the RMS or via third-party software, for instance, CV scanning and analysis and on- line psychometric testing for particular jobs. If a separate RMS is established, interface with the main HRIS may be needed, and also with the CRM if this is used to front-end resourcing for organization work control and reporting purposes.

Software applications in organization mainly dealing with human resources and their skills, attitudes, and knowledge (such as e-learning systems, skills databases, e-recruitment modules, corporate modules integrated with competence-centered services, and functions) are often very much based on database technology (usually relational) for organizing, storing, and searching relevant information regarding the firm. This system has really assisted firms in e-staffing especially for large and complex organizations. The e-human resource planning systems had been able to provide staff profiles which made it easier for the firms to have succession planning and also contributing towards effective and efficient performance of work. This also leads to proper utilization of the employees resulting to a higher market share for the firm.

2.5 Research Gap

This study sort to establish the effect of human resource information system on the organization performance of Saccos. There is immense literature on the utilization of human resource information systems in organizations globally. In Kenya a lot of emphasis has been given on the operational aspects of HRIS instead of strategic implementation of the system. There has been little focus on the influence of HRIS on the efficiency and effectiveness of Saccos. Most of the studies have focused mainly on the use of HRIS in delivering efficiency in human resource department delivery. Therefore, this study filled the gap by establishing the effect of human resource information system components of e-staffing systems, e-human resource planning systems, e-performance management systems, e-training and development systems on the organization performance.

2.6 Conceptual Framework

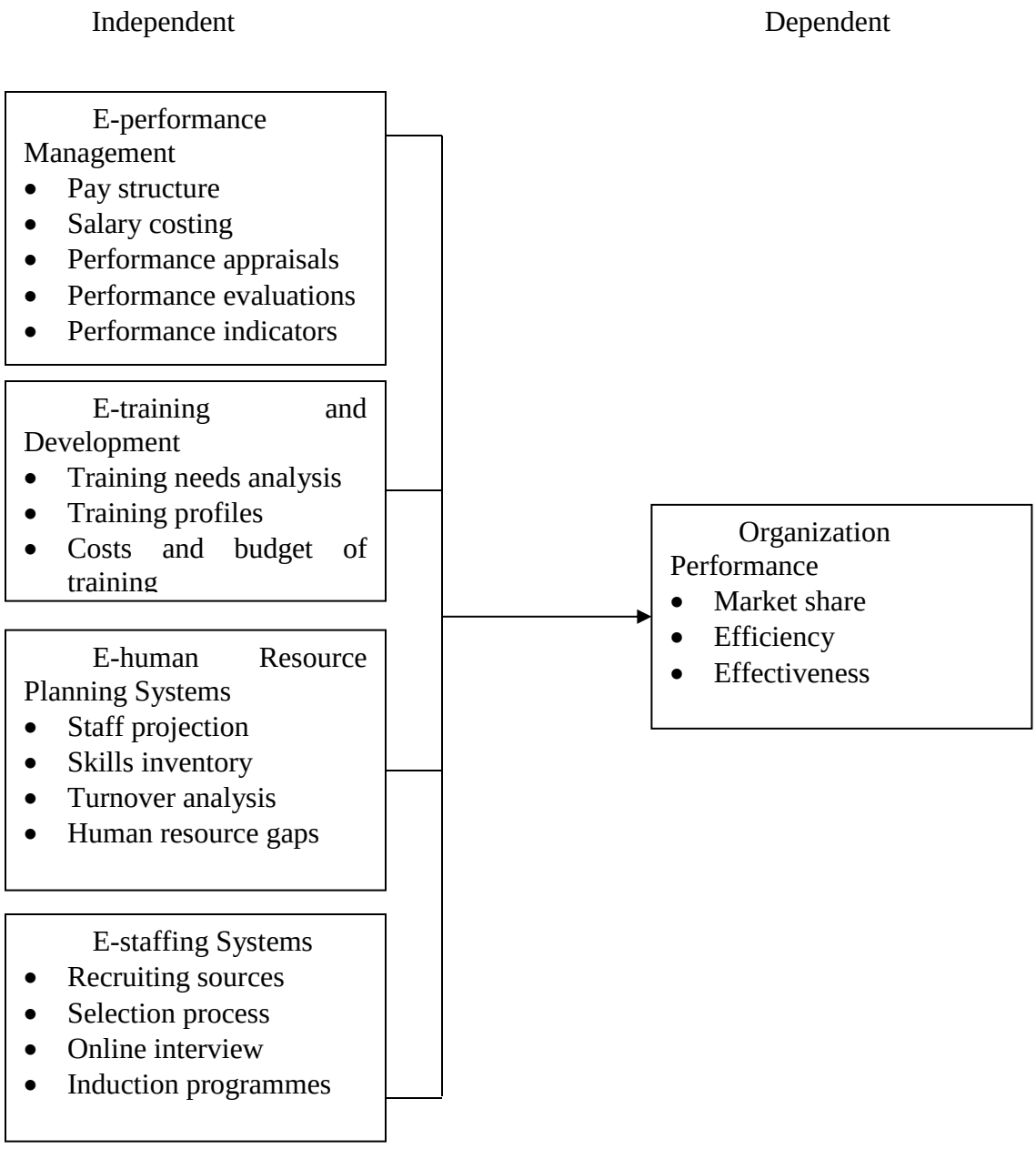

Figure 2.5: Effects of Human Resource Information System on Organization Performance
Source: Author (2018)

The conceptual framework offered a link between the independent variables and the dependent variable. The moderating variables human resource policy and infrastructure

determines the HRIS modules to be purchased for the functions of training, performance management, human resource planning and staffing.

E–performance management system is used in organization for assessing of performance through electronic means. This enables for faster measurements of indicators of performance and therefore lead to efficiency in the performance appraisal process and provides permanent records which are transparent leading to a motivated workforce and therefore increasing the performance of the employee. This will provide accurate estimation of productivity which will help to establish promotion plans and compensation programmes.

E-training systems provide modules for training of workers and provide future plans for development. This module helps to provide information for managing careers and succession planning which helps to improve the morale of workers and therefore improve on performance. The data obtained will be used for planning training events., implementing the training and evaluating of the training programmes which is done promptly since it is electronically managed.

E- Human resource planning systems helps to make future forecasts in human resource in the organization and provide economic trends which is useful in the budgeting of human resource thereby providing for surpluses and shortages and dealing with labour turnover which improves the organization performance by maximizing on the return on investments.

E-staffing systems assess the necessary data on vacant positions, the required skills, the educational requirement and job descriptions to facilitate both internal and external posting.

It helps in promoting efficiency in the recruitment and selection and there providing better skilled personnel which leads to improved organization productivity. It also provides timely data on employee bio data and also work-related information concerning the statistics of the employee.

Organization performance was measured by cost of the HR function as a percentage of expenses and the demand for HR services and operational efficiency of the firm. This was measured with the market share of the firm. The organization performance relates to efficiency, effectiveness, financial stability as well as relevance of the firm in terms of the market share. Performance of enterprise is its ability to achieve goals by using resources prudently. Effectiveness means providing a product or a service that meets the customers' needs while efficiency is about how the organization uses resources to achieve organization objectives. The measures for organization performance in the study were mainly based on the effectiveness of the firm by being able to meet the department goals and ultimately the organization goals. The organization performance was also measured by efficiency that is the firm's ability to have minimal costs both financially and non-financially and still meet the objectives of the firm. The organization performance measurement was also in terms of the market share which included the need for better service by the human resource department which ultimately leads to better performance of the employees of the organization, which leads to improved productivity of the firm. The analysis was based on human resource time and speed of activity, operational effectiveness and demand for human resource services.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter dealt with methodology used in the research, thus it incorporated a number of aspects, which show the entire approach towards realization of the thesis report. The items were research design, target population, sampling design, data collection instruments and procedure, data analysis and presentation, validity and reliability of research instruments and the analytical model used. Therefore, the above-mentioned aspects were employed in line with the research objectives and the hypotheses were tested.

3.1.1 Research Philosophy.

The research philosophy that was used in the study was that of post positivist philosophy. This held a deterministic approach which used the underlying philosophy that that causes probability determine effects or outcomes. It reflected the need to identify and assess the causes that influence the outcome. It reduced the ideas into small, discrete set of ideas to test such as variables that comprise of hypotheses and research questions. This entailed the developing of numeric measures of observations and studying the behavior of individuals. The study entailed the study of the bahaviour of the respondents towards their perception of HRIS implementation in the organization. The post positivist approach began with a theory in which it entailed to look at how e-performance management system, e-training and development systems, e-human resource planning systems, e-staffing systems affected organization performance. The study then looked at collecting data which was ether supporting of refuting the theory and then the field work was done and the data tested to

determine the hypotheses outcomes. This was mainly analysed how the elements of HRIS has an effect on the outcome in this case the organization performance.

3.2 Research Design

The study adopted a cross-sectional survey research design, whereby information was gathered on a population at a single point in time because a pre-determined set of questions was used to elicit a pre-formulated set of feelings and answers from the respondents based on the objectives of the study. This entailed information on the HRIS components and organization performance and it also assessed the association of variables. According to (Mugenda & Mugenda, 2003)a survey design allows simultaneous description of items and opinions of the respondents at a given point in time. It is considered suitable in facilitating the collection of factual or attitudinal information from the respondents concerning the research hypotheses. It provided a quantitative or numeric description of trends, attitudes or opinions of a population by studying a sample of that population. (Babbie, 1990). The main objective of this type of design was to obtain insight into the relationships between variables and new ideas relating to the research problem. Furthermore, the design captured the feelings of a large target audience for easy generalization of results. The study was conducted in selected Saccos across Kenya. It was conducted at the Sacco headquarters since all the core human resource activities are undertaken at the headquarters even systems management of the Saccos was being done at the headquarters. It had diverse Saccos from various sectors such as transport, communication, government agencies, agricultural and business sectors.

3.3 Location of the study

The study was carried out in various counties in the country, Kenya which included Nairobi County, Kisii County, Mombasa County, Kiambu County, Kericho County and Nyeri County since this were the saccos that were currently using the human resource information systems in Kenya.

3.4 Population of the Study

The population of study included selected Saccos in Kenya that utilized human resource information system or use human resource management modules. These companies were chosen because they are in their early and middle stages of the implementation of HRIS. It included Saccos in various sectors. It included selected saccos in the various sectors such as transport, communication, government agencies, agricultural and commercial sectors. The saccos in the early stages of implementation of HRIS included New fortes Sacco, Metropolitan sacco, Bigwasacco, Imarika sacco, Imarisha sacco, Simbsacco and Boresha sacco. The firms which were in the middle stage of implementing the HRIS included Ndege chai sacco, Kenya highlands sacco, Gusii mwalimu sacco, Unitas sacco, Kimisitu sacco, Safaricom sacco, U N sacco, Stima sacco, Mwalimu national sacco and Kenya police sacco.

Hence, the respondents of the study were the 54 company personnel who are in charge of human resource practices and HRIS implementation within the selected Saccos.

3.5 Sampling Procedure and Sample Size

Given the nature of the target population, the study adopted a purposive sampling technique, whereby all Saccos using HRIS were involved in the study. Hence this formed a

sample frame for the study of 54 personnel in the Saccos who both in the early and middle stages of HRIS adoption are who were directly in charge of HRIS implementation. These company personnel were preferred because they were most suitable to give the much-needed information for the study. The researcher purposively selected the human resource manager, assistant human resource manager and human resource officer in each of the 18 Saccos. The census methodology was used to obtain the 54 respondents which was more than the threshold of 30 respondents which is recommended for research. All the selected Saccos were accessible which made the census technique to be more appropriate in sampling.

3.6 Instrumentation

The study used primary data collected using questionnaires, which has structured (closed-ended) questions. The closed-ended questions were used to elicit the respondents' feelings towards the objectives and limit the respondents on giving their answers in precise manner. The questionnaire included section A which provided for background information on the respondents which included gender, age, experience in use of HRIS and the years of working in the organization, Section B, C, D and E were on e-performance management systems , e-training and development systems, e-human resource planning systems and e-staffing systems influence on organization performance respectively. The section F was on organization performance metrics on effectiveness, efficiency and market share. The study also included the use of an interview schedule.

3.6.1 Validity and Reliability of Research Instruments

In order to obtain the validity of the research instrument, content validity was employed, which measured the degree to which the test items represented the domain or universe of the

trait being measured and how it represented a specific dominant indicators or content of a particular concept. The reliability test was used to test the consistency of research tool by reviewing or deleting items from the research instrument. Items were randomly chosen from this content that accurately represented the information in all areas of the study. The researcher then obtained a group of items which were representative of the content of the trait or property to be measured. Then thereafter, a pre-testing was done in Harambee Sacco that was not listed in the sampling frame. Internal consistency method was used. The most popular internal consistency reliability estimate was given by Cronbach's alpha reliability coefficient of 0.969 with number of items being 75.and therefore being more than 0.700 it was considered "acceptable" in the study. The reliability statistics for E-performance management system was 0.757, that for E-training and development systems was 0.934, while that of E-Human resource planning systems was 0.927, while that of E-staffing systems was 0.887 and that of organization performance was that of 0.912 which indicated that the instrument was fit for collection of data.

3.7 Data collection Procedure

The data collection procedure began with the obtaining of letter for authorization of collection of data form Kabarak University which was later taken to National commission for science , technology and innovation (NACOSTI) .The institution was able to provide a research permit to collect data. The survey instruments were self-administered on the basis of drop and pick-up later basis. This was done in order to give enough time to the respondents to work on the questionnaires appropriately. The research assistants were used to collect the questionnaire and also administer the interview schedule. The research assistant was given

enough training for both the questionnaire and the interview schedule before stating the data collection.

3.8 Data Analysis and Presentation

The data was classified, operationalized, interpreted and analyzed to determine the effects of the HRIS components on the organization performance. With was according to the study objectives. The analysis was Quantitative and qualitative in nature. This categorization was used in order to deal with each element involved in the study in a required detail. The multivariant analysis was employed to provide the most useful statistics for the regression model.

3.8.1 Quantitative and Qualitative Analysis

After the data had been collected, it was edited to detect errors and omissions and correct these when possible. Coding then followed where the questionnaires were assigned numerals so that responses could be put into a limited number of categories. Thereafter classification soon followed to arrange raw data into homogeneous groups to get meaningful relationships. Finally, descriptive statistics and inferential statistics were used to present findings. Then the information was presented in tables to make it more meaningful. Thereafter, discussions followed immediately to explain on the same. The study was able to use the structured interview schedule to provide the qualitative analysis. The interview schedule was to elicit in depth responses that were relevant to the study and was administered to the human resource managers and human resource officer. The respondents provided appropriate information and relevant to the research objectives.

3.8.2 Qualitative Analysis

According to Turek the author indicates that the human resource technology had reduced the response time and improved the quality of human resource service at the work place. The poor utilization is due to the managers being slow and inflexible in the use of the system resulting to poor quality of data input by them and also the officers in the human resource department. The interview schedule was used to obtain the information based on the objectives and results provided in chapter four.

3.8.3 Multiple Regression

In testing the hypotheses, the study examined the effect of human resource information system on organization performance. The reason for using the Pearson correlation co-efficient was that it was able to assess on the extent of relationship between the independent and dependent variable. Hence, the formula for this study was;

$y_i = ß_0 + ß_1 + ß_2 + ß_3 + \varepsilon$

That was;

$y_i\ (OP) = ß_{0+}\ ß_0 T + ß_1 HRP + ß_2 S + ß_3 PM + \varepsilon$

Where:

$y_{i(OP)}$ Organization performance (value of dependent variable)

$ß_0$ Constant coefficient

$ß_{0\,T}$ E- training and development systems and its coefficient

ß1 HRP E-Human Resources planning systems and its coefficient

ß2 S E- Staffing systems and its coefficient

ß3 PM E- performance management systems and its coefficient

E error term

Then the model changed to this below after data analysis.

y_i (OP)= 28.787+ 0.437T-0.135HRP+ 0.359S +0.546PM+ ε

3.9 Ethical considerations.

As the researcher was going to the field, the researcher had to obtain authority to collect data from the Kabarak university postgraduate department and a letter was obtained to allow the researcher to carry out the research. The letter was then taken to NACOSTI who provided a permit to be used for the selected saccos. The copy of the letter was taken to the district cooperative officer. The study ensured security and confidentiality of the data collected. By the respondents not writing their name on the questionnaire it provided more privacy and this was indicated in the letter of introduction to the respondents. A letter of requests was made to the human resource managers, assistant human resource managers and human resource officers of the selected saccos in order to ensure informed consent of the respondents to participate in the study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION.

4.1 Introduction.

The chapter presented the findings on quantitative and qualitative data on the study. Data was analyzed using descriptive statistics and inferential statistics such as the regression analysis and presentation done using tables. The chapter was divided into general information on respondents and then the subsections on the HRIS components of e-performance management systems, e-training and development systems, e-human resource planning systems and e-staffing systems and organization performance of the firm. It also offered a correlation analysis of the variables under study in the saccos.

The study was able to analyze the effects of e-performance management systems, e-training and development systems, e-human resource planning systems and e-staffing systems on the organization performance of Saccos. The study also provided the result of hypotheses testing of the relationship between the human resource information systems variables of e-performance management systems, e-training and development systems, e-staffing systems, e-human resource planning systems and organization performance.

4.2 General Information.

The response rate was 100%. The researcher issued 54 questionnaires to selected Saccos in Kenya using the human resource information systems. The 54 questionnaires were successfully filled and returned. This is accordance to Mugenda and Mugenda, (1999) in which 50% is adequate response while 60% is good and 70% is rated very good and therefore this study can be rated as very good with 100% response.

4.3. Demographic Information of Respondents.

Table 4.1: General Characteristics of Respondents

	Category	Frequency	Percent
Gender (n = 54)	Male	33	61.1
	Female	21	38.9

SOURCE; Research data (2018)

The respondents' characteristics in gender indicated that majority of the respondents were male which formed 61.1% of the respondents and 38.9% of the respondents were female. This indicated that majority of the respondents were male within the human resource department.

	Category	Frequency	Percent
Age of the respondents (n = 54)	Between 18-25 years	6	11.1
	Between 26-33 years	20	37.0
	Between 34-41 years	10	18.5
	Over 42 years	18	33.3

SOURCE; Research data (2018)

The respondents characteristics in age indicated that 37% were between 26-33 years, while 33.3% were above 42 years, those between 34-41 years were 18.5 % of the respondents and those between 18-25 years were 11.1% of the respondents. This indicated that majority of the respondents were between 26-33 years in the human resource department. This showed that the workers were of youthful age and were able to interact well with the new technology of the human resource information systems within the department.

	Category	Frequency	Percent
Respondents experience in years (n = 54)	1-2 years	21	38.9
	3-4 Years	16	29.6
	More than 4 Years	17	31.5

SOURCE; Research data (2018)

The respondents experience in years in the human resource department showed that majority of them had worked for between 1-2 years which was indicated by 38.9%, while those who had worked for more than 4 years were 31.5%, while those that had worked for 3-4 years had 29.6%, which showed that they had interacted well with the system.

	Category	Frequency	Percent
Duration of using HRIS (n = 54)	Less than 1 year	8	14.8
	Between 1-2 years	11	20.4
	Between 3-5 years	23	42.6
	More than 5 years	12	22.2

SOURCE: Research data (2018)

In relation to duration of using HRIS majority of the respondents had used it from between 3-5 years which was 42.6%, while those who had used the system for more than 5 years had 22.2%, then those who had used it for 1-2 years had 20.4% while 14.8 % of the respondents had been less than one year. This indicated that the respondents had used the HRIS for a reasonable long time to understand its operations in the organization and therefore its contribution to the organization performance. Most of the respondents indicated that they had used it previously in their earlier employment and were able to provide meaningful contribution to its use in the Sacco.

4.4 Findings for Objectives

4.4.1 The Effects of E-performance Management Systems on Organization Performance

Table 4.2: Effects of E-performance Management Systems on Organization Performance E-Performance Management systems (n = 54)	SD	D	UD	A	SA	χ^2	P value
1. The HRIS has been used for effective payment and salary administration.	0(0%)	0(0%)	0(0%)	1(2%)	53(91%)	50.074	0.000
2. The HRIS is used in performance appraisal and review of employees.	0(0%)	1(2%)	18(30%)	11(20%)	24(44%)	21.704	0.000
3. The HRIS provides for the determination of employment rewards.	0(0%)	3(6%)	5(9%)	38(70%)	8(15%)	60.222	0.000
4. The HRIS is used in absence monitoring for wage administration and calculation of overtime.	0(0%)	0(0%)	14(26%)	31(57%)	9(17%)	14.778	0.001
5. The HRIS is not effective in merit increases and bonus incentives.	1(2%)	15(28%)	15(28%)	23(42%)	0(0%)	18.593	0.000
6. The HRIS results in not effective in claim processing and establishment of benefits statement.	2(4%)	20(37%)	16(30%)	15(27%)	1(2%)	28.037	0.000
7. The HRIS helps in making of estimates of productivity of employees.	0(0%)	7(13%)	12(22%)	34(63%)	1(2%)	46.000	0.000
8. The organization has been able to have proper reward management by use of HRIS.	2(4%)	7(13%)	11(20%)	26(48%)	8(15%)	30.630	0.000
9. As a result of the knowledge of HRIS, the HR staffs performance management is good.	0(0%)	2(4%)	11(20%)	33(61%)	8(15%)	40.667	0.000
10. As a result of our HRIS, there is timeliness in the processing of salary and bonus claims.	1(2%)	1(2%)	2(4%)	37(68%)	13(24%)	88.963	0.000
11. The HRIS has led to effective level of compliance with the department objectives.	0(0%)	1(2%)	2(4%)	39(72%)	12(22%)	69.704	0.000
12. The organization HRIS has standardized programs and procedures for performance management.	0(0%)	0(0%)	1(2%)	31(57%)	22(41%)	26.33	0.000
13. The HRIS has enhanced the ability of the firm to implement the performance evaluation.	0(0%)	0(0%)	0(0%)	24(44%)	30(56%)	0.667	0.414

SOURCE: Research data (2018)

The respondents in the study strongly agreed that HRIS had been used for effective payment and salary administration which is indicated by $(\chi^2 = 50.1, P \leq 0.001)$ this showed that the observed data was statistically different from the expected values which indicated that there was a strong, positive and significant relationship between HRIS and effective payment and salary administration in the firm. This implied that the system was used for salary administration and had proper processing of pay. They also strongly agreed that HRIS was used in performance appraisal and review of employees with $(\chi^2 = 21.7, P \leq 0.001)$ this indicated the effect of HRIS on performance appraisal and review of employees was positive and significant which meant the HRIS had been highly used for performance appraisal. This is supported by (Jarrar & Shiuma, 2007) in which the authors stated that e-performance helped the organization to retain and motivate top talent by gaining insights into top performers in the firm. The respondents agreed with HRIS provided for determination of employee rewards $(\chi^2 = 60.2, P \leq 0.001)$ hence the strong and significant association between HRIS and calculations of employee rewards. This indicated that HRIS provided for the determination of employee rewards. This implied that the system provided more accurate calculations on employee rewards. While majority of the respondents were in agreement that HRIS was used in absence monitoring, wage administration and calculation of overtime which had a $(\chi^2 = 14.8, P \leq 0.001)$ this indicated that the observed data was statistically different from the expected values and therefore a strong, positive and significant relationship between HRIS and absence monitoring, wage administration and calculation of overtime. This showed that the system was able to help with the establishment of extra work and provided appropriate rewards. The respondents agreed that HRIS was not effective in merit increases and bonus

incentives which had $(\chi^2 = 18.6, P \leq 0.001)$ this indicated that there was an association between HRIS and non-effectiveness in merit increases and bonus incentives in the firm which was positive and significant. This implied that HRIS was not being used for adequate merit and bonus incentives management and for the establishment of proper merit and bonus increases.

The majority of the respondents disagreed that HRIS resources was not effective in claim processing and establishment of benefits statements this had $(\chi^2 = 28.0, P \leq 0.001)$ this indicated that the statistics provided strong evidence against the null hypothesis therefore indicated a strong, positive and significant relationship between HRIS and effective claim processing and establishment of benefits. This showed that the system provided efficiency in adequate benefits for the employees and proper scheduling of claims. The respondents in the study agreed that HRIS helped in the making of estimates of productivity of employees with $(\chi^2 = 46.0, P \leq 0.001)$ which means there was a significant and positive relationship between HRIS and determination of estimates of productivity. The respondents also agreed that organization had been able to have proper reward management by use of HRIS with $(\chi^2 = 30.6, P \leq 0.001)$ this indicated that association between HRIS and proper reward management was positive and significant. This researcher therefore concluded that HRIS was helpful in the establishment of financial rewards and providing proper estimates of employee productivity. The respondents agreed that as a result of the knowledge of HRIS, the HR staff performance management was good and had the results as $(\chi^2 = 40.7, P \leq 0.001)$ this showed that the effect of Knowledge of HRIS and HR staff performance management was positive and significant. The respondents agreed that the system was more effective in

performance management in the organization. This has been supported by (Frayne & Geringer, 2005) in which the authors indicated that integration between e-performance management and competency data ensured effective communication. It also increased organizations business success by improving employee engagement with the business objectives in a more clear process.

The respondents agreed that as a result of HRIS, there was timeliness in the processing of salary and bonus claims which had $(\chi^2 = 89.0, P \leq 0.001)$ this indicated that there was a strong and positive correlation between HRIS and timeliness in the processing of salary and bonus claims. This showed that the system was able to be fast in processing the salary due to the software as opposed to the manual system. This is in agreement with the study by Frayne and Geringer (2005) in which the authors agreed that the HRIS was able to help the management to achieve true pay for performance. The respondents agreed that HRIS had led to effective level of compliance with the department objectives with $(\chi^2 = 69.7, P \leq 0.001)$ this indicated that the observed data were statistically different from the expected values therefore rejection of the null hypothesis which meant there is a significant and strong relationship between HRIS and effective compliance with the department objectives. This showed that there was proper tracking of the achievement of goals and there for proper contribution to the department goals. The respondents also agreed that the organization HRIS had standardized programmes and procedure for performance management with $(\chi^2 = 26.3, P \leq 0.001)$ this showed that there was strong, positive and significant relation between HRIS and standardized programs and procedure for performance management. This indicated that HRIS provided proper standardized format on how to manage performance

management and thereby providing efficiency in the department. The respondents also strongly agreed that HRIS had enhanced the ability of the firm to implement the performance evaluation with $(\chi^2 = 0.667, P \leq 0.001)$ this indicated that that the statistics provided strong evidence against the null hypothesis therefore there was a strong association between HRIS and enhanced ability of the firm to implement the performance evaluation. This implied that the system was able to proper evaluate the performance based on the performance criteria of the firm and proper logging in of performance metrics. This is supported by the study of (Bharti, 2015) in which the findings indicated a strong significant positive relationship between HRIS components and performance. This is supported by the study by Afshani and Moghadam (2012) a study that was done in manufacturing food companies, the authors found a significant and positive relationship between HRIS and the performance of employees.

4.4.2 The Effects of E-training and Development Systems on Organization Performance.

Table 4.3: Effects of E-training and Development Systems on Organization Performance

(n = 54)	SD	D	UD	A	SA	χ^2	P Values
1. The HRIS is helpful in the generation of external and internal reports on training and development.	0(0%)	0(0%)	0(0%)	34(63%)	20(37%)	3.63	0.057
2. The information generated from the HRIS helps the Sacco to when training and skill development are necessary.	0(0%)	0(0%)	9(17%)	19(35%)	26(48%)	8.11	0.017
3. The HRIS has helped in making decisions on who are	0(0%)	0(0%)	1(2%)	37(69%)	16(30%)	36.33	0.000

supposed to go for training and development.							
4. The HRIS has improved the training programs.	0(0%)	1(2%)	11(20%)	22(41%)	19(35%)	19.98	0.000
5. The HRIS has reduced the training and development expenses in the HR department.	0(0%)	0(0%)	19(35%)	13(24%)	22(41%)	2.33	0.311
6. The HRIS has been effective in the evaluation and planning of the e-training.	0(0%)	0(0%)	8(15%)	33(61%)	12(22%)	42.15	0.000
7. Our HRIS has reduced the time spent on training	0(0%)	0(0%)	16(30%)	24(44%)	14(26%)	3.111	0.211
8. The HRIS has decreased the training expenses of the firm.	0(0%)	8(15%)	7(13%)	19(35%)	20(37%)	10.74	0.013
9. The management has ensured that the competencies required by HR staff are adequate and appropriate.	0(0%)	0(0%)	12(22%)	23(43%)	19(35%)	3.44	0.179
10. The ability to use the development strategies has improved by the use of HRIS.	0(0%)	0(0%)	0(0%)	24(44%)	30(56%)	0.667	0.414
11. There has been proper and timely training in the firm.	0(0%)	0(0%)	2(4%)	40(74%)	12(22%)	43.111	0.000

SOURCE: Research data (2018)

The respondents agreed that HRIS was helpful in the generation of external and internal reports on training and development with $(\chi^2 = 3.63, P < 0.05)$ this showed that the effect of HRIS on the generation of external and internal reports on training and development was positive and significant. This means that it was significant in the generation of reports on

training and development The respondents strongly agreed that the information generated from the HRIS helped the SACCO to determine when training and skill development are necessary with $(\chi^2 = 8.11, P < 0.05)$ this showed that the association between HRIS and determination when training and skill development are necessary was positive and significant. This indicated that it was used for training needs analysis of the firm. The respondents also agreed that HRIS had helped in making decisions on who are supposed to go for training and development with $(\chi^2 = 36.3, P < 0.05)$ this showed that there was a strong, positive and significant relationship between HRIS and making decisions who are supposed to go on training and development. This indicated that the effect of HRIS in which it was helpful to determine person needs assessment for training. The respondents also agreed that HRIS had improved the training programs with $(\chi^2 = 10.0, P < 0.05)$ this showed a positive and significant relationship between HRIS and improved training programs. This indicated that HRIS had been able to help the SACCO to perform training needs analysis and also provided for systems for adequate training in the firm. This is supported by a study by Sarmento (2010) in which the author showed that e-training and development in the hotel industry increased productivity and production volumes. Though this is contrary to findings by Moller, Foshay, and Huett (2008) in which the authors stated that e-training was both productive and unproductive.

The respondents also strongly agreed that HRIS had reduced the training and development expenses in the human resource department with $(\chi^2 = 2.3, P > 0.05)$ this indicated a positive and not significant relationship between HRIS and reduced training and development expenses in the human resource department this indicated that the HRIS had not

significantly contributed to the reduced training and development expenses. This implied there were reduced cost on training based on the computerized training and proper planning of training of employees. The respondents in the study also agreed that HRIS had been effective in the evaluation and planning of e-training with $(\chi^2 = 42.2, P < 0.05)$ this indicated a strong and positively significant relationship between HRIS and evaluation and planning of e-training. This showed that the evaluation of the training is properly done using the computer software therefore making it faster and more accurate. This is contrary to the study by Newton & Doonga, (2007) in which they state that without proper evaluation tools to analyze the quality of e-training and development the justification of continued growth in e-training is questionable. The respondents also agreed that the HRIS had reduced the time spent on training with $(\chi^2 = 3.11, P > 0.05)$ this indicated that there was a positive but not significant relationship between HRIS and reduced time spent on training. This showed that the system was efficient in managing the training electronically. The respondents agreed that HRIS had decreased the training expenses of the firm with $(\chi^2 = 10.7, P < 0.05)$ this provided stronger evidence against the null hypothesis therefore concluded that there is a strong and significant relationship between HRIS and decreased training expenses of the firm.This study concluded that the HRIS has helped with online training which has able to provide efficiency in training which is in agreement with the study by Adkins (2011) in which the author indicated that most firms rely on e-training so as to reach large groups of people and therefore reducing the costs and environmental impact of travel and efficient flow of information.

The respondents agreed that management had ensured that the competences required by human resource staff were adequate and appropriate which was represented by a

$(\chi^2 = 3.44, P > 0.05)$ this indicated that there was a negative and not significant relationship between HRIS and adequacy of human resource competence. This meant that the system through adequate employee profiling the system can be able to identify the competence needs of the staff. This is in agreement with the study by Dardar, Jusoh and Rasli (2011) in which the authors linked e-training to employee job satisfaction. This is also supported by Honey (2000) in which the author agreed that e-training would bring huge advances in the organizations capacity to learn. The respondents also strongly agreed that the ability to use the development strategies had been improved by the HRIS which was with $(\chi^2 = 0.67, P > 0.05)$ this indicated that the observed data were statistically different from the expected values therefore the relationship between HRIS and development strategies improvement was positive and significant therefore the system is able to identify development needs of the employees. The respondents in the study also agreed that there had been proper and timely training in the firm with $(\chi^2 = 43.11, P < 0.05)$ this indicated that the association of HRIS and proper and timely training was positive and significant therefore which showed that the HRIS provided proper scheduling of training activities in the firm therefore making them timely. This study concluded that management were able to provide better development of employees through HRIS and also provided timely responses towards the training of the employees. The study by Dutton et al (2006) in the study also stated that the computer based training allowed the trainers to individualize training instructions than group based training.

4.4.3 The Results on the Effects of E-human Resource Planning Systems on Organization Performance

Table 4.4: Effects of E-human Resource Planning Systems on Organization Performance

(n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. Our HRIS has helped with forecasting staffing needs.	0(0%)	0(0%)	1(2%)	26(48%)	27(50%)	24.11	0.000
2. HRIS information has helped the SACCOs to make more effective decisions on promotions.	0(0%)	0(0%)	1(2%)	34(63%)	19(35%)	30.33	0.000
3. The information generated from HRIS has helped on deciding when to hire.	0(0%)	0(0%)	8(15%)	28(52%)	18(30%)	11.11	0.004
4. As a result of HRIS there is timeliness in the processing of HR functions.	0(0%)	0(0%)	10(19%)	11(20%)	33(61%)	18.78	0.000
5. Our HRIS has made our HR decision making more effective.	0(0%)	0(0%)	1(2%)	22(41%)	31(57%)	26.33	0.000
6. The HRIS has helped with data about employees and evaluation of their experiences.	0(0%)	0(0%)	1(2%)	32(59%)	21(39%)	27.44	0.000
7. The HRIS has helped in the assignment of employees.	0(0%)	1(2%)	8(15%)	29(54%)	16(30%)	32.07	0.000
8. The HRIS has helped in the analysis of internal, external, vacations and healthcare reports.	0(0%)	1(2%)	0(0%)	38(70%)	15(28%)	38.78	0.000
9. The HRIS has helped in the statistics of employees and position description.	0(0%)	0(0%)	1(2%)	26(48%)	27(50%)	24.11	0.000

10. The HRIS has improved the organization charting and workforce models within the Saccos.	0(0%)	7(13%)	2(4%)	18(30%)	27(50%)	27.93	0.000
11. The HRIS has helped in the tracking and controlling of the different HR function.	0(0%)	1(2%)	3(6%)	23(43%)	27(50%)	39.93	0.000
12. The HRIS has helped the HR in job change decisions.	0(0%)	1(2%)	3(6%)	28(52%)	22(41%)	40.67	0.000
13. HRIS is used effectively in the making of the HR job budgets.	0(0%)	0(0%)	1(2%)	35(65%)	18(30%)	32.11	0.000

SOURCE: Research data (2018)

The respondents in the study strongly agreed that the HRIS had helped with the forecasting of the staffing needs in the Sacco which was with $(\chi^2 = 24.1, P < 0.05)$ this indicated there was a positive and significantly strong correlation between HRIS and forecasting of staffing needs in the firm. This showed that the system was effective in determining future staffing needs of the organization. The respondents also agreed that the HRIS information had helped the Sacco to make more effective decisions on promotions which was represented with $(\chi^2 = 30.3, P < 0.05)$ this provided a stronger evidence against the null hypothesis therefore concluding that there is a positive and significant relationship between HRIS and effective decisions on promotions. This implied that the system was effective in determining the promotions of the staff due to adequate employee records. The respondents also agreed that that the information generated from HRIS had helped on deciding when to hire which had $(\chi^2 = 11.1, P < 0.05)$ this showed that the system was significant and positive relationship between HRIS and the determination of hiring in the firm.

The respondents in the study also strongly agreed that as a result of HRIS there was timeliness in the processing of human resource functions which is demonstrated with $(\chi^2 = 18.8, P < 0.05)$ this indicated that there was a strong and positive correlation between HRIS and timeliness in the processing of human resource functions.The study concluded that HRIS was able to provide proper demand forecasting of labour by the use of technologically advanced software therefore providing accurate estimates on the human resource needs of the organization .This also provided for proper decisions on human resource functions such as the timeliness in hiring and promotion of the employees.The respondents strongly agreed that HRIS had helped to make the HR decisions making to be more effective which is represented with $(\chi^2 = 26.3, P < 0.05)$ this showed that the observed data were statistically different from the expected values, therefore there is a positive and significant relationship between HRIS and effective HR decision making. This implied that the system allowed for electronic recording of activities and provide for proper decision making of human resource functions. This is in agreement with Asafo (2007) in which the author agreed that the data collected from HRIS provided management with decision making tool.

The respondents strongly agreed that HRIS had helped with data about employees and evaluation of their human resource experiences which is represented with $(\chi^2 = 27.4, P < 0.05)$ hence the positive and significant association between HRIS and data about employees and evaluation of the human resource experiences. This implied that the system allowed for electronic recording of activities and provide for proper evaluation of human resource functions. The respondents also agreed that HRIS had helped in the development of assignment for employees which had been represented with

($\chi^2 = 32.1, P < 0.05$) this showed that there was a strong and positive correlation between HRIS and development of assignment for employees. This implied that the system was helpful in task specification due to electronic recording of employee tasks. The respondents in the study agreed that HRIS had helped in the analysis of internal, external, vacations and healthcare reports which had ($\chi^2 = 38.8, P < 0.05$) this indicated that the effect of HRIS on analysis of internal, external, vacations and healthcare reports were positive and significant. This showed that the system was able to provide for adequate report generation due to proper data management. The respondents also strongly agreed that HRIS had helped in the statistics of the employees and position description which had ($\chi^2 = 24.1, P < 0.05$) this indicated that there was a strong and statistically significant relationship between HRIS and proper maintenance of statistics of the employees and position description. This implied that HRIS had helped in proper data management of employee records and also provided proper job analysis reports which provided adequate description of employee work specification . It also helped to maintain all general records regarding employee activities in the firm. This is in agreement with Ruel *et al*. (2004) in which the author stated that the importance of records keeping systems which is being highly recognized by the organizations.

The majority of the respondents strongly agreed that HRIS had improved the organization charting and workforce models within the Saccos which was represented with ($\chi^2 = 27.9, P < 0.05$) hence the association between HRIS and improved organization charting and workforce modelling being positive and significant. This showed that the system helped in providing the roadmap of organization activities due to adequate job analysis. The respondents strongly agreed that HRIS had helped in the tracking and controlling of the

different human resource functions which had $(\chi^2 = 39.9, P < 0.05)$ this indicated that there was a strong evidence against the null hypothesis this therefore concluded that there was a significant and positive relationship between HRIS and tracking and controlling of human resource functions. This showed that the system was able to plan and evaluate human resource functions due to proper records. The respondents of the study also agreed that HRIS had helped in the human resource in job change decisions which had $(\chi^2 = 40.7, P < 0.05)$ this showed that the observed data was statistically different from the expected values and therefore concluded that the association between HRIS and human resource job change decisions were positive and significant. This implied that the system was used for job simplification due to adequate records of tasks Lastly the respondents also agreed that HRIS was used effectively in the making of human resource job budgets which had $(\chi^2 = 32.1, P < 0.05)$ this indicated that the effect of HRIS and effectiveness in making of human resource job budgets was positive and significant. This implied that HRIS had helped to determine proper organization charting of the firm and controlling of the human resource function. This also provided for making effective decisions on the job design and also provided for proper budgeting of human resource functions and activities. This agrees with the study by Mohammad and Tarawneh (2012) in which the authors indicated that there was a significant effect between the quality of output of human resource information systems and institutional performance in the banking sector in the Jordanian firms. This is also supported by Bal 2012, in which the author indicated that human resource department need to embrace technology in order to anticipate changing expectations within the organization.

4.4.4 Results on the Effects of E-staffing Systems on Organization Performance of Saccos

Table 4.5: Effects of E-staffing Systems on Organization Performance

(n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. The HRIS is useful in absence monitoring.	0(0%)	0(0%)	0(0%)	18(33%)	36(67%)	6.00	0.014
2. The HRIS is useful in processing employment leave.	0(0%)	0(0%)	0(0%)	31(57%)	23(43%)	1.19	0.276
3. The HRIS is effective in providing disciplinary procedure.	1(2%)	1(2%)	1(2%)	31(57%)	20(37%)	72.3	0.000
4. The HRIS improved job analysis and work design.	0(0%)	0(0%)	8(15%)	21(39%)	25(46%)	8.78	0.012
5. The HRIS provides quick responses and access to information.	0(0%)	0(0%)	1(2%)	35(65%)	18(30%)	32.11	0.000
6. The HRIS helps in standardizing programs and procedures for the work place.	0(0%)	0(0%)	0(0%)	21(39%)	33(54%)	2.67	0.102
7. The HR department utilizes the HRIS for recruitment tasks.	0(0%)	0(0%)	1(2%)	28(52%)	25(46%)	24.33	0.000
8. The HRIS has improved the EEO analysis and records.	0(0%)	0(0%)	10(19%)	36(67%)	8(15%)	27.11	0.000
9. The HRIS has improved the job rotation exercise.	0(0%)	0(0%)	1(2%)	25(46%)	28(52%)	24.33	0.000
10. The HRIS has improved employee skills systematization.	0(0%)	8(15%)	2(4%)	16(30%)	28(52%)	28.07	0.000
11. The HRIS has helped our firm to make better decisions in choosing better people.	0(0%)	0(0%)	8(15%)	18(30%)	27(50%)	10.23	0.006
12. The HRIS has improved the data maintenance process.	0(0%)	2(4%)	4(7%)	20(37%)	27(50%)	52.48	0.000
13. Our HRIS has decreased the time spent on	0(0%)	3(6%)	1(2%)	27(50%)	23(43%)	39.92	0.000

communicating information within our institution.							
14. Our HRIS has improved the data input process in the department of human resource.	0(0%)	1(2%)	1(2%)	28(52%)	24(44%)	46.89	0.000
15. HRIS has increased levels of useful information.	0(0%)	1(2%)	2(4%)	28(52%)	24(44%)	1.85	.174

SOURCE: Research data (2018)

The respondents indicated that they strongly agreed that HRIS was useful in absence monitoring which had $(\chi^2 = 6.00, P < 0.05)$ this showed that there was a strong and positive correlation between HRIS and usefulness in absence monitoring. This indicated that the system was able to be used to determine absenteeism by assessment of electronic activities of the employees. Majority of the respondents agreed that HRIS was useful in processing employment leave with $(\chi^2 = 1.2, P > 0.05)$ this indicated there was a negative and not significant relationship between HRIS and usefulness in processing employment leave. This implied there was timely filling of the forms electronically therefore leading to effectiveness in the processing of leave. The respondents of the study agreed that HRIS was effective in providing disciplinary procedures which had $(\chi^2 = 72.3, P < 0.05)$ this implied it was significant and positive relationship between HRIS and disciplinary management in the firm. Majority of the respondents strongly agreed that HRIS improved job analysis and work design which had $(\chi^2 = 8.8, P < 0.05)$ this indicated a strong and positive correlation between HRIS and improved job analysis and work design. This showed that the system was used to assess the jobs and to determine the appropriate job design. The respondents agreed that HRIS provided quick responses and access to information which had a $(\chi^2 = 32.1, P < 0.05)$ this indicated that there was a strong evidence against the null hypothesis and therefore HRIS had

a positive and significant influence on providing quick responses and access to information. This implied that the information on organization activities were electronically available for the employees and would obtain it from the firm's website. This is in agreement with the study by Zafar (2013) in which the author indicated that majority of organizations have implemented HRIS to reinforce the effectiveness and efficiency of the administration, decision making and sharing of information. The majority of the respondents strongly agreed that HRIS helped in standardizing programs and procedures for the workplace which had $(\chi^2 = 2.67, P > 0.05)$ hence a positive and significant relationship HRIS and standardization of programs and procedures for the workplace. This implied that the HRIS was useful in maintaining employee records on absence monitoring, leave processing and disciplinary procedures and also to provide adequate results on work design. It also provided for access to information by the employees and standardized procedures for the workplace.

The respondents agreed that the human resource department utilized the HRIS for recruitment tasks which had a $(\chi^2 = 24.3, P < 0.05)$ this indicated that the observed data were statistically different from the expected values and therefore the relationship was positive and significant between HRIS and its utilization for recruitment tasks. This showed that the firm would search for new employees and fill vacant positions using the website. This is in agreement with (Tyagi, 2012) in which he stated that internet-based recruitment facilitated the just in time hiring by attracting the good talent. Galanaki (2002) conducted a study on recruitment online in which the author found out that it provided better applications than the traditional recruitment practice. Contrary to this Chunguli (2010) indicated that the extent of use of e-recruitment practice in commercial banks were insignificant and only limited to use

of emails. The respondents also agreed that HRIS had implemented the EEO Analysis and records which had a $(\chi^2 = 27.1, P < 0.05)$ this indicated that there is a strong and positive correlation between HRIS and implementation of EEO Analysis and records this showed that the system allowed for proper management of employee data to determine proper EEO. Majority of the respondents strongly agreed that HRIS had improved the job rotation exercise which had a $(\chi^2 = 24.3, P < 0.05)$ hence the data indicated that there is a positive and significant relationship between HRIS and improved job rotation exercise, since the department needs was well managed to determine the movement of individuals within the departments. The respondents in the study also strongly agreed that HRIS had improved the employee skill systemization and the results were $(\chi^2 = 28.1, P < 0.05)$ hence the association between HRIS and improved skill systemization being positive and significant. This showed that the system could document the skill needs of the employee through proper records of employee skills.

The respondents also strongly agreed that HRIS had helped the firm to make better decisions in choosing better people which had $(\chi^2 = 10.2, P < 0.05)$ this showed that the observed data was statistically different from the expected values therefore this indicated that there was a positive and strong relationship between HRIS and making better decisions in choosing better people for the firm. This implied that HRIS was quite useful in e-recruitment and provided for equal employment opportunity by proper scrutiny of applicants. It was also effective in job rotation and also provided adequate skills based on the needs of the organization. This is supported by Bal 2013, in which the author indicated that by applying consistency in capturing and maintaining employee specific data (position, job and

qualifications) helps the organization to plan for the employees in the firm. This is also envisaged by Hussain et al 2007, that the HRIS enhanced their ability to locate the best qualified employees regardless of her or his location which can also be mainly a competitive advantage.

The respondents of the study also strongly agreed that HRIS had strongly improved the data maintenance process in the Saccos that was indicated by $(\chi^2 = 52.5, P < 0.05)$ this indicated that there was a strong evidence against the null hypothesis which indicated a strong positive relationship between HRIS and improved data maintenance process in the firm. This showed that the system was able to organize employee data adequately. The respondents also agreed that HRIS had decreased the time spent on communicating information within the institution which had a $(\chi^2 = 39.9, P < 0.05)$ hence the association between HRIS and decreased time spent on communicating information within the firm being positive and significant. This implied that the system allowed for effective information sharing electronically since the employees can get information through their computers.

The respondents agreed that HRIS had improved the data input process in the HR department which had a $(\chi^2 = 46.9, P < 0.05)$ this indicated that there is a positive and significant relationship between HRIS and improved data input process in the HR department. This showed that HRIS was significant in data processing in the department. Majority of the respondents agreed that HRIS had increased levels of useful information in the human resource department which was represented by $(\chi^2 = 1.85, P > 0.05)$ this showed that the effect of HRIS on increased levels of useful information in the human resource department was positive and significant. The study concluded that HRIS provided timeliness in

communication among the employees in the firm and also processing of new inputs in the human resource data base. It also provided additional information which could be useful in other human resource functions. This is contrary to the study by Langat (2006) in which the author found out that corporations in Kenya have computerized the human resource department but the extent of use of electronic recruitment was at a very insignificant level in the firm.

4.5 Operational Effectiveness and Demand for HR Services

Table 4.6: Operational Effectiveness and Demand for HR Services

(n = 54)	SD	D	UD	A	SA	χ^2	P value
1. As workers we are satisfied with the flexibility of the system.	1(2%)	1(2%)	1(2%)	35(65%)	16(30%)	83.40	0.000
2. As workers we are actively involved with HRIS.	0(0%)	0(0%)	10(%)	36(67%)	8(15%)	27.11	0.000
3. Our HRIS has made the HR department operate effectively	0(0%)	0(0%)	1(2%)	28(52%)	25(46%)	24.33	0.000
4. Our HRIS has met our expectations.	0(0%)	0(0%)	9(17%)	37(69%)	8(15%)	30.11	0.000
5. Our HRIS has improved the HR functions at the Saccos	1(2%)	0(0%)	1(2%)	20(37%)	32(59%)	51.63	0.000
6. As a result of the availability of the HRIS the staffs are satisfied with HR services delivered to them by the HR department.	0(0%)	1(2%)	9(17%)	33(61%)	11(20%)	41.70	0.000
7. The HRIS has helped to make more staff informal decisions.	0(0%)	1(2%)	1(2%)	45(83%)	7(13%)	99.78	0.000

8. The HRIS has helped in tracking and controlling the human resource functions in the firm	0(0%)	0(0%)	8(15%)	30(56%)	16(30%)	13.78	0.001
9. The information generated from HRIS is shared with top administrators	0(0%	0(0%)	8(15%)	30(56%)	16(30%)	13.78	0.001

SOURCE; Research data (2018)

The results of the respondents indicated that as workers in the human resource department agreed that they were satisfied with the flexibility of the system which had $(\chi^2 = 83.4, P < 0.05)$ this showed that the observed data were statistically different from the expected value and that there is a strong and significant relationship between flexibility of HRIS system and satisfaction of the human resource department. This showed that they had significantly been satisfied with the system. The workers in the human resource department also agreed that that were actively involved with the HRIS which had $(\chi^2 = 27.1, P < 0.05)$ this implied that there is a positive and significant influence between employee involvement and HRIS use. This implied that the employees were actively using the systems components. The respondents also agreed that HRIS had made the HR department operate effectively which had $(\chi^2 = 24.3, P < 0.05)$ this showed that they were able to carry out their functions adequately. The respondents also agreed of that HRIS had met their expectations which had $(\chi^2 = 30.1, P < 0.05)$ this indicated that there was a strong evidence against the null hypothesis and therefore a strong and significant relationship between HRIS and meeting of the human resource department expectations. This showed that they were able to carry out their functions adequately and met the department goals.

Majority of the respondents strongly agreed that the HRIS had improved the HR functions at the Sacco which had $(\chi^2 = 51.6, P < 0.05)$ the data showed that there was positive and significant relationship between HRIS and improved human resource functions at the firm. This implied that the HRIS has enabled the department to meet its objectives and also provided flexibility in the performance of the various functions in the organization and that it has helped to actively engage the employees in human resource issues through the computer interactions.

The respondents in the study also agreed that as a result of the availability of the HRIS the staff are satisfied with the HR services delivered to them by the human resource department which had $(\chi^2 = 41.7, P < 0.05)$ this indicated that there was a strong and significant relationship between HRIS and HR service delivery to other staff by the human resource department. This implied that the system provided better service to employees in other departments. The respondents agreed that HRIS had helped to make more informal staff decisions which was represented with $(\chi^2 = 99.8, P < 0.05)$ this indicated the data was positive and significant among the variables of HRIS and informal staff decisions. This implied that the system was able to provide adequate information for staff members to make non -strategic issues.

Majority of the respondents agreed that HRIS had helped in the tracking and controlling of the human resource functions in the firm which had a $(\chi^2 = 13.8, P < 0.05)$ this showed that there was a positive and significant relationship between HRIS and tracking and controlling the human resource functions in the firm. This study concluded

that HRIS through the feedback mechanism were able to ascertain that the employees were able to get better services form the human resource department through the HRIS. The HRIS provided for more informed both formal and informal decision making regarding the members of staff. It also provided for adequate tracking of employee information within the firm. Majority of the respondents agreed that the information generated form the HRIS is shared with the top administrators which had $(\chi^2 = 13.8, P < 0.05)$ this showed that there was a positive and quite significant relationship between the HRIS and the sharing of information with the top administrators. This implied that the information generated form the system was able to be used for strategic decision making. This is also supported by Akhtar et al 2008, the authors indicated that the special function of HRIS is to gather, collect and analyze the data necessary for the human resource department to do its job properly. This is also concluded by Sommer, 2006 that the human resource managers should be able to be accountable for the success of the business by supporting the information gathering process and therefore help in the global HRIS effort.

4.6 Effects of HRIS on the Efficiency on the Basis of Human Resource Cost

Table 4.7: Effects of HRIS on the Efficiency Based on Cost

(n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. The HRIS has decreased the cost per hire.	0(0%)	2(4%)	8(15%)	35(65%)	9(17%)	47.78	0.000
2. The HRIS has decreased training expenses.	0(0%)	0(0%)	7(13%)	38(70%)	9(17%)	33.44	0.000
3. The HRIS has decreased recruiting expenses.	0(0%)	0(0%)	6(11%)	41(54%)	7(13%)	44.11	0.000
4. The HRIS has decreased the data input expenses.	0(0%)	0(0%)	8(15%)	36(67%)	10(19%)	27.11	0.000

SOURCE: Research Data (2018)

The respondents agreed that HRIS had decreased the cost per hire which had $(\chi^2 = 47.8, P < 0.05)$ hence the association between HRIS and decreased cost per hire was significant. This showed that HRIS had significantly reduced the cost per hire which is usually high due to the manual processing of new hires in the organization. The respondents also indicated that they agreed that HRIS had decreased training expenses with $(\chi^2 = 33.4, P < 0.05)$ this indicated a strong, positive and significant relationship between HRIS and decreased training expenses, which implied that HRIS had significantly reduced the expenditure associated with training. The respondents in the study agreed that HRIS had decreased recruiting expenses with $(\chi^2 = 44.1, P < 0.05)$ this indicated that the data had strong evidence against the null hypothesis hence HRIS had a positive and significant influence on decreased recruiting expenses. This is supported by the study of (William, 2009) on which the author agreed that the e-recruitment showed reduced recruitment spending at the expense of traditional methods of recruitment. Majority of the respondents also agreed that HRIS had

decreased the data input expenses which had $(\chi^2 = 27.1, P < 0.05)$ this indicated that the association between HRIS and decreased data input expenses was positive and significant. The study concluded that HRIS had reduced the expenses of the department and thereby contributing to the profitability of the SACCO. This ensured that the human resource costs had been minimal since the use of HRIS. This is in agreement with (Pfieffelmann, Wagner, & Libkuman, 2010) who stated that the internet enabled applications have changed the recruitment process making it effective and efficient. This is also supported by (Jarrar & Shiuma, 2007)in which the authors stated that streamlining the performance management to be web based the company can be able to cut costs.

4.7 The Effects of HRIS on Activity Processing Time and Speed

Table 4.8: Effects of HRIS on Activity Processing Time and Speed

SACCOS performance on Processing time (n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. The HRIS has decreased the time spent on recruiting	0(0%)	0(0%)	0(0%)	18(30%)	36(67%)	9.00	0.011
2. The HRIS has decreased the time spent on training	0(0%)	0(0%)	0(0%)	31(57%)	23(43%)	0.074	0.785
3. The HRIS has decreased the time spent on making staff decisions.	1(2%)	1(2%)	1(2%)	31(57%)	20(37%)	1.85	0.174
4. The HRIS has decreased the time spent on inputting the data.	0(0%)	0(0%)	8(15%)	21(39%)	25(46%)	0.67	0.414
5. The HRIS has decreased the time spent on communicating information within our institution.	0(0%)	0(0%)	1(2%)	35(65%)	18(33%)	30.33	0.000

6. The HRIS has decreased the time spent in processing paperwork.	0(0%)	0(0%)	0(0%)	21(39%)	33(61%)	39.48	0.000
7. The HRIS has decreased the time spent on correcting the errors in human resource department.	0(0%)	0(0%)	1(2%)	28(52%)	25(46%)	22.33	0.000
8. The HRIS has reduced the time spent on making strategic human resource management decisions.	0(0%)	0(0%)	10(19%)	36(67%)	8(15%)	27.44	0.000

SOURCE; Research data (2018)

Majority of the respondents strongly agreed that the HRIS had decreased the time spent on recruiting which had a p $(\chi^2 = 9.0, P < 0.05)$ this showed that there was a strong and positive relationship between HRIS and decreased time spent on recruiting. This implied that recruitment was done much faster using the HRIS. The respondents in the study also agreed that HRIS had decreased the time spent on training this was indicated with a $(\chi^2 = 0.1, P > 0.05)$ this showed that there was not significant relationship between HRIS and decreased time spent on training. The respondents of the study agreed that the HRIS had decreased the time spent on that making staff decisions which had $(\chi^2 = 1.9, P > 0.05)$ this indicated that there is a not positive and not significant relationship between HRIS and the time spent on making staff decisions. Majority of the respondents also strongly agreed that HRIS had decreased the time spent in inputting the data which had $(\chi^2 = 0.7, P > 0.05)$ this showed that there was a positive but insignificant relationship between HRIS and decreased time spent in inputting data in the department. This had implied that the HRIS was able to reduce the time spent for making strategic decisions in areas of recruitment, training and also processing of employees' data.

The respondents in the study also agreed that HRIS had decreased the time spent on communicating information within the institution which had $(\chi^2 = 30.3, P < 0.05)$ this indicated that the effect of HRIS on decreased time spent on communication within the institution is positive and significant. This implied that communication was enhanced by the electronic communication network. Majority of the respondents strongly agreed that HRIS had decreased the time spent in processing paperwork which had $(\chi^2 = 39.5, P < 0.05)$ this showed that the observed data are statistically different from the expected value and therefore a strong and significant relations between HRIS and reduced time spent on paper work, which it showed that the system was able to reduce the paperwork in the department. The respondents of the study agreed that HRIS had decreased the time spent on correcting errors in the human resource department which had $(\chi^2 = 22.3, P < 0.05)$ this showed a strong and positive correlation between HRIS and decreased time spent on correcting errors in the human resource department. This implied that the errors brought about by the manual system were reduced. The respondents also agreed that HRIS had reduced the time spent on making strategic human resource management decisions as indicated with $(\chi^2 = 27.4, P < 0.05)$ hence the association of HRIS and reduced time spent on strategic human resource management decisions were significant and positive. The study also concluded that HRIS had enhanced communication and the time spent on processing of the paper work within the department. It had also enhanced strategic decision making within the department. This had been reinforced by Zafar, (2013) who indicated in his study that majority of the organizations had implemented HRIS to improve the administration, decision making and sharing of information.

4.8 Effects of HRIS on SACCOs Market Share

Table 4.9: Effects of HRIS on Sacco Market Share

Market share of SACCOs (n = 54)	SD	D	UD	A	SA	χ^2	P
1. The HRIS has promoted the Saccos competitive advantage and improving the market share.	0(0%)	0(0%)	3(6%)	30(56%)	21(39%)	21.00	0.000
2. The HRIS has enabled for proper service delivery and therefore increasing the customer base.	0(0%)	0(0%)	3(6%)	19(35%)	32(59%)	23.44	0.000

SOURCE: Research data (2018)

The respondents of the study agreed that the HRIS had promoted the firms competitive advantage and improved the market share with $(\chi^2 = 21.0, P < 0.05)$ this showed that the data had a stronger evidence against the null hypothesis which indicates a stronger positive and significant association between HRIS and improved market share. This showed that the HRIS significantly improved the competitive advantage and the firm's market share. The respondents of the study strongly agreed that the HRIS had enabled for proper service delivery and therefore increased the customer base which had $(\chi^2 = 23.4, P < 0.05)$ this indicated that the data was statistically significant and a positive relation between proper service delivery and customer base. This implied that the HRIS was more effective in enhancing the market share and improving the customer base of the firm. This is supported by Al-Hmouze (2016) who examined the effect of HRIS applications on organization performance in relation to innovation and customer satisfaction, the findings concluded that HRIS applications had a

significant influence on organization performance, this also provides more benefits to the organization and enhance quality in the organization.

For each of the regression models they were tested for:

Multi Collinearity - linear regression assumes that there is little or no multi-collinearity in the data. Multi-collinearity occurs when the independent variables are not independent from each other. Variance Inflation Factor (VIF) was used with VIF < 10 is an indication of no multi-collinearity present.

Model Adequacy/Fit - The F-test of the overall significance is a specific form of the F-test. It compares a model with no predictors to the model that you specify. A regression model that contains no predictors is also known as an intercept-only model.

The hypotheses for the F-test of the overall significance are as follows:

- **Null hypothesis**: The fit of the intercept-only model and your model are equal.
- **Alternative hypothesis**: The fit of the intercept-only model is significantly reduced compared to your model.

If the P(sig) value for the F-test of overall significance test is less than 0.05 significance level, you can reject the null-hypothesis and conclude that your model provides a better fit than the intercept-only model.

Table 4.10. The Regression Model

Model	R	R Square	Adjusted Square	RF	Sig
1	.812[a]	.660	.631	F (4,47) 22.794	.000[b]

The results of the study indicated that the F value statistics was 22.794 which was more than the critical value of 4.47 which indicated that the regression model is significant in predicting the changes in the dependent variable. This had also been supported by the significance value being 0.000 which is less than 0.05. This is in agreement with a study conducted by Perry (2010) which provided that engaging in human resource information systems in the firm lead to larger business performance.

Table 4.11: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1454.973	4	363.743	22.794	.000[b]
Residual	750.008	47	15.958		
Total	2204.981	51			

a. Dependent Variable: Overall Performance

b. Predictors: (Constant), E-staffing, E-performance, E-Training, E-HR Planning

The results indicated that the significance value was 0.000 which was less than 0.05 and therefore it was concluded that there were statistically significant differences between the means of HRIS variables of e-performance management systems, e-training and development systems, e-human resource planning systems, e-staffing systems and organization performance. The study concluded that the differences between means were not likely due to chance and were more likely due to independent variables manipulation. The null hypotheses

was rejected since the F value was not close to 1.0 for the variables of e-performance management systems, e-training and development systems and e-staffing systems and its effect on the organization performance. The F value was also large of 22.794 which meant more variability between the independent variables and dependent variable of organization performance.

Table 4.12: The Regression Model Coefficients Estimates

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Durbin Watson
	B	SE	Beta			Tolerance	VIF	
(Constant)	28.787	8.517		3.380	.001			
E-performance	.546	.178	.337	3.061	.004	.596	1.677	
E-Training	.437	.118	.430	3.694	.001	.533	1.875	1.995
E-HR Planning	-.135	.170	-.112	-.793	.432	.360	2.778	
E-staffing	.359	.153	.329	2.342	.023	.367	2.722	

a. Dependent Variable: Overall Performance
b. b. Predictors: (Constant), E-staffing, E-performance, E-Training, E-HR Planning

When the total score of all the four areas of performance was used, the four independent variables were able to explain 66% of the variations in performance. Three variables: E performance (t = 3.061, p = 0.004), E- Training (t = 3.694, p = 0.001) and E- Staffing (t = 2.342, p = 0.023) were found to significantly influence the performance of SACCOs in Kenya. The study should therefore reject the null hypothesis and accept the alternative hypothesis for E-training, E-staffing and E-performance effect on organization performance. It should also accept the null hypothesis for the effect of E-human resource planning on organization performance.

The variables were found to significantly influence the performance of SACCOs in Kenya. The study should therefore rejected the null hypothesis and accepted the alternative hypothesis for which the HRIS components of E-training and development system, E-staffing system and E-performance system had an effect on organization performance. It should also accepted the null hypothesis for the effect of E-human resource planning system on organization performance that is e-human resource planning system has no significant influence on organization performance.

Table 4.13: The Model Summary of Regression Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1454.973	4	363.743	22.794	.000[b]
	Residual	750.008	47	15.958		
	Total	2204.981	51			

a. Dependent Variable: Overall Performance
b. Predictors: (Constant), E-staffing, E-performance MS, E-Training, E-Planning

The results of the above table 4.13 indicated there is a significant difference between means of human resource information systems and organization performance of Saccos in Kenya in which F= 22.794 where F critical= 15.958, then the value of the calculated F statistics was more than the F critical value which meant that the study treatment had a significant effect on the dependent variable. This implied that the null hypotheses would be rejected and the alternative hypotheses would be accepted for the study variables except for the variable of e-human resource planning systems on the organization performance. The study therefore established that e-staffing, e-training and development, e-performance management and e- human resource planning were all important elements that influence the

organization performance. This is supported by (Khashman & AL-ryalat, 2015) whose findings revealed that HRIS dimensions for e-recruitment, e-selection, e-training, e-performance appraisal, and e-compensation significantly positively impacted on the operational activities. This is also supported by Bharti (2015) whose findings showed that there was a significant positive relationship between HRIS components and organization performance.

Table 4.14: Coefficients of the Model

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	28.787	8.517		3.380	.001		
	EperformanceMS	.546	.178	.337	3.061	.004	.596	1.677
	ETrainning	.437	.118	.430	3.694	.001	.533	1.875
	EHRPlanning	-.135	.170	-.112	-.793	.432	.360	2.778
	Estaffing	.359	.153	.329	2.342	.023	.367	2.722

a. Dependent Variable: Overall Performance

The above table 4.14 showed associations of the independent variables and the dependent variable of organization performance. The regression analysis of e-performance management and organization performance showed significantly different ($t = 3.061, P \leq 0.004$) the e-training and development and organization performance has a positive strongly significantly $t = 3.69$, $P \leq 0.001$) e-human resource planning and organization performance were not significantly ($t=-0.79$, $P>0.05$ which is $p=0.432$) e-staffing and organization performance had a positive relationship was significantly different ($t = 2.34, P \leq 0.023$) .The results of the above table 4.14 indicated there is a significant differences between means of human resource information systems and organization performance of selected Saccos in Kenya in which $F(4,51)= 22.794$ .The study therefore established that e-

staffing, e-training and development, e-performance management and e- human resource planning were all important elements that influence the organization performance. This is supported by Khashman and Al-Ryalat (2015) whose findings revealed that HRIS dimensions for e-recruitment, e-selection, e-training, and e-compensation significantly positively impacted on the operational activities while e-performance appraisal was not significantly different. This is also supported by Bharti (2015) whose findings showed that there was a significant positive relationship between HRIS components and organization performance.

Table 4.15 Summary of results of tests of Hypothesis and related objectives

Objective	Hypothesis	Result	Remarks on Hypothesis
Objective 1 To establish the association between e-performance management systems and selected Sacco performance.	H_0: there is no dependence between e-performance systems and selected saccos organization performance.	p=0.004 which is less than 0.05.	Rejected
Objective 2 To establish the association between e-training and development systems and Sacco performance.	H_0: there is no dependence between e-training and development systems and selected saccos organization performance.	p=0.010 which is less than 0.05	Rejected
Objective 3 To establish the association between e-human resource planning and selected saccos performance.	H_0: there is no dependence between e-human resource planning systems and selected saccos performance.	p=0.432 which is more than 0.05.	Accepted
Objective 4 To examine the association between e-staffing and selected saccos organization performance.	H_0: there is no dependence between e-staffing systems and selected saccos organization performance.	P=0.023 Which is less than 0.05	Rejected.

In the table 4.15 above the hypotheses summary of findings have been provided. In which the first hypotheses which indicated that there is no dependence between e-performance management systems and selected sacco organization performance, according to the findings the hypotheses was rejected and therefore the researcher concluded that there was established positive relationship between e-performance management systems and organization performance in the selected saccos in Kenya.

The second hypotheses was that there was no dependence between e-training and development systems and selected saccos organization performance in which the hypotheses was rejected and therefore the researcher concluded that there was a positive and significant relationship between e-training and development systems and organization performance of the selected saccos in Kenya.

The third hypotheses were that there was no dependence between e-human resource planning systems and selected saccos organization performance in which the hypotheses were accepted based on the findings. Therefore, the researcher observed that there was no significant relationship between e-human resource planning systems and organization performance of selected saccos.

The fourth hypotheses were that there was no dependence between e-staffing systems and the selected saccos organizaton performance in which the hypotheses were rejected according to the findings. The researcher therefore concluded that there was a statistically significant relationship between e-staffing systems and the organization performance of the selected saccos in Kenya.

4.9 Qualitative Analysis

According the respondents they indicated that the human resource technology had reduced the response time and improved the quality of human resource service at the work place. They also agreed that the HRIS was not adequately utilized this poor utilization is due to the managers being slow and inflexible in the use of the system resulting to poor quality of data input by them and also the officers in the human resource department. The respondents also indicated that HRIS dealt with performance appraisals which was able to provide input for promotion, succession and career planning. The payroll information systems had data on wages, salaries, allowances and deductions for provident funds. It also had contributed positively to cost cutting and therefore organization overall performance. The HRIS had data on compensation patterns of competitors and market activities in relation to compensation. The e-performance management systems helped the firm in job evaluation based on the analysis on the performance and the needs of the employees concerning the work environment. It also helped in the performance management process of setting goals, appraising process, measuring performance and providing electronic feedback. This had helped in providing competency requirements for the employees. This system had enhanced superior- subordinate relations due to the accurate data on performance being correctly captured.

The responses on the variable of e-training and development systems included that it provided information for designing course materials, arranging for need based training and providing cost analysis for training. The HRIS also provided development requirements for employees. The e-training methods that were included in the training included using CD-ROM, internet, intranet and digital collaborations among trainees. Though most of the saccos had not incorporated e-learning management system which

provided single log on point for all e-learning opportunities offered. The organization also provided for digital forms of learning especially for the teller employees. The module also helped the saccos in the training needs analysis mainly organization analysis which was mainly resource utilization and less was done on organization climate analysis. The system also helped in task analysis and human resource analysis.

The e-human resource planning systems had data that could assist in human resource mobility, career planning, succession planning and input for skill development. The systems in the Sacco had data bank for attitude surveys, manpower development, organization planning and human resource market analysis. The system also had human resource inventory contained the necessary data about employees in the saccos, Though the respondents indicated that they did not have sophisticated modules, which can be able to provide expert systems that provide adequate information on human resource planning options. They said they still relied more on the manual process.

The e-staffing systems had helped in coordinating team work. The module had helped the Sacco in enhancing job design which assisted in job rotation, job enrichment and job enlargement. The system provided placement data, advertisement module, recruitment data and general recruitment activities. The data also included current employee data for various analysis. The system also had information on transfer information, transfer monitoring and promotion details. It also had health information systems which provided information for maintenance of people. This also contained organization status such as job title, job related data and skills inventory for before and after employment period. The system also provided work history. It also provided labour reporting data on absenteeism, productivity and supervision patterns. The respondents also

indicated that the system helped in reducing the time and expenses of hiring and therefore contributed to improved organization performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provided a detailed summary of the major findings of the actual study, it will then draw conclusions and discussed implications from the findings. It also provided the recommendations and suggestions on the areas of further studies. The chapter provided a brief summary of the findings and conclusions. The main aim of the study was to examine the relationship between human resource information systems and organization performance of Saccos in Kenya. It specifically sought to determine the relationship between e-performance management systems and organization performance of Saccos in Kenya; e-training and development systems and organization performance of Saccos in Kenya; e-human resource planning systems and organization performance of Saccos in Kenya; e-staffing systems and organization performance of Saccos in Kenya. It also provided implications of the study to the firms, management and staff in areas of human resource management.

5.2 Summary

The Saccos were mostly able to use the HRIS for between 3-5 years means they were able to interact quite well in the system. Majority of the respondents were between the ages of 26-33 years and majority of the respondents were female. This indicated that they were in all active age which allows for effective electronic learning within the institution.

The regression results revealed that the human resource information systems elements that is e-performance management systems, e-training and development systems, e-human resource planning systems and e-staffing systems combined could explain

approximately 66.6% of the variations in the organization performance of Saccos in Kenya. The other 33.4% may be attributed to other elements of the human resource information systems not explained by the model or the variables. The three variables which were e-performance management systems, e-staffing systems and e-training and development systems had an effect on the organization performance of Saccos in Kenya. The study therefore rejects the null hypothesis and accept the alternative hypothesis for e-training and development systems, e-staffing systems and e-performance management systems effect on organization performance. The study also would also accept the null hypothesis that states that e-human resource planning systems has no effect on the organization performance. The regression results on the influence of HRIS on the organization performance, analysis was based on the effects of HRIS on the market share of the firm, operational effectiveness and demand for human resource services. The analysis was also based on time and speed of activity processing in the human resource department and its effect on efficiency of the firm on the basis of human resource costs which ultimately had effects on organization costs.

5.2.1 Summary of e-performance management systems effect on organization performance.

The study had the first objective which was to determine the effect of e-performance management systems on organization performance, the findings therefore established that the variable had negative influence on time and speed of human resource processes, the variable also had a negative influence on cost effectiveness, it has a positive influence on human resource efficiency and the firms market share. The respondents moderately disagreed that the HRIS results is not effective in claim processing and establishment of benefits statement. The respondents moderately also disagreed that HRIS is not effective in merit increases and bonus incentives. The respondents also moderately agreed that

HRIS is used in absence monitoring and calculation of wages and overtime and also HRIS is providing for the determination of employment rewards. The respondents also moderately agreed that HRIS helps in making estimates of productivity of employees, organization is able to have proper reward management and HRIS also helped in HR staff performance. Majority of the respondents strongly agreed that HRIS has been used for effective payment and salary administration, also used in performance appraisal and review of employees.

The respondents also strongly agreed that as a result of the HRIS there is timeliness in the processing of salary and bonus claims, it also led to effective level of compliance with the department objectives, standardization of programmes and procedures for performance management. The respondents also strongly agreed that HRIS had enhanced the ability of the firm to implement the performance evaluation.

5.2.2 Summary of e-training and development systems on organization performance.

The study second objective was that of establishing the effect of e-training and development systems on organization performance of Saccos in Kenya in which the findings established that e-training and development systems had a positive influence on the firms market share. It also had a positive influence on time and speed of human resource processes, cost effectiveness and human resource efficiency. The respondents moderately agreed that HRIS had reduced the time spent on training and that it also decreased the training expenses on the firm. This is because the firm engaged more on electronic training. According to (Midiwo, 2015) who had a study on the influence of HRIS on the performance of Kenyan public Universities revealed that HRIS applications

on training and development, payroll and performance management cumulatively supported accurate, quality and consistent information that provide effective and efficient decision making for organization competitive advantage.

However, the respondents agreed that there have been proper and timely training in the firm and that the ability to use the development strategies had improved by the use of HRIS. The HRIS ensured that the competence required were adequate and appropriate. The HRIS was also effective in evaluation and planning of e-training and development programs. It also reduced the training and development expenses in HR department and it also improved the training programs. The HRIS also helped in making decisions on who were supposed to go for training and development. The information gotten from the HRIS also helped the Sacco on when the training and development are necessary and also helpful in the generation of external and internal reports on training and development.

5.2.3 Summary of e-human resource planning systems on organization performance.

The study also had the third objective which was to determine the effect of e-human resource planning on organization performance of Saccos in Kenya the findings established that e-human resource planning had a negative influence on time and speed of human resource processes, human resource efficiency and market share. This finding is contrary to that of Opiyo (2015) in which the researcher established that e-succession planning had a significant effect on the organization performance.

The HRIS also had a positive influence on the firms cost effectiveness. The HRIS had helped in forecasting the staffing needs, make more effective decisions on promotions

and helped in deciding when to hire. The HRIS provided timeliness in processing the human resource functions, helped the decision making to be more effective, provide proper evaluation of employees, assignment of employees and also provide analysis of internal, external and healthcare reports. The HRIS provides proper statistics of employees, workforce model, tracking and evaluation of different human resource functions. The HRIS had helped the human resource department in job change decisions and in the making of the human resource job budgets. This finding indicated that the HRIS system should be able to help in strategic human resource management which is in agreement with the study done by Duff (1989) in which he indicated that HRIS is important for organization overall competitiveness and it improves service function as well as to provide room for strategic decision making of the organization.

5.2.4 Summary of e-staffing systems on organization performance.

The study also had the fourth objectives which was to determine the effect of e-staffing systems on organization performance of Saccos in Kenya the findings obtained that there was a positive influence on the firms market share, time and speed of human resource processes, cost effectiveness and human resource efficiency. The respondents also strongly agreed that HRIS was useful in absence monitoring, processing employee leave, providing disciplinary procedure, improved job analysis and work design. The HRIS also helped in quick responses and access to information and standardization of work procedures and programs for the workplace. It also assisted in recruiting, assigning tasks, EEO analysis, job rotation exercise, employee skill systemization, making better choices in choosing better people, communication within the firm and improve on data input processes. It also generally helped in increasing the levels of useful information through adequate data management. This is also concluded by (Cheruto, 2005) in which in her

study she established that an effective e-recruitment model in a HRIS reduces the hiring costs of an organization by 90% in the firm which agrees with the findings in this study. This is also supported by Bussler and Davis (2002) in which the authors stated that e-recruiting systems can reduce the hiring time by two-thirds. In regards to the finding on effective communication among the workforce due to the HRIS this was also established by studies done by Northwest Territories (2002) that the role of the HRIS record systems was to ensure that the members of staff involved in different operations have the information they need when necessary. This is in contradiction of the findings by Pearce and Tuten (2001) in which the authors pointed out that although employers see the advantages of e-recruitment they still continued to prefer the traditional methods for most of their recruiting. This is also in agreed by Borck (2000) and Caggiano (1999) in which the authors argued that internet-based recruiting will not replace traditional practices but a well implemented strategy can make the recruitment process more successful.

On the findings of the effect of HRIS on the Saccos market share the respondents agreed that HRIS had promoted the firms competitive advantage and improved the market share. They also strongly agreed that the HRIS enabled human resource department delivery and also resulted to increased customer base for the firm. This is supported by (Troshani, Jerram, & Rao, 2011), where the author indicated that if HRIS is designed correctly the system adequately manages employee data in line with how the organization is managed and hence the need for the firm to implement HRIS.

The findings on the effect of HRIS on the time and speed of human resource processes the respondents strongly agreed that the HRIS had decreased the time spent on recruiting, training, making staff decisions and time spent on inputting the data, time spent

on processing paperwork, correcting errors and making strategic decisions. According to Akhtar et al 2008, indicated that the human resource function may realize significant costs savings using complete and accurate data which will be more appropriate for decision making in the firm. On organization performance (Mbugua, 2015), who examined the role of HRIS on organization effectiveness in Kenya commercial bank, the HRIS lead to positive perception towards the company by stakeholders and therefore increase in the market share.

The findings on the effect of the HRIS the firm's efficiency on the basis of human resource costs the respondents agreed that HRIS had decreased the cost per hire, training expenses, recruiting expenses and data input expenses. These results agreed with the study conducted by Wachira, (2010) in which the study assessed the reason for introducing HRIS to organizations which indicated that most firms recognized a reduction of costs of 79% in operational activities in the human resource department. This is also affirmed by Bee& Bee, Brown 2002) in which they stated that majority of the firms had introduced HRIS not just to replace manual processing but also to enable the firm to reduce their operational costs.

The issue of operational efficiency in HR the respondents moderately agreed that the HRIS had met their expectations and also that the workers were actively involved in HRIS. This could be attributed to the elements in the technology acceptance model. In general, the respondents strongly agreed that HRIS helped with the flexibility of human resource systems, the HR operated effectively, improved the HR functioning in the Saccos. The workers were satisfied with the HR services delivered by the human resource department. It has also helped in making staff informal decisions and helped in tracking and controlling

the human resource functions in the firm. This is supported by Bal 2012, in which the author indicated that by applying consistency in capturing and maintaining employee specific data (position, job and qualifications) helps the organization to plan for the employees in the firm. This is also envisaged by Hussain et al 2007, that the HRIS enhanced their ability to locate the best qualified employees regardless of her or his location which can also be mainly a competitive advantage.

5.3 Conclusion

5.3.1 Conclusion on Effects of e-Performance Management Systems on Organization Performance

The study concluded from the findings that there existed a relationship between e-performance management systems and organization performance of Saccos at 5% level of significance. This indicated that the variable positively affected the firms market share and human resource efficiency. The variable had a negative influence on the cost effectiveness and time and speed of human resource processes of the firm. This agrees with Opiyo (2015) which indicated that e-performance appraisals had an effect on organization performance of commercial banks in Kenya. This also is agreed with Kundu& Rajesh (2012) which showed the widely use of HRIS on performance and reward management.

5.3.2 Conclusion on Effects of e-Training and Development Systems on Organization Performance

Secondly, for the second objective, the study concluded that e-training and development systems had a significant influence on organization performance especially on speed and time of human resource processes, HR efficiency and the market share of the firm. This is also concluded by Opiyo (2015) that e-training had an influence on

organization performance of commercial banks in Kenya. This was also concluded by Lengnick-hall and Moritz (2003) who revealed that e-training had a positive correlation with the financial performance of the organization. The easy access to data may also help management identify areas where available talent is lacking for adequate succession. The skills inventories represent a valuable source of information for assessing the internal supply of talent that exists within the firm.

5.3.3 Conclusion on Effects of e-Human Resource Planning Systems on Organization Performance

Thirdly, for the third objective, the study concluded that e-human resource planning had no significant influence on organization performance. The variable had a negative influence on the firms market share, time and speed of human resource processes and had a positive influence on the human resource efficiency and cost effectiveness. This can be attributed to the firm maybe not engaging more on the strategic decision making that can be utilized in HRIS. The data obtained in an employee database can be used to analyze environmental influences. The information technology supported the different steps of the strategic human resource planning process. Besides providing better information processing and decision-making models, it is responsive to the particular requirement of human resource planning. Some of the saccos were able to utilize the workforce scheduling and optimization software that provided applications for deploying employees most effectively, created employment schedules and the managers could make scheduling adjustments as call volumes and other variables change within the market. This is contrary to (Yilmaz & Bulut, 2015) who examined the relationship between human resource planning and organization performance among firms that operate the manufacturing of textile products industry in turkey in which the study obtained empirical results to support

the hypothesis that there was a meaningful relationship between the two variables. This is supported by (Anya, Umoh, & Worlu, 2017) where the authors investigated human resource planning and organization performance in oil and gas firms in Port Harcourt, Nigeria. In which the study was able to establish that there was a relationship between e-human resource planning and organization performance and being moderated by organization structure. (Nagendgra & Deshpande, 2014) investigated human resource information systems in human resource planning and development in India mainly in mid to large sized firms. The study revealed that the dominant uses of HRIS were its support of efficiency and effectiveness of human resource planning through skills inventory, HRIS succession planning, HRIS training needs analysis and HRIS labour demand and supply analysis. Organization can fill job positions accurately, good HR Planning efficiency and effectiveness, integrating the HRIS functions with other business functions. The study established that HRIS needed to offer more intelligent capabilities to increase the effectiveness of human resource planning.

5.3.4 Conclusion on Effects of e-Staffing Systems on Organization Performance

Fourthly, for the fourth objective, the study concluded that e-staffing systems had a significant positive influence on organization performance of Saccos. The variable also had a positive influence on the firms market share, time and speed of HR processes, cost effectiveness and human resource efficiency. This is also concluded by Opiyo (2015) who also states that e-staffing affects organization performance of commercial banks in Kenya. This was also contrary to the study by Ganalaki (2002) in which the author indicated that the overload of resume created a huge volume of unqualified candidates therefore making e-recruitment non -effective towards obtaining the staffing objectives. This is also supported by Pearce and Tuten (2001) in which the authors argued that the web-based

recruitment brought about by high volumes of applicants but a low-quality fit. Empirical evidence generally showed that e-recruitment occurred at all levels of the job hierarchy but the prevalence of internal recruitment increased at higher levels. The online hires usually have more experience and education.

The case for organization performance the technology may be used to gauge the client satisfaction with the service levels provided by the human resource department. Some of the information technology dashboards was able to monitor enterprise goals alignment and helped to identify performance deficiencies that require more attention. The HRIS also had a scorecard application that might track revenue per employee, cost of hiring and separation which was able to assist in human resource analytics and human resource capital management. This has been supported by Lawler et al, (2003) in which the authors indicated that the HRIS provided an opportunity for HR to play a more strategic role by providing metrics which can be used to support strategic decision making and therefore an enhancer to organization performance.

5.4 Recommendations

i. Following the foregoing findings, the study recommended that concerning e-performance management systems effect on organization performance. The firm should improve more on data management in areas of performance assessment to allow for timely and speedy delivery of services to the employees. The firm should also incorporate more cost-effective performance management programs to allow for lean processes. The system should also have proper absence monitoring and calculation of wages and for proper allocation of employment rewards through proper analysis of productivity levels.

ii. The second recommendation is concerning the e-training and development systems effect on organization performance, the firm should be able to embrace more electronic training in order to reduce the training costs and also improve the time spent on training. They should also incorporate proper data management in order to have more skill development strategies. The management of the saccos should have IT applications that support the development of skills inventory that contained skills profile for each member of the workforce within the firm.

iii. Thirdly, the researcher recommended that for the e-human resource planning systems the firm need to incorporate more systems which allow for adequate strategic planning in the firm. This will help the firm to be cost effective and also have timely processes of human resource functions especially in the establishment of human resource goals which are critical for the planning process in the human resource department. The study also recommended that the saccos should have IT solutions that can make succession planning to be more effective and wide spread. The firms should also have management inventory which had more individualized human resource records for management, professional and technical human resources that included all elements in the skills inventory with the additional information on specialized duties, responsibility and accountabilities. The workforce analytics solutions would be recommended since it helped the management provide analysis needed for strategic human resource planning.

iv. Fourthly, for the organization performance the study recommended that the evaluation on the human resource management, the organization should be able to utilize the 5 C Model which included the main elements of compliance, client satisfaction, culture management, cost control and contribution to overall organization goal. The human resource department should record compliance with law and employment standards. This entails proper legislation dealing with employer and employee relationship. The satisfaction should be for both the internal and external clients. Proper management of human resources results to saving the company legal costs, fines and damaging publicity.

v. Finally, the study recommended that the influence of e-staffing should be more oriented towards proper hires for the organization. It should use more methods of e-recruitment so as to reduce the amount spent on print adverts for vacancy of jobs. The firm should have more data on the employees' experiences in order to allow for adequate job rotation and job analysis within the workplace. The management should be able to emphasize in areas of safety, health, employment equity and industrial relations.

The study would contribute to new knowledge by highlighting the various areas of improvement on the modules of human resource information systems on performance management, training and development, human resource planning and staffing and trying to find the need to show areas of improvements on e-human resource planning systems so that it can be able to positively contribute to the organization efficiency and effectiveness. This is also highly supported by lawler 2003 in which the author stated that HRIS provided

opportunity for human resource to have a more strategic role, their ability to generate metrics which could be used to propel the strategic decision making which enhanced organization performance.

5.4.1 Policy Recommendation

i. The Saccos should have the existing policy on e-human resource planning systems moderated in order to help the human resource officers and managers be able to use it exhaustively for the interpretation of the data obtained from the human resource information portal. This will be able to assist on having more informed decision making in human resource planning function.

ii. The Saccos should provide proper guidelines on the use of the various human resource information systems portal and how to provide adequate reward management models that will be able to provide optimized rewards and performance management of the organization. This can be provided for by having models that provide ease of use of the systems for interpretation of data.

iii. The saccos should provide adequate training for the use of the human resource information systems dimensions in order for the human resource officers to interpret the information obtained from the systems and also feed in the right data for better interpretation of human resource activities.

5.5 Recommendations for Further Studies

The study attempted to give insights into the relationship between specific elements of human resource information systems and organization performance of Saccos. Therefore, further research can be done on other elements of HRIS and their influence on

organization profitability. The study can also be extended to firms in other sectors of the Kenyan economy.

REFERENCES

Achoui, M. (2009). Human resource development in gulf countries. An analysis of the trends and challenges facing Saudi Arabia. *Human resource development International 12 (1)*, 35-46.

Adamson, L., & Zampetti, R. (2001). *Web based manager self-service; adding value to the work. A.J Walker (ed) web based human resources.* New York: Mc Graw Hill.

Ademba, C. (2010). Challenges facing SACCO regulations in Africa. *In 11th Sacco Congress.* Swaziland.: Sacco Congress.

AL-Adaileh, R., & AL-Makhadmeh, A. (2008). An investigation of fundamental organization factors influencing IT/IS Projects in Jordanian banking sector. *Jordanian journal of business administration 4 (3)*, 366-376.

Alamri, M. (2011). Higher Education in Saudi Arabia. *Journal of higher education theory and practice 11 (4)*, 88-91.

Al-Dmour, R. H., & Zubi, M. F. (2014). Factors motivating and inhibiting the practice of HRIS in business organizations . an empirical analysis. *International business Research 7 (7)*, 139-155.

Alfes, K., Truss, C., Soane, E., Rees, C., & Gatenby, M. (2013). The relationship between line manager behavior , perceived HRM practices and individual performance. Examining the mediating role of engagement. *Human resource management 52 (6)*, 839-859.

Al-Gahtani, S. (2003). Computer Technology adoption in Saudi Arabia. Correlations of perceived innovation attributes. *Information technology for development 10 (1)*, 57-69.

Al-Gassim, A., Barry, S., & Mc Phail, R. (2014). Exploring management and employees perspective of HRM practices in Saudi Arabia. *Journal of law and social sciences 2 (1)*.

Ali, H. (2010). Management practice in safety culture and its influence on workplace injury. *Journal of disaster prevention and management 18, 5*, 470-477.

Alleyne, P., Doherty, L., & Greenidge, D. (2007). Approaches to HRM in the Barbados hotel industry. *International Journal of Contemporary Hospitality Management, 18*(2), 94 - 109.

Al-Shawabkeh, M. (2015). Computer security factors effects towards online usage of internet banking systems. *Asian Research publishing network*, 45-56.

Al-Shehri, M., & Drew, S. (2012). A comprehensive analysis of e-government services adoption in Saudi Arabia . Obstacles and challenges. *International journal of advanced computer science and applications. 3*, (2).

Anya, C. J., Umoh, G. I., & Worlu, G. (2017). Human resource planning and organization performance in Oil and gas firms in Port Harcourt , Nigeria. *International journal of advanced academic research social and management science. 3*, (9).

Armstrong, M. (2010). *Armstrong handbook of human resource management practices.* (12th ed.). Kogan Page publishers.

Asafo, A. A. (2007). *The Role of Human Resource Information Systems (HRIS) in Strategic Human Resource Management (SHRM).* Swedish School Of Economics and Business Administration.

Aycan, Z., Miriam, E., & Michele, J. G. (2007). Cross cultural organizational behavior. *Journal of annual review of psychology 58 (8)*, 479-514.

Bagozzi, R. P., Davis, F. D., & Warshaw, P. R. (2012). Development and test of a theory of technological learning and usage. *Human Relations , 45*, 7.

Ball, K. S. (2001). The use of human resource information systems; A survey. *Personnel review 30(6),* 677-693.

Bee, F., & Bee, R. (2002). *Managing Information and Statistics.* London: Chartered Institute of Personal and Development.

Bharti, P. (2015). Impact of E-HRM System on organization performance. A case study on banking sector. *International conference of advanced Research and Innovation*, 202-204.

Bianchi, A. J. (2001). Management indicators model to evaluate performance of IT organizations. *Portland international conference.* Portland: Portland international conference.

Boxall, P., & Purcell, J. (2008). *Strategic Human Resource Management.* New York: Palgrave Macmillan.

Budhwar, P. S., & Debrah, Y. (2001). Rethinking comparative and cross national human resource management research. *International journal of human resource management 12(3)*, 497-515.

Bussler, L., & Davis, E. (2002). The Quiet Revolution in Human Resources Management. *The Journal of Computer Information Systems, 42*(2), 17-20.

Byars, I., & Rue, W. L. (2006). *Human resource management. Business and economics.* Mc Graw-Hill /Irwin.

Chau, P. Y., & Hu, P. J. (2001). Information technology acceptance by individual professionals. *A Model comparison approach decision science 32 (4),* 699-719.

Cheruto, T. S. (2005). *A survey of the use human resource information systems in the banking sector in Nairobi.* Nairobi: University of Nairobi.

Chowdhury, S. A., Mohammad, Y., Bhuiyan, F., & Kabir, M. R. (2013). Impact of HRIS on the performance of firms. A study of selected Bangladesh Banks. *Proceedings*

of 9th Asian Business Research conference (pp. 20-21). Dhaka , Bangladesh: BIAM foundation.

Cooperative bank of Kenya. (2012). Cooperative bank of Kenya report on the sacco movement in Kenya. *AFRACA Workshop.* Nairobi Kenya.: AFRACA Workshop.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS*, 319-340.

De Varo, J. (2012). The labour market effects of employer recruitment choice. *European Economic Review, 2*, 283-314.

DeLone, W. H., & Mclean, E. R. (1992). Information System sucess. The quest for the dependent variable. *Information System Research 3, 1*, 60-95.

Desanctis, G., & Poole, M. S. (1994). Capturing the complexity in advanced technology use of adaptive structuring technology. *Organization Science 5*, 121-147.

Dessler, G., Griffiths, J., & Lloyd-Walker, B. (2004). *Human Resource Management* (2 nd ed.). Sydney: Pearson.

Djabatey, E. N. (2012). *Recruitment and selection practices of organization. A case study of HFC Bank Ltd.* Accra, Ghana.: Kwameh Nkrumah University.

Ehnert, L. (2006). Sustainability issues in human resource management: Linkages, theoretical approaches, and outlines for an emerging field. *Ehnert, L., (2006) 'Sustainability issues in human resource management: Linkages, theoretical aInternational Journal of Human Resource Management*, Ehnert, L., (2006) 'Sustainability issues in human resource management: Linkages, theoretical approa30–31.

Elliott, R. H., & Tevavichulada, S. (1999). Computer Literacy and Human Resources Management: A public Sector comparison. *28*(2), 259-274.

Fadhel, K. (2007). *Working paper no 498 ,employment guarantee programs ; a survey of theories and policy experiences.* Drew university.

Frayne, J. M., & Geringer, M. J. (2005). A Social cognitive approach to examine joint venture general manager performance. *Group and organizational management 19*, 240-262.

Gable, G. G., Sedera, D., & Chan, T. (2008). Re-conceptualizing information system success: The IS-impact measurement model. *Journal of the Association for Information Systems*, 378–390.

Gable, S. L., & Reis, H. T. (2003). Towards a positive psychology of relationship. Flourishing positive psychology and the life well lived. *American psychological association.*, 129-159.

Gamage, A. S. (2015). Recruitment and selection practices in manufacturing SMES in Japan. An analysis of the link with business performance. *Journal of Management and Finance*, 37-52.

Gardeklint, A. (2009). *Facts about the cooperative movement.* Nairobi, Kenya: Kenya National federation of cooperatives.

Gardeklint, A. (2009). Facts about the Co-operative movement. Nairobi. *Kenya National Federation of Co-operatives.*

Gatian, A. W. (1994). Is user satisfaction a valid measure of system effectiveness? *Information & Management 26 (3)*, 119–131.

Gill, J., & Johnson, P. (2010). *Research Methods For Managers.* London: Sage Publications Ltd.

Gloet, M., & Berrel, M. (2003). The dual paradigm nature of knowledge management: Implications for achieving quality outcomes in human resource management. *Journal of Knowledge Management, 1*, 78-89.

Greengard, S. (2005). Putting it all together workforce. *Management , 83*, 11.

Huselid, A. M. (2011). The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal, 3*, 635-672.

Hussain, Z., Wallace, J., & Cornelius, N. E. (2007). The use and impact of human resource information systems on human resource proffesionals. *Information & Management, 44*, 74-89.

International Co-operative Alliance. (2009, 1). Statistical Information on the Co- operative Movement. *International Co-operative Alliance.*

Ireri, J. K. (2015). *Constructing a portrait of Kenyan journalists in the 21st century . Demographics, job satisfaction influence on news values and autonomy and standards of journalism training. (Doctorial Dissertation , Indiana University).* Indiana: Indiana University.

Jarrar, Y., & Shiuma, G. (2007). Measuring performance in public sector. challenges and trends. In *Measuring business excellence 11(4)* (pp. 4-8).

Kamel, M. (2007). The effects of regulations on human resource management; private sector firms in Saudi Arabia. *International journal of human resource management volume 15, issue 1*, 85-99.

Kanini, R. (2008). *Implementing strategic information systems in commercial banks in Kenya.* Nairobi: University of Nairobi.

Kaplan, R. (2004). Measuring the strategic readiness of intangible assets. *Harvard Business Review*, 52-64.

Kavanagh, M. J., Gueutal, H. G., & Tannenbaum, S. I. (1990). *Human resource information systems.* Boston: PWS-Kent.

Kehoe, R., & Wright, P. M. (2013). The impact of high performance human resource practices on employee attitudes and behavior. *Journal of management 39, 2,* 366-391.

Khan, M. T., Khan, N. A., & Mahmood, K. (2012). An organizational concept of human resource development: How human resource management scholars view HRD. *Journal of Psychology and Business 8 (5),* 50–60.

Khashman, A. M., & AL-ryalat, H. A. (2015). The impact of electronic human resource management (E-HRM) practices on business performance in Jordanian telecommunications sector. The employees perspectives. *Journal of management research ,7(3),* 115-129.

Khera, S. N., & Gulati, K. (2012). Job satisfaction: A ray of sunshine even in burn-out times: Perceptual analysis of IT organizations. *International Journal of Management & Information Technology*, *1*(3), 111-117.

Khumalo, G. (2008). South Africa,KZN, Kenya Partner to Develop Co-operative College. *Free Africa Current Afairs Journal*, *2*, 1-3.

Kiessling, T., & Harvey, M. (2005). Strategic global human resource management research in the twenty-first century: An endorsement of the mixed-method research methodology. *The International Journal of Human Resource Management 16 (1),* 22– 45.

Kovach, K. A., Hughes, A. A., Fagan, P., & Maggitti, P. G. (2002). Administrative and strategic advantages of HRIS. *Employment Relations Today, 29,* 43-8.

Kundu, S. C., & Kadian, R. (2012). Applications of HRIS in human resource management in India. *European journal of business management 4 (21),* 34-41.

KUSCCO. (2006, 1). he Sacco Family Union Newspaper. *Kenya Union of Savings Credit Co-operative Unions [KUSCO]*.

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management 40 (3)*, 191–204.

Lengnick-Hall, M. L., & Moritz, S. (2003). The Impact of e-Hr on the Human Resources Management Function. *Journal of Labor Research, 24*(3), 365-379.

Manyara, M. K. (2003). *The Development of Co-operative Law and Policy in Kenya.* Nairobi: Oscan Print.

Martinsons, M. G. (1997). Human Resource Management Applications of Knowledge-Based Ssyetms. *International Journal of Information Management, 17*(1), 35-53.

Mayfield, J., Mayfield, M., & Launce, S. (2003). Human Resource Information Systems: A Review and Model Development. *Advances in Competitiveness Research. 11(1),* 139-151.

Mbugua, C. N. (2015). The role of human resource information systems in organization effectiveness. A Case study of Kenya Commercial bank. *International journal of business and Commerce. 4 (6),* 99-145.

McNabb, R., & Whitfield, K. (1990). the distribution of employee participation schemes at the workplace. *International journal of human resource management 10 (1),* 122-136.

Mellahi, K. (2007). The effects of the regulations in HRM in private sectors firms in Saudi Arabia. *The international journal of human resource management 1*, 85-99.

Metcalfe. (2007). International management ethics. A critical cross-cultural perspective. *Cambridge university press*, 194.

Midiwo, J. (2015). *Influence of human resource information systems on the performance of Kenya public Universities. Un published doctoral dissertation.* NAIROBI: Jomo Kenyatta University of Agriculture and Technology.

Mudibo, E. K. (2005). Corporate governance on cooperatives in East African experience. *Conf. Pan -African Consultative Forum on corporate governance.* Dakar Senegal.

Mugenda , O. N., & Mugenda, A. G. (2003). *Research Methods; A Quantitative and Qualitative Approach.* Nairobi: ACTS Press.

Mujtaba, B. G., Afza, T., & Habib, N. (2011). Leadership Tendencies of Pakistanis: Exploring Similarities and Differences based on Age and Gender. *Economics and Behavioral Studies, 2*(5), 199-212.

Mwakajumilo, S. L. (2011). *The Role Of Informal Microfinance Institutions In Saving Mobilization, Investment And Poverty Reduction. A Case Of Savings And Credit Cooperative Societies (Saccos) In Tanzania From 1961-2008.* Turks and Caicas islands of British West: St Clements University.

Nagendgra, A., & Deshpande, M. (2014). Human resource information systems in HR planning and development in mid and large organizations. *Procedia- social and behavioural sciences 133*, 61-67.

Nasief, Y. A. (2015). *The development of saudisation practices in the Saudi supermarkets industry an institutional perspective.* London.: University of London.

Ndung'u, G. (2010, 1). Orderly movement. *Business Post*, pp. 28-30.

Ngai, E. W., Law, C. C., Chan, S. C., & Wat, F. (2007). Importance of the Internet to human resource practitioners in Hong Kong. *Personnel Review 37 (1)*, 66–84.

Ng'ombe, B. W., & Mikwamba, E. (2004). *Know More About SACCO. A Handbook for SACCO study Circle Porgramme. Malawi Union of Savings and Credit Co-operative.* Lilongwe, Malawi: MUSCCO.

Nyakoe, M. G. (2003). *The extent of use of information communication technology in human resource management in large manufacturing firms in Kenya.* Nairobi: University of Nairobi.

Obeidat, B. Y. (2009). *A Study of the implementation Stage of Strategic Decisions in the Banking Sector in Jordan. 1st Edition.* VDM Verlag: Dr. Müller e.K.

Opiyo, A. P., & Abok, A. (2015). Effects of human resource information system on performance of commercial banks in Kenya. A case study of Kenya commercial bank. *Journal of business Mnagement , 1*, 1.

Ordóñez De Pablos, P. (2004). The importance of relational capital in service industry: the case of the Spanish banking sector. *International Journal of Learning and Intellectual Capital, 1*(4), 431–440.

Perry, E. (2010). The benefits of using technology in human resource management. *Cranfield School of Management*.

Petter, S., & McLean, E. R. (2009). A meta-analytic assessment of the DeLone and McLean IS success model: An examination of IS success at the individual level. *Information & Management 46 (3)*, 159-166.

Pfieffelmann, B., Wagner, S. H., & Libkuman, T. (2010). Recruiting on corporate web sites; perception of fit and attraction. *International journal of selection and assessment. 18 (1)*, 40-47.

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research 14 (3)*, 224–235.

Rai, A., Lang, S. S., & Welker, R. B. (2002). Assessing the validity of IS success models: An empirical test and theoretical analysis. *Information Systems Research 13 (1)*, 50–69.

Rauf, M. A. (2007). *HRM sophistication and SME performance. A case of readymade garment manufacturers and exporters in Lahore , Pakistan.* London: London.

Redman, T., & Wilkinson, A. (2009). *Contemporary human resource management; text and cases.* Prentice Hall.

Republic of Kenya. (1997a). *Sessional Paper No. 6 of 1997 on Co-operatives in A Liberalized Economic Environment.* Nairobi: Government Printers.

Richard, O., Roh, H., & Pieper, J. R. (2013). The link between diversity and equality management practice bundles and racial diversity in the managerial ranks. *Human resource Management 52 (2),* 215-242.

Ruel, H. J., Bondarouk, T. V., & Van der Velde, M. (2007). The contribution of e-HRM to HRM effectiveness: results from a quantitative study in a Dutch Ministry. *Emp. Rel, 29*(3), 280 - 291.

Sadri, J., & Chatterjee, V. (2008). Building Organizational Character Through HRIS. *International Journal of Human Resources Development and Management, 3(1),* 84-98.

Sanchez, J., & Aguayo, M. (2007). An approach to the satisfaction of human resource information systems (HRIS): Analysis and empirical contrast. *International Journal of Human Resources Development and Management 7 (2),* 177–214.

Savings Plus. (2010). *A brief history of savings and credit cooperatives* . South Africa: Future link Technologies. .

Sean, O. N., & Diane, H. (2005). Political leadership and higher education reviews. *American Indian culture and research journal 29, 1,* 97-147.

Seddon, P. B. (1997). A Respecification and extension of the delone and Mclean model of IS success. *INFORMATION SYSTEMS RESEARCH 8 (3),* 240-253.

Sentosa, I., Nejatian, H., Piaralal, S. K., & Faisal, A. (2011). Empirical study of Internet adoption among small and medium entrepreneurs (SMES) ‘in Malaysia (a

structural equation modeling approach. *In 2nd International Conference on Business and economic Research.* Malaysia: ICBER.

Shannon, C. E., & Weaver, W. (1949). *The mathematical theory of information.*

Shin, B. (2003). An exploratory investigation of system success factors in data warehousing. *Journal of the Association for Information Systems 4 (1),* 141–170.

Shin, S. H. (2003). Disclosures and Assets Returns. *Journal of the econometrics society 71, 1*, 105-133.

Shirbly, A. H. (2011). Human resource information systems success assessment. An investigative model. *Australian Journal of basic and applied sciences 5(5),* 157-169.

Singh, H. P., Jindal, S., & Samim, S. A. (2011). Role of Human Resource Information Systems in Banking Industry of Developing Countrie"s. *The First International Conference on Interdisciplinary Research and Development.* Thailand.

Solomon, M. V., Bozga, R. E., & Mateescu, M. A. (2019). Management of human resource: Past and present. *Babes Bolyai University*, pp. 185–190.

Sommer, B. (2006). Divergence or Alignment: State of HR and HR Technology. *IHRIM Global Conference.* Boston, MA.

Sparrow, P. (2006). *Global knowledge management and HRM. In Stahl, G.K. and Bjorkman, I. (Eds.) Handbook of Research in International Human Resource Management, pp. 113-138.* Cheltenham: Cheltenham.

Stone, D., & Gueutal, H. (2005). *The Brave New World of eHR: Human Resources Management in the Digital Age.* San Francisco: Jossey-Bass.

Stroh, L. K., & Caligiuri, P. M. (1990). Increasing global competitiveness through effective people management. *Journal of world business 33,1*, 1-16.

Stroh, L. K., & Caligiuri, P. M. (1998). Strategic human resources. A new source of competitive advantage in the global arena. *International journal of human resource management 9(1)*, 1-17.

Strohmeier, S. (2007). Research in e-HRM: Review and implications. *Human Resource Management Review*, *17*(1), 19–37.

Suh, B., & Han, I. (2003). Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications 1 (3)*, 247–263.

Sun, Y., Wang, N., Guo, X., & Peng, Z. (2013). Understanding the acceptance of mobile health services: A comparison and integration of alternative models. *Journal of Electronic Commerce Research 14 (2)*, 183–200.

Thatcher, M. E., & Oliver, J. R. (2001). The impact of technology investments on a firms production efficiency, product quality, and productivity. *Journal of Management Information Systems 18 (2)*, 17–45.

Troshani, I., Jerram, C., & Rao, h. (2011). Exploring the public sector adoption of HRIS . *Industrial Management and data systems 3*, 470-488.

Troshani, I., Jerram, C., & Rao, S. (n.d.). Exploring the public sector adoption of HRIS. *Industrial Management & Data Systems, 111 (3)*, 470-488.

Ulrich, D. (2009). HR Transformation. *Journal of Management*.

Venkatesh, V. M., Morris, G. D., & Davis, F. G. (2003). User acceptance of information technology. Towards a unified view. *MIS quarterly 27*, 425-478.

Venkatesh, V. M., Morris, G. D., & Davis, F. G. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly 27*, 425–478.

Wachira, F. N. (2010). Improving the Management of Human Resource in the Public Service through application of Information and Communication Technologies (ICTs).

Wanyama, F. O. (2009). Surviving Liberalization; The cooperative movement in Kenya. *Ccoop Africa Working paper no. 11*. Dar es Salaam, Tanzania: International Labour Organization.

William, H. (2009). E-recruitment ; rethinking recruitment. *Personnel today survey*.

Wixom, B. H., & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information Systems Research 16*, 85–102.

Yilmaz, R., & Bulut, F. M. (2015). The effects of human resource management on organization performance. *Kwartalnik Naukowyuczelni Vistula 44 (2)*, 5-13.

Zin, R. B. (2012). Human Resource Management and Information Technology. Some Empirical Evidences in the context of Saudi Arabia. *Human Resource Management Journal 3(1)*, 28.

Zviran, M., & Erlich, Z. (2003). Measuring IS user satisfaction: Review and implications. *Communications of the Association for Information Systems, 12*, 81– 103.

Appendix 1: Questionnaire

DOREEN NJEJE

P.O. Box 14012

Nakuru

Kenya

Dear Respondent,

Re: Introduction Letter

I am a student undertaking PHD in Business Administration (Human Resource Management) at Kabarak University.

You have been selected to participate in the study of the assessment of the effects of human resource information systems on organization performance of SACCOS in Kenya. This questionnaire is prepared to ask questions to human resource officers and human resource managers. For the purpose of keeping the information confidential your name is not required. You are therefore asked to answer the questions correctly and honestly by ticking (√) in the right box or filling in the right number in the appropriate box. The researcher will ensure that the information will be mainly used for the study and the information obtained will not be disclosed to any other person.

Yours sincerely

Doreen Njeje

QUESTIONNAIRE FOR RESPONDENTS.

INTRODUCTION TO THE RESPONDENTS.

This questionnaire will be used to collect data for research purposes and provide answers as accurately as possible and do not write your name on the questionnaire.

The questionnaire is meant to collect data from the human resource department employees within the selected saccos.

SECTION A

PART A: DEMOGRAPHIC DATA

Please indicate by ticking [√] your view

1. Please indicate your gender

Male ( ) Female ( )

2. Indicate your age

18-25 years ( )

26-33 years ( )

34-41 years ( )

41-48 years ( )

49 and above……

3. How long have you been in the human resource department at the Sacco?

Less than a year ( )

1-2 years ( )

3-4 years ( )

More than 4 years ( )

4. How long has your organization been using the human resource information system?

Less than a year ( )

1-2 years ( )

3-5 years ( )

More than 5 years ( )

PART B

E-Performance Management Systems

7. Please indicate the extent to which you agree or disagree with the following statements. Please indicate by ticking [√] your view. The Value of Scale is given below

SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1)

	SA 5	A 4	U 3	D 2	SD 1
The HRIS has been used for effective payment and salary administration as performance management					
The HRIS is used in performance appraisal and review of employees.					
The HRIS provides for the determination of employment rewards based on performance.					
The HRIS is used in absence monitoring for wage administration and calculation of overtime.					
The HRIS is not effective in merit increases and bonus incentives as part performance management					
The HRIS results in not effective in claim processing and establishment of benefits statement.					
The HRIS helps in making of estimates of productivity of employees.					
The organization has been able to have proper reward management by use of HRIS as a result of performance management.					
As a result of the knowledge of HRIS, the HR staffs performance management is good.					
As a result of our HRIS, there is timeliness in the processing of salary and bonus claims as per performance assessment					
The HRIS has led to effective level of compliance with the department objectives.					
The organization HRIS has standardized programmes and procedures for performance management.					
The HRIS has enhanced the ability of the firm to implement the performance evaluation.					

PART C

E-Training and development systems

8. Please indicate the extent to which you agree or disagree with the following statements. Please indicate by ticking [√] your view. The Value of Scale is given below

SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1)

	SA 5	A 4	U 3	D 2	SD 1
The HRIS is helpful in the generation of external and internal reports on training and development.					
The information generated from the HRIS helps the Sacco to determine when training and skill development are necessary.					
The HRIS has helped in making decisions on who are supposed to go for training and development.					
The HRIS has improved the training programmes.					
The HRIS has reduced the training and development expenses in the HR department.					
The HRIS has been effective in the evaluation and planning of the e-training.					
Our HRIS has reduced the time spent on training					
The HRIS has decreased the training expenses of the firm.					
The management has ensured that the competencies required by HR staff are adequate and appropriate.					
The ability to use the development strategies has improved by the use of HRIS.					
There has been proper and timely training in the firm.					

PART D

E-Human Resource Planning Systems

6. Please indicate the extent to which you agree or disagree with the following statements. Please indicate by ticking [√] your view. The Value of Scale is given below

SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1)

	SA 5	A 4	U 3	D 2	SD 1
Our HRIS has helped with forecasting staffing needs.					
HRIS information has helped the Saccos to make more effective decisions on promotions.					
The information generated from HRIS has helped on deciding when to hire.					
As a result of HRIS there is timeliness in the processing of HR functions.					
Our HRIS has made our HR decision making more effective.					
The HRIS has helped with data about employees and evaluation of their HR experiences.					
The HRIS has helped in the development of assignment for employees.					
The HRIS has helped in the analysis of internal, external, vacations and healthcare reports.					
The HRIS has helped in the statistics of employees and position description.					
The HRIS has improved the organization charting and workforce models within the Saccos.					
The HRIS has helped in the tracking and controlling of the different HR function.					
The HRIS has helped the HR in job change decisions.					
HRIS is used effectively in the making of the HR job budgets.					

PART E

E-Staffing System

5. Please indicate the extent to which you agree or disagree with the following statements. Please indicate by ticking [√] your view. The Value of Scale is given below

SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1)

	SA 5	A 4	U 3	D 2	SD 1
The HRIS is useful in staff absenteeism monitoring.					
The HRIS is useful in processing employment leave.					
The HRIS is effective in providing staff disciplinary procedure.					
The HRIS improved job analysis and work design.					
The HRIS provides quick responses and access to information.					
The HRIS helps in standardizing programmes and procedures for the work place.					
The HR department utilizes the HRIS for recruitment tasks.					
The HRIS has improved the EEO analysis and records.					
The HRIS has improved the job rotation exercise.					
The HRIS has improved employee skills systematization.					
The HRIS has helped our firm to make better decisions in choosing better people.					
The HRIS has improved the data maintenance process.					
Our HRIS has decreased the time spent on communicating information within our institution.					
Our HRIS has improved the data input process in the department of human resource.					
HRIS has increased levels of useful information.					

PART F

Organization Performance

4. Please indicate the extent to which you agree or disagree with the following statements. Please indicate by ticking [√] your view. The Value of Scale is given below

SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), SD-Strongly Disagree (1)

	SA 5	A 4	U 3	D 2	SD 1
As workers we are satisfied with the flexibility of the system leading to organization effectiveness.					
As workers we are actively involved with HRIS.					
Our HRIS has met our expectations.					
Our HRIS has improved the Human resource functions at the sacco					
As a result of the availability of the HRIS the staff are satisfied with human resource services delivered to them by the human resource department.					
The HRIS has helped to make informal staff decisions.					
The HRIS has helped in tracking and controlling the human resource functions in the firm.					
The information generated form the HRIS is shared with the top administrators.					
HRIS decreases the time spent on recruitment.					
HRIS decreased the time spent on training and development.					
HRIS has decreased the time spent on making staff decisions.					
HRIS has decreased the time spent on inputting the data.					
HRIS has decreased the time spent on communicating information within our institution.					
HRIS has decreased the time spent on processing paper work					
HRIS has decreased the time spent in correcting the errors in human resource department.					
The HRIS has reduced the time spent on making strategic human resource decisions.					
The HRIS has promoted the saccos competitive advantage and improved the market share					
The HRIS has enabled for proper service delivery and there increasing the customer base.					

APPENDIX 2; INTERVIEW SCHEDULE.

The information provided in this interview schedule will be used for research only and not provided to unauthorized persons and write the answers in brief.Please respond to the questions as accurately as possible.

1. Discuss in what ways the HRIS has helped in performance management in the organization.

2 Elaborate on how the e-performance management systems have had an effect on organization performance.

3 Explain further how the e-performance appraisal has helped to improve organization performance.

4 In brief explain how e-training and development systems have enhanced the performance of the human resource department.

5 Explain in details the elements that have been involved in the e-training and development systems.

6 Discuss how e-training and development has contributed to organization performance.

7 Elaborate on the various elements of e-human resource planning systems in the organization.

8 Discuss the contribution of e-human resource planning systems on organization performance.

9 Elaborate on the improvements that can be done to enhance the e-human resource planning systems.

10 Discuss the contribution of e-staffing systems on the organization performance.

11 Elaborate on the improvements that can be done on e-staffing systems in the firm.

Appendix 3: LIST OF SELECTED SACCOS IN KENYA.

Nairobi County

- Kenya Police Sacco
- Mwalimu National Sacco
- Stima Sacco
- UN Sacco
- Safaricom Sacco
- Kimisitu Sacco

Kiambu and Nyeri County

- Unaitas
- New Fortis(NyeriTrs) Sacco
- Metropolitan(Kiambu Trs) Sacco
- Bingwa Sacco

Mombasa County

- Imarika Sacco

Kericho County

- Imarisha Sacco
- Ndege Chai Sacco
- Simba Chai
- Boresha
- Kenya Highlands

Kisii County

- Gusii Mwalimu Sacco
- I & G (Kateco Trs) Sacco

Source: www.kuscco.co.ke

IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 20, Issue 5. Ver. V (May. 2018), PP 89-98
www.iosrjournals.org

E-Performance Management Systems and Organization Performance of Sacco's in Kenya

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Abstract: *Human resource information system (HRIS) is a concept which utilizes the information technology for effective management of the human resource, its functions and applications.E-performance management system is an important component of HRIS whose effects on organization performance remains largely unknown.Several studies both local and international have underscored the importance of HRIS on performance of organizations. However, the effects of the individual components of the system such as E-Performance Management were largely subsumed, hence, the exact impact of E-Performance Management is not known. Further, the focus of the studies was not on Saccos. Therefore, the purpose of the current study was to examine the effect of e-performance management systems on organization performance of Saccos in Kenya. The study was guided by the technology acceptance theory. The study employed a cross sectional survey design targeting a population of 54 respondents drawn from 18 Saccos in the country. Purposive sampling was used to select the 54 respondents who were mainly the employees in the human resource department. Questionnaires were used as data collection instruments and data was quantitative in nature. Data was analyzed using descriptive and inferential statistics and correlation and presented in tables. The validity and reliability of the instrument was determined by Cronbach. The results showed that E-performance management had a significant effect on the performance of Saccos. The study therefore recommended that firms should improve more on data management in areas of performance assessment to allow for timely and speedy delivery of services to the employees.*
Key words: *E-Performance Management Systems, Human Resource Information System, Organization*

Date of Submission: 07-05-2018 Date of acceptance: 23-05-2018

I. Introduction

Business organizations today find themselves operating in a highly competitive world characterized by among other things multiple stakeholder interests, increased regulations, demand for new or superior products, innovations, new entrants in the market, increased local and international labour movements and changing technology just to name a few (Albert et al., 2011). All these aggregated together with the firm internal characteristics,such as, size and complexity ultimately affect its performance and competitive positioning in the market. As a result internal service providers, such as, human resource (HR) function have been forced to re-examine their own competencies in the light of a dramatic increase of organizational demands on them (Gloet & Berrel, 2003). Evidently, businesses must find and adopt newer and more effective ways of measuring and managing their performance on a regular basis (Richard *et al*., 2011). According to Robert Kaplan (2003), professor at Harvard Business School: "Each organization must create and communicate ways to measure performance to reflect its unique strategy." Therefore, it follows that the first condition necessary to improve and achieve excellence in business is developing and implementing a system for measuring performance of the organization. With the benefit of the rapidly evolving technology, e-performance management systems are gaining currency in many organizations. In Kenya, several organizations including Saccos are adopting e-performance management systems which is one of the major components of the Human Resource Information System (HRIS).

1.1 Human Resource Information System (HRIS)

The development of Information and Communication Technologies (ICTs) has radically changed the world's social and economic lives, and has had a big effect on the way organizations are managed. Consequently, Human Resource Information System (HRIS) has emerged as a concept which utilizes the Information Technology for effective management of the human resource, its functions and applications. HRIS enables systematic procedure for collecting, storing, maintaining and recovering data required by the organizations about its human resources (Singh, Jindal, & Samim, 2011). HRIS support planning, administration, decision making and control. The system supports applications such as employee selection and placement, payroll, pension and benefits management, intake and training projections, career pathing, equity

monitoring and productivity evaluation. The information generated from HRIS increases coordination between the HR department and the top administrators in organizations (Tumuhirwe, 2011).

HRIS has been in operation in the Sacco industry in Kenya and includes the following activities in human resource management; employee information systems, payroll administration, job analysis and job design. The Saccos in Kenya are in the early and middle stages of HRIS development since they had begun the use of the system in 2001. The typical HRIS users are the first line managers and the middle level managers. A human resource department if well maintained ensures that the employees are motivated and therefore ready to maximize their outputs. Sacco customers are selective and mind the services provided. Such services can only be offered by a well-managed workforce. A major problem is that most Saccos have not changed their service delivery systems despite the growing need for better services by its members (Mudibo, 2005). The major components of a HRIS are; E-training and development system, E-human resource planning systems, E-staffing system and E-performance management system. The present study focused on the E-performance management system.

E–performance management system is used in organizations for assessing of performance through electronic means. E-performance management is the relational e-HRM function to support business processes. The tool has simplified performance contracting and appraisal. Using E-Performance Management, the goals of the organization are linked to the balanced scorecard elements giving the organization an overall view of performance capability from departments, sub departments and down to individuals (Ravisha&Pakkeerappa, 2013). HR managers continue to discover the benefits that come with adopting electronic employee assessment tools to support the performance review process and have determined that a unifying digital appraisal system has revolutionized their evaluation process, making it faster, easier and more effective (Lloyd, 2016). Ideally, each evaluation should serve as a source of information, reflection and inspiration for your esteemed staff members. Even employees with the highest performance ratings move forward more effectively after reviews with a solid sense of their current job performance, along with new goals for encouragement and enrichment.

1.2 Saccos in Kenya

According to the survey carried out by international cooperative alliance (ICA, 2010), the Kenya cooperative sector is rated the best with the highest revenue mobilization in Africa and the 7th in the world. Consequently, the Savings and Credit Cooperative Organizations (SACCO) sub sector occupies a strategic position in the social and economic development in the country. Currently, there are SACCOs in almost all sectors of the economy (Khumalo, 2008), making SACCO movement one of the economic pillars of the Kenyan nation. SACCOs play a significant role in the development of the economy and in raising the standards of living of the majority of the Kenyan population. They contribute to over 30 percent of the country's national savings (Ndung'u, 2010; Republic of Kenya (RoK), 2008). By the year 2010, Kenya had over 5,000 registered SACCOs with a membership of about 7 million. As at the year 2010, the Saccos had mobilized savings of over Kshs 200 billion and an asset base valued at Ksh 300 billion, the Sacco subsector also continued to grow rapidly at the rate of 25% per year (Cooperative Bank of Kenya, 2012). Further, the regulator - SACCO Societies Regulatory Authority (SASRA) (2013) - reported that as at December 2012, one hundred and twenty-four (124) had been licensed as deposit taking SACCOs while another 20 had Letters of Intent.

Based on these performance reports, it is evident that the subsector has a lot of promise if the Saccos increased their service delivery capabilities. There is, therefore, an urgent need by the Saccos to pay close attention to the services that they offer their members and how this services are offered. Quality and user friendly services are the major determinants in the performance of an institution in the financial sector (Ademba, 2010), and as such, innovations in provision of the services is crucial. Service quality in modern organizations including Saccos is largely leveraged on human resource and technology interaction. This has led to the rise of Human Resource Information System (HRIS). Saccos in Kenya have incorporated HRIS and this includes 75% of the Saccos which include 18 of the Saccos which had started using the HRIS from 2001 to date. Saccos which have been formed recently are in the early stages which deal more with employee information processing (Ireri, 2015). Many Saccos still use HRIS as database HR transactional tasks only, and have not yet optimized the actual capability of HRIS. Hence, little is known about the e-performance measurement function of the HRIS in the Saccos.

Several studies both local and international have underscored the importance of HRIS on performance of organizations (Al-Raisi et al., 2011; Kundu&Kadian, 2012; Chwodhury*et al*. 2013; Odhiambo&Kamau, 2013; Midiwo, 2015; Mbugua, 2015; Opiyo&Abok, 2015). However, the effects of the individual components of the system such as E-Performance Management were largely subsumed, hence, the exact impact of E-Performance Management remained unknown. Further, the focus of the studies was not on Saccos, thus, revealing little about the importance of e-performance management systems on organization performance of Saccos in Kenya. This, therefore, motivated the current study to examine the effect of e-performance management systems on organization performance of Saccos in Kenya.The study, thus, sought to test the hypotheses;

Ho: *E-performance management system does not have a statistically significant effect on organizational performance in Saccos in Kenya*

Ha: *E-performance management system does have a statistically significant effect on organizational performance in Saccos in Kenya*

II. Literature Review

2.1 Theoretical Review

2.1.1 Technology Acceptance Model

The technology acceptance model is the information systems theory that shows how users come to accept and use technology broadly it emphasize that the intensity of an individual intention to use a technology can be explained jointly by his or her perception about the technologies usefulness and attitude towards the technology in the firm (Chau & Hu, 2001).The model suggested that when organization users are presented with a new technology, a number of issues influence their decision about how and when they will use the technology, perceived usefulness and perceived ease of use (Bagozzi, Davis &Warshaw, 2012).

King and He (2006) concluded in a statistical meta-analysis of the technology acceptance model as applied in various fields analyzed 88 published studies that provided sufficient data to be credible. The results showed that TAM was a valid and robust model that has been largely used, but which potentially has wider implications in organizations. The original TAM according to (Fu *et al*., 2006) was developed using the setting of MIS usage within firm's boundaries, where availability of technological resources, training of staff, MIS experience and expectations of users were homogeneous to some extents. TAM would be used to guide in the conceptualization of the adoption of information systems in Saccos. As guided by the theory, adoption would be used to measure in terms of the actual usage of IT in human resource management functions mainly in performance management within the firm.

2.1.2 E-Performance Management System

E-performance management is the planning, implementation, and application of information technology in managing the PMS. E-performance management is a part of e-HRM or HR information system (HRIS) (Al-Raisi, Amin & Tahir, 2011). E-Performance Management is a web-based tool, has been designed to make performance reviews easier in organizations (Ravisha&Pakkeerappa, 2013). Through IT enabled performance management systems (PMS), it is possible to integrate strategies, policies, and practices of the organization with the performance management process (Bhattacharyya, 2017). This enables for faster measurements of indicators of performance and, therefore, leads to efficiency in the performance appraisal process and provides permanent records which are transparent leading to a motivated workforce and therefore increasing the performance of the employee. This will provide accurate estimation of productivity which will help to establish promotion plans and compensation programs.E-performance management system also provides flexible application components to develop and establish individual performance policies, long term performance management objectives and performance oriented compensation strategies.

The benefits of E-performance management for future employee reviews are: Faster and easier administration and completion meaning managers spend less time and intensive effort on performance reviews (Kariznoee, Afshani&Moghadam, 2012). Another benefit is better organization for context and understanding. With electronic performance reviews, it is possible to capture organizational, divisional and/or departmental goals in the tool, which the manager can examine and share with employees. This data helps the management see each employee's individual performance, as well as within the context of the organization to see how his or her performance rates among peers (Kundu&Kadian, 2012). Sharing this information with employees gives them a unique view on their performance and how it benefits the whole organization while sharing it with managers can help them guide team members to better productivity and improved performance (Khashman& Al-Ryalat, 2015). E-performance management systems also improve data collection and analysis. An electronic assessment system will give you the tools to gather and analyze data need by the management. This might include high-performers, underperformers, development and training needs, progress on goals, alignment of goals, and ratings by department. The system also enables feedback, feedback – positive and not-so positive – is essential for every employee's growth and motivation within the organization. It is important to let employees know how well they have adjusted to their job tasks. Whether they have exceeded expectations or fallen short, information becomes an invaluable tool. Finally, it helps protect the organization legally (Bharti, 2015). Through proper performance documentation, it can help dispel litigations of unfair termination.

2.2 Empirical Review

A study by Al-Raisi*et al.,* (2011) in the United Arab Emirates (UAE) revealed that E-Performance Management systems have major components that dramatically affect the efficiency and effectiveness of governmental operations. It facilitates the monitoring and evaluating of employee performance by supervisors and organizations. Midiwo (2015) on the influence of HRIS on the performance of Kenyan Public Universities revealed that HRIS application on recruitment and selection, training and development, payroll and performance management cumulatively provide quality, accurate and consistent data that enables effective and efficient decision making for organizational competitive advantage The results further confirm that HRIS reduces operational cost compared to manual systems as it helps to maintain data with more accuracy and in less time. Mbugua (2015) examined the role of human resource information systems in organizational effectiveness in Kenya Commercial Bank. The study found that HRIS based employee performance appraisal has created environments conducive for effective organization through better collaborative relationships, positive perception toward the company by stakeholders, more efficiency and quality in the work and service provisions, better change management prospects through low resistance to changes among other important denominators.

Odhiambo and Kamau (2013) investigated the impacts of the use of electronic based employee appraisal techniques on employee and organization performance in CAK established that HRIS based appraisal technique has more positive benefits to an organization in respect of the performance, profitability, competitiveness, innovation, flexibility and motivation. Further, according to the findings the use of HRIS based processes results in high commitments, better customer services provisions, increased profitability productivity and production with low wastes in terms of time and resources thus contributing to high organizational effectiveness. Opiyo and Abok (2015) in her study indicated that e-training, e-recruitment, and e-performance appraisal has an effect on organization performance in commercial banks in Kenya.

III. Research Methodology

3.1 Research Philosophy

The research philosophy that was used in the study was that of post positivist philosophy. This held a deterministic approach which used the underlying philosophy that that uses probability to determine effects or outcomes (Kothari, 2008). It reflected the need to identify and assess the causes that influence the outcome. It reduced the ideas into small, discrete set of ideas to test such as variables that comprise of hypotheses and research questions. Further, it enabled thedevelopment of numeric measures of observations for studying the behavior of respondents towards their perception of HRIS implementation in the organization.

3.2 Research Design

The study adopted a cross-sectional survey research design, whereby information was gathered on a population at a single point in time because a pre-determined set of questions was used to elicit a pre-formulated set of feelings and answers from the respondents based on the objectives of the study (Mugenda&Mugenda, 2003). The main objective of this type of design was to obtain insight into the relationships between variables and new ideas relating to the research problem.

3.3 Target Population

The study targeted 18 Saccos in Kenya that utilized human resource information system or use human resource management modules. These Saccos were chosen because they are in their early and middle stages of the implementation of HRIS. From these, the accessible population were the human resource managers, assistant human resource managers and human resource officers in each of the 18 Saccos who are in charge of human resource practices and HRIS implementation within the Saccos.

3.4 Sampling Design

The study adopted a purposive sampling technique, whereby all Saccos using HRIS were involved in the study. Hence this formed a sample frame for the study of 54 personnel in the Saccos who are both in the early and middle stages of HRIS adoption who were directly in charge of HRIS implementation. The human resource manager, assistant human resource manager and human resource officer in each of the 18 Saccos were purposively selected for the study purposes.

3.5 Data Collection Instruments and Procedure

The study used primary data collected using structured (closed-ended) questionnaires. The questionnaire was pilot tested and also subjected to validity and reliability tests. Content validity was employed to test the validity of the research instrument while internal consistency test using the Cronbach's alpha reliability coefficient was used to estimate the reliability of the instruments (Saunders, Lewis& Thornhill, 2009).

The questionnaire had 75 items which had an overall Cronbach's alpha reliability coefficient of 0.969, this was above the recommended values of 0.700 and, therefore, considered "acceptable" for the study.

3.6 Data Analysis and Presentation

The analysis was quantitative in nature and was analyzed using descriptive and inferential statistical methods. Descriptive measures involved frequencies, percentages and chi-squares while inferential statistics used were the Pearson correlation co-efficient and regression analysis. The regression model was assumed to hold under;

$y_i = ß_0 + ß_1 + \varepsilon$

or more precisely**;**

$y_i\ (OP) = ß_0 + ßPM + \varepsilon$

Where:

$y_{i(OP)}$	Organization performance (value of dependent variable)
$ß_0$	Model Constant
$ß_1PM$	E- performance management systems and its coefficient
E	error term

IV. Results and Discussions

4.1 Introduction

The researcher issued 54 questionnaires to selected Saccos in Kenya using the human resource information systems. The 54 questionnaires were successfully filled and returned representing 100% response rate was.

4.2. General Characteristics of Respondents and Established HRIS

Table 4.1: General Characteristics of Respondents

	Category	Frequency	Percent
Gender (n = 54)	Male	33	61.1
	Female	21	38.9
Age of the respondents (n = 54)	Between 18-25 years	6	11.1
	Between 26-33 years	20	37
	Between 34-41 years	10	18.5
	Over 42 years	18	33.3
Respondents experience in years (n = 54)	1-2 years	21	38.9
	3-4 Years	16	29.6
	More than 4 Years	17	31.5
Duration of using HRIS (n = 54)	Less than 1 year	8	14.8
	Between 1-2 years	11	20.4
	Between 3-5 years	23	42.6
	More than 5 years	12	22.2

SOURCE: Research data (2018)

The respondents' characteristics in gender indicated that majority of the respondents were male which formed 61.1% of the respondents and 38.9 % of the respondents were female. The age of the respondents indicated that 37% were between 26-33 years, while 33.3% were above 42 years, those between 34-41 years were 18.5% of the respondents and lastly those at the age of between 18-25 years had 11.1% of the respondents. This indicated that majority of the respondents were between 26-33 years in the human resource department. The respondents experience in years in the human resource department showed that majority had worked between 1-2 years which is shown by 38.9% while those with more than 4 years were 31.5% while those that had worked for 3-4 years had 29.6% which showed that majority had worked in the department for more than one year. This showed that they had enough experience in the human resource department. In relation to the duration of using the HRIS majority of the respondents had used it between 3-5 years which was 42.6%, while for more than 5 years was 22.2%, then those who had used it for 1-2 years had 20.4% while 14.8 % of the respondents had been less than one year. This indicated that the respondents had used the HRIS for a reasonable long time to understand its operations in the organization and therefore its contribution to the organization performance.

4.3 The Effects of E-performance Management Systems on Organization Performance

Table 4.2: Effects of E-performance Management Systems on Organization Performance

E-Performance Management systems (n = 54)	SD	D	UD	A	SA	χ^2	*P value*
1. The HRIS has been used for effective payment and salary administration.	0(0%)	0(0%)	0(0%)	1(2%)	53(91%)	50.074	0.000
2. The HRIS is used in performance appraisal and review of employees.	0(0%)	1(2%)	18(30%)	11(20%)	24(44%)	21.704	0.000
3. The HRIS provides for the determination of employment rewards.	0(0%)	3(6%)	5(9%)	38(70%)	8(15%)	60.222	0.000
4. The HRIS is used in absence monitoring for wage administration and calculation of overtime.	0(0%)	0(0%)	14(26%)	31(57%)	9(17%)	14.778	0.001
5. The HRIS is not effective in merit increases and bonus incentives.	1(2%)	15(28%)	15(28%)	23(42%)	0(0%)	18.593	0.000
6. The HRIS results in not effective in claim processing and establishment of benefits statement.	2(4%)	20(37%)	16(30%)	15(27%)	1(2%)	28.037	0.000
7. The HRIS helps in making of estimates of productivity of employees.	0(0%)	7(13%)	12(22%)	34(63%)	1(2%)	46.000	0.000
8. The organization has been able to have proper reward management by use of HRIS.	2(4%)	7(13%)	11(20%)	26(48%)	8(15%)	30.630	0.000
9. As a result of the knowledge of HRIS, the HR staffs perform-ance management is good.	0(0%)	2(4%)	11(20%)	33(61%)	8(15%)	40.667	0.000
10. As a result of our HRIS, there is timeliness in the processing of salary and bonus claims.	1(2%)	1(2%)	2(4%)	37(68%)	13(24%)	88.963	0.000
11. The HRIS has led to effective level of compliance with the department objectives.	0(0%)	1(2%)	2(4%)	39(72%)	12(22%)	69.704	0.000
12. The organization HRIS has standardized programs and procedures for performance management.	0(0%)	0(0%)	1(2%)	31(57%)	22(41%)	26.33	0.000
13.The HRIS has enhanced the ability of the firm to implement the performance evaluation.	0(0%)	0(0%)	0(0%)	24(44%)	30(56%)	0.667	0.414

SOURCE: Research data (2018)

The respondents in the study strongly agreed that HRIS had been used for effective payment and salary administration which is indicated by $(\chi^2 = 50.1, P \leq 0.001)$ this showed that the observed data was statistically different from the expected values which indicated that there was a strong, positive and significant relationship between HRIS and effective payment and salary administration in the firm. This implied that the system was used for salary administration and had proper processing of pay. They also strongly agreed that HRIS was used in performance appraisal and review of employees with $(\chi^2 = 21.7, P \leq 0.001)$ this indicated the effect of HRIS on performance appraisal and review of employees was positive and significant which meant the HRIS had been highly used for performance appraisal. This is supported by Jarrar and Schiuma, (2007) in which the authors stated that e-performance helped the organization to retain and motivate top talent by gaining insights into top performers in the firm. The respondents agreed with HRIS provided for determination of employee rewards $(\chi^2 = 60.2, P \leq 0.001)$ hence the strong and significant association between HRIS and calculations of employee rewards. This indicated that HRIS provided for the determination of employee rewards. This implied that the system provided more accurate calculations on employee rewards.

While majority of the respondents were in agreement that HRIS was used in absence monitoring, wage administration and calculation of overtime which had a $(\chi^2 = 14.8, P \leq 0.001)$ this indicated that the observed data was statistically different from the expected values and therefore a strong, positive and significant relationship between HRIS and absence monitoring, wage administration and calculation of overtime. This showed that the system was able to help with the establishment of extra work and provided appropriate rewards. The respondents agreed that HRIS was not effective in merit increases and bonus incentives which had $(\chi^2 = 18.6, P \leq 0.001)$ this indicated that there was an association between HRIS and non-effectiveness in merit increases and bonus incentives in the firm which was positive and significant. This implied that HRIS was

not being used for adequate merit and bonus incentives management and for the establishment of proper merit and bonus increases.

The majority of the respondents disagreed that HRIS resources was not effective in claim processing and establishment of benefits statements this had $(\chi^2 = 28.0, P \leq 0.001)$ this indicated that the statistics provided strong evidence against the null hypothesis therefore indicated a strong, positive and significant relationship between HRIS and effective claim processing and establishment of benefits. This showed that the system provided efficiency in adequate benefits for the employees and proper scheduling of claims. The respondents in the study agreed that HRIS helped in the making of estimates of productivity of employees with $(\chi^2 = 46.0, P \leq 0.001)$ which means there was a significant and positive relationship between HRIS and determination of estimates of productivity.

The respondents also agreed that organization had been able to have proper reward management by use of HRIS with $(\chi^2 = 30.6, P \leq 0.001)$ this indicated that association between HRIS and proper reward management was positive and significant. The researcher, therefore, concluded that HRIS was helpful in the establishment of financial rewards and providing proper estimates of employee productivity. The respondents agreed that as a result of the knowledge of HRIS, the HR staff performance management was good and had the results as $(\chi^2 = 40.7, P \leq 0.001)$ indicating that the effect of Knowledge of HRIS and HR staff performance management was positive and significant. The respondents agreed that the system was more effective in performance management in the organization. This has been supported by Frayne and Geringer, (2005) in which the authors indicated that integration between e-performance management and competency data ensured effective communication. It also increased organizations business success by improving employee engagement with the business objectives in a clearer process.

The respondents agreed that as a result of HRIS, there was timeliness in the processing of salary and bonus claims which had $(\chi^2 = 89.0, P \leq 0.001)$ this indicated that there was a strong and positive correlation between HRIS and timeliness in the processing of salary and bonus claims. This showed that the system was able to be fast in processing the salary due to the software as opposed to the manual system. This is in agreement with the study by Frayne and Geringer (2005) in which the authors agreed that the HRIS was able to help the management to achieve true pay for performance. The respondents agreed that HRIS had led to effective level of compliance with the department objectives with $(\chi^2 = 69.7, P \leq 0.001)$ this indicated that the observed data were statistically different from the expected values therefore rejection of the null hypothesis which meant there is a significant and strong relationship between HRIS and effective compliance with the department objectives. This showed that there was proper tracking of the achievement of goals and there for proper contribution to the department goals.

The respondents also agreed that the organization HRIS had standardized programmes and procedure for performance management with $(\chi^2 = 26.3, P \leq 0.001)$ this showed that there was strong, positive and significant relation between HRIS and standardized programs and procedure for performance management. This indicated that HRIS provided proper standardized format on how to manage performance management and thereby providing efficiency in the department. The respondents also strongly agreed that HRIS had enhanced the ability of the firm to implement the performance evaluation with $(\chi^2 = 0.667, P \leq 0.001)$ this indicated that that the statistics provided strong evidence against the null hypothesis therefore there was a strong association between HRIS and enhanced ability of the firm to implement the performance evaluation. This implied that the system was able to proper evaluate the performance based on the performance criteria of the firm and proper logging in of performance metrics. This is supported by the study of Bharti (2015) in which the findings indicated a strong significant positive relationship between HRIS components and performance. This is supported by the study byKariznoee, Afshani and Moghadam (2012) a study that was done in manufacturing food companies, the authors found a significant and positive relationship between HRIS and the performance of employees.

4.3 Effects of HRIS on the Profitability on the Basis of Human Resource Cost

Table 4.3: Effects of HRIS on the Profitability Based on Cost

(n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. The HRIS has decreased the cost per hire.	0(0%)	2(4%)	8(15%)	35(65%)	9(17%)	47.78	0.000
2. The HRIS has decreased training expenses.	0(0%)	0(0%)	7(13%)	38(70%)	9(17%)	33.44	0.000
3. The HRIS has decreased	0(0%)	0(0%	6(11	41(54	7(13%	44.11	0.000

	recruiting expenses.		)	%)	%)	)		
4.	The HRIS has decreased the data input expenses.	0(0%)	0(0%)	8(15 %)	36(67 %)	10(19%)	27.11	0.000

SOURCE: Research Data (2018)

The respondents agreed that HRIS had decreased the cost per hire which had $(\chi^2 = 47.8, P < 0.05)$ hence the association between HRIS and decreased cost per hire was significant. This showed that HRIS had significantly reduced the cost per hire which is usually high due to the manual processing of new hires in the organization. The respondents also indicated that they agreed that HRIS had decreased training expenses with $(\chi^2 = 33.4, P < 0.05)$ this indicated a strong, positive and significant relationship between HRIS and decreased training expenses, which implied that HRIS had significantly reduced the expenditure associated with training. The respondents in the study agreed that HRIS had decreased recruiting expenses with $(\chi^2 = 44.1, P < 0.05)$ this indicated that the data had strong evidence against the null hypothesis hence HRIS had a positive and significant influence on decreased recruiting expenses. This is supported by the study of William (2009) on which the author agreed that the e-recruitment showed reduced recruitment spending at the expense of traditional methods of recruitment. Majority of the respondents also agreed that HRIS had decreased the data input expenses which had $(\chi^2 = 27.1, P < 0.05)$ this indicated that the association between HRIS and decreased data input expenses was positive and significant. The study concluded that HRIS had reduced the expenses of the department and thereby contributing to the profitability of the SACCO. This ensured that the human resource costs had been minimal since the use of HRIS. This is in agreement with (Pfieffelmann*et al*.,2010) who stated that the internet enabled applications have changed the recruitment process making it effective and efficient. This is also supported by Jarrar and Schiuma (2007) in which the authors stated that streamlining the performance management to be web based the company can be able to cut costs.

Regression Analysis

Regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variable. The results are given in Table 2.

Table 4.4: Multiple linear regression analysis model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.546[a]	0.2981	0.2846	1.5382		
	Sum of Squares	df	Mean Square	F	Sig.
Regression	121.131	1	121.131	51.1928	.000[b]
Residual	123.041	52	2.36617		
Total	244.172	53			

a. Dependent Variable: Organization Performance of Saccos

b. Predictors: (Constant), E-performance

Looking at the results in Table 4.4, the model correlation coefficient is r = 0.546 is higher than any other zero order value in the table and in addition, its coefficient of determination adjusted r square = 0.2846, also indicates that the multiple linear regression model could explain for approximately 28.5 % of the variations in theperformance of Saccos in Kenya attributable to e-performance management system.

Table 4.5: Summary of Multiple Regression Analysis

Model		Unstandardized Coefficients B	SE	Standardized Coefficients Beta	t	Sig.
1	(Constant)	28.787	8.517		3.38	0.001
	E-performance	0.546	0.178	0.337	3.061	0.004

a. Dependent Variable: Overall Performance

b. Predictors: (Constant), E-performance

The results in Table 4.5, indicate that E-performance management component of HRIS strongly influenced the Organization Performance of Saccos in Kenya ($\beta = 0.337$; $p < 0.05$). This was a significant result and led to the rejection of the null hypothesis;

Ho: *E-performance management system does not have a statistically significant effect on organizational performance in Saccos in Kenya*

And acceptance of the alternative hypothesis;

Ha: *E-performance management system does have a statistically significant effect on organizational performance in Saccos in Kenya*

The study therefore established that e-performance management was an important element of HRIS influencing the organization performance of Saccos in Kenya. This finding is supported by Khashman and Al-Ryalat (2015) whose findings similarly revealed that HRIS dimensions for e-performance appraisal significantly positively impacted on the operational activities. The finding also agrees with Bharti (2015) whose findings showed that there was a significant positive relationship between HRIS components among them e-performance management and organization performance.

V. Conclusions and Recommendations

Conclusions

Based on the results of the study, it was observed that HRIS led to timeliness in the processing of salary and bonus claims and it also resulted in effective level of compliance with the department objectives, standardization of programmes and procedures for performance management. Additionally, HRIS was being used for effective administration of compensation and also in performance appraisal and review of employees. Therefore, it can be concluded that there existed a relationship between e-performance management systems and organization performance of Saccos at the 5% level of significance. Moreover, the variable positively affected the firms market share and human resource efficiency, however, it had a negative influence on the cost effectiveness, time and speed of human resource processes of the firm. This finding was consistent with Kundu and Kadian (2012) who established that the extensive use of HRIS affected performance and reward management. Similar conclusions were arrived at by Opiyo (2015) who found that e-performance appraisals had an effect on organization performance of commercial banks in Kenya.

Recommendations

Following the foregoing findings, the study recommended concerning e-performance management systems that firms should improve more on data management in areas of performance assessment to allow for timely and speedy delivery of services to the employees. The firms should also incorporate more cost effective performance management programs to allow for lean processes. The system should also have proper absence monitoring and calculation of wages and for proper allocation of employment rewards through proper analysis of productivity levels.

References

[1]. Ademba, C. (2010, October). Challenges facing SACCO regulations in Africa. In 11th SACCA Congress, Swaziland. Retrieved May (Vol. 9, p. 2014).

[2]. Albert, R., Escot, L., &Fernández-Cornejo, J. A. (2011). A field experiment to study sex and age discrimination in the Madrid labour market. The International Journal of Human Resource Management, 22(02), 351-375.

[3]. Al-Raisi, A., Amin, S., & Tahir, S. (2011), Evaluation of e-performance analysis and assessment in the United Arab Emirates (UAE) Organizations, Journal of Internet & Information System, 2(2), 20 –27

[4]. Bagozzi, R. P., Davis, F. D., & Warshaw, P. R. (2012). Development and Test of a Theory Of Technological Learning and Usage. Human Relations, 45 (7).

[5]. Bharti, P. (2015). Impact of E-HRM System on Organizational Performance: A Case Study on Banking Sector. International Conference of Advance Research and Innovation (ICARI-2015), 202-204.

[6]. Bhattacharyya, D.K. (2017). Performance Management Systems and Strategies. O'Reilly.

[7]. Chau, P. Y., & Hu, P. J. H. (2001). Information technology acceptance by individual professionals: A model comparison approach. Decision sciences, 32(4), 699-719.

[8]. Chowdhury, A. M. R., Bhuiya, A., Chowdhury, M. E., Rasheed, S., Hussain, Z., & Chen, L. C. (2013). The Bangladesh paradox: exceptional health achievement despite economic poverty. The Lancet, 382(9906), 1734-1745.

[9]. Cooperative Bank of Kenya (2012).Cooperative Bank of Kenya Report on the Sacco movement in Kenya, AFRACA workshop. Nairobi, Kenya. Available on www.afraca.org/main.(Accessed on 25th September 2015)

[10]. Frayne J. M., &Geringer M. J. 1995. A social cognitive approach to examine joint venture general manager performance. Group and Organizational Management,19: 240–262.

[11]. Fu, J. R., Farn, C. K., & Chao, W. P. (2006). Acceptance of electronic tax filing: A study of taxpayer intentions. Information & Management, 43(1), 109-126.

[12]. Gloet, M., &Berrel, M. (2003). The dual paradigm nature of knowledge management: Implications for achieving quality outcomes in human resource management. Journal of Knowledge Management, 1, 78-89.

[13]. Jarrar, Y., &Schiuma, G. (2007). Measuring performance in the public sector: challenges and trends. Measuring Business Excellence, 11(4), 4-8.

[14]. Kaplan, R. D. (2003). Warrior politics: why leadership demands a pagan ethos. Vintage.

[15]. Kariznoee, A., Afshani, M., &Moghadam, M. R. H. (2012). The examine of effect of E-HRM on employee's job performance. Advanced Research in Economic and Management Sciences (AREMS), 6, 275-282.

[16]. Khashman, A. M., & Al-Ryalat, H. A. (2015). The impact of electronic human resource management (E-HRM) practices on business performance in Jordanian telecommunications sector: The employees perspective. Journal of Management Research, 7(3), 115-129.

[17]. Khumalo, G. (2008). South Africa: KZN, Kenya Partner to Develop Co-operative College. Free Africa Current Affairs Journal. 2,1-3.

[18]. King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. Information & management, 43(6), 740-755.

[19]. Kothari, C. K. (2008). Research Methodology: Methods & Techniques (3rd ed.). New Delhi: New Age publishers

[20]. Kundu, S. C., &Kadian, R. (2012). Applications of HRIS in human resource management in India: A study. European Journal of Business and Management, 4(21), 34-41.
[21]. Lloyd, V. (2016). Five key benefits of Electronic Performance Review. CIPD
[22]. Mbugua, C.N. (2015). The Role of Human Resource Information Systems in Organizational Effectiveness: A Case Study of Kenya Commercial Bank. International Journal of Business and Commerce, 4(6), 99-145
[23]. Midiwo J. (2015). Influence of Human Resource Information Systems on the Performance of in Kenyan Public Universities. Unpublished Doctoral Dissertation, Jomo Kenyatta University of Agriculture and Technology
[24]. Mudibo, E. K. (2005). Corporate Governance in Co-operatives the East African Experience. Conf. Pan-African Consultative Forum on Corporate Governance 2005, Dakar, Senegal.
[25]. Mugenda, O.N.,&Mugenda, A.G. (2003). Research Methods: A Quantitative and Qualitative Approach. Nairobi: ACTS press.
[26]. Ndung'u, G. (2010). Orderly movement. Business Post, 1, 28-30.
[27]. Odhiambo, W., &Kamau, P. (2013). Public Procurement: Lessons from Kenya, Tanzania and Uganda. OECD Working Paper NO.208. OECD Development Centre. on http/www.wto.org, on 15th Dec. 2009.
[28]. Opiyo, A. P., &Abok, A. (2015). Effects Of Human Resource Information System On Performance Of Commercial Banks In Kenya: A Case Of Kenya Commercial Bank. Journal of Business Management, 1(1).
[29]. Pfieffelmann, B., Wagner, S. H., &Libkuman, T. (2010). Recruiting on corporate web sites: Perceptions of fit and attraction. International Journal of Selection and Assessment, 18(1), 40-47.
[30]. Ravisha, B., &Pakkeerappa, P. (2013). E- Performance Management. Mangalore University, India
[31]. Republic of Kenya (2008). Medium Term Plan (2008–2012) For The Financial Services Sector. Nairobi: Government printer. Republic of Kenya. (2008). Vision 2030 First Medium Term Plan. A Globally Competitive and Prosperous Kenya 2008. Nairobi: Government Printer.
[32]. Richard, O. Roh, H., & Pieper, J. R. (2013) The link between diversity and equality management practice bundles and racial diversity in the managerial ranks: Does firm size matter? Human Resource Management, 52(2),215-242
[33]. Saunders, M., Lewis, P., & Thornhill, A. (2009). Research Methods for Business Students (5th ed) Essex: Pearson Education.
[34]. Singh, H. P., Jindal, S., &Samim, S. A. (2011). Role of Human Resource Information System in banking industry of developing countries. In The First International Conference on Interdisciplinary Research and Development (Vol. 31).
[35]. The SACCO Societies Regulatory Authority. [SASRA] (2013). SACCO Supervision Annual Report 2012 (Deposit Taking Saccos), Nairobi: SASRA
[36]. Tumuhirwe, O. (2011). Improving Human Resource Management services delivery through information technology: A Case Of Selected Organisations. Makerere University.
[37]. William, H. (2009). E-recruitment: Rethinking recruitment. Personnel today survey.

IOSR Journal of Business and Management (IOSR-JBM) is UGC approved Journal with Sl. No. 4481, Journal no. 46879.

Doreen A. Njeje "E-Performance Management Systems and Organization Performance of Sacco's in KenyaIOSR Journal of Business and Management (IOSR-JBM) 20.5 (2018): 89-98.

International Journal of Economics, Commerce and Management
United Kingdom Vol. VI, Issue 7, July 2018
http://ijecm.co.uk/ ISSN 2348 0386

E-HUMAN RESOURCE PLANNING SYSTEMS AND ITS EFFECT ON ORGANIZATIONAL EFFICIENCY OF SACCOS IN KENYA

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Abstract

Organizations must prioritize HR resources in order to improve their overall internal efficiency while adding bottom-line value to the enterprise. This requires an approach that aligns people, processes and technology. Consequently, information technology analogues have emerged to support and optimize the HRP function. However, the effect of these technology based HRP systems on organizational efficiency in financial services sector organizations such as Saccos has not been rigorously examined in previous studies. Hence, the aim of this paper was to examine the effect of e-human resource planning systems and its effect on organizational efficiency of Saccos in Kenya. The study employed a cross sectional survey design which targeted 54 respondents as the population and purposive sampling was used to select the 54 respondents who were mainly the employees in the human resource department. Questionnaires were used as the data collection instruments and data was quantitative in nature. Data was analyzed using descriptive and inferential statistics. The study found that e-human resource planning had no significant influence on organization efficiency. Therefore, it is recommended that for the e-human resource planning systems the firm need to incorporate more systems which allow for adequate strategic planning in the firm.

Keywords: e-human resource, HRIS, organizational efficiency, planning systems

INTRODUCTION

The competitive forces that managers face today and will continue to confront in the future demand organizational excellence. The efforts to achieve such excellence—through a focus on learning, quality, teamwork, and reengineering—are driven by the way organizations get things done and how they treat their people. Those are fundamental HR issues, therefore, achieving organizational excellence, which is largely defined by efficiency, must be the work of HR. However, achieving organizational efficiency is still a challenge to many organizations for most part due to their approach to resource management and more specifically human resource. According to IBM (2006), HR organizations must prioritize resources in order to improve their overall internal efficiency while adding bottom-line value to the enterprise. Seldon (2007) also explains that technical, cost, and allocative efficiencies are the basis upon which decisions ultimately must be founded if the aim is to obtain the most value from available resources. As a result, organizations are constantly looking for solutions that will enable them to deliver high-value services and tools to employees, automate processes and workflow, and align their activities with business objectives. Achieving these goals is the initial step in moving from a human resources system to an e-HR system that represents a new approach to aligning people, processes and technology (IBM, 2006).

To a great extent, the efficiency and effectiveness of organizations depend on effective human resource planning (Omoankhanlen, 2013). Effective human resource planning is a process of analyzing an organization's human resource needs under changing conditions and developing the activities necessary to satisfy these needs (Biswajeet, 2010). With the speedy development of Japanese economy, countries all over the world discovered that the rapid growth of any economy did not lie in attaching single importance to material factors such as the production system. Hence, organizations are realizing that it is imperative to hire employees who can do the job and be successful at it. It is imperative, therefore, that the organization find these people, bring them into the organization and maintain their services. This requires effective human resource planning (HRP) and implementation. However, it is unfortunate that many organizations had to suffer due to improper HRP. Further, the present day's organizations can no longer afford just hire to for the sake of hiring neither can they rest on the belief that individuals will stay with the organization through thick and thin (Decenzo & Robbins, 1998).

Human resource has received keen attention because of its recognition that better output could be gained from the use of information systems for managing human resources effectively. Companies, which want to be the most competitive companies against their competitors in their sector in the market, have to use actively HRP as a gun that enhances their organizational performance and makes them leaders of the market. The challenge for any

organizational performance is generally indicated by the effectiveness of an organization to achieve its objectives and efficiency to use the resources properly, satisfaction of employees and customer innovation, quality products and services and thereby ability to maintain unique human resource pool (Dyer & Reeves,1995; Katou & Budwar, 2007). For example, Yılmaz and Bulut (2015) examined the relationship between HRP and organizational performance (OP) among firms that operate the manufacturing of textile products as members of Bursa Chamber of Commerce and Industry (BCCI) in Turkey. The study found empirical evidences to support the hypothesis that there was a meaningful relationship between them. Consequently, information technology analogues have emerged to support and optimize the HRP function. However, the effect of these technology based HRP systems on organizational efficiency in financial services sector organizations such as Saccos has not been rigorously examined in previous studies.

Saccos in Kenya contribute significantly to the financial services sector and provide essential support to the formal and informal sectors of the economy. It is, therefore, imperative that the Saccos to pay close attention to the services that they offer their members and how these services are offered. Innovations in provision of the services is crucial, quality and user friendly services are the major determinants in the performance of an institution in the financial sector (Ademba, 2010). A growing number of Saccos in the country have incorporated HRIS and these includes 75% of the Saccos which include 18 of the Saccos which had started using the HRIS from 2001 to date. Saccos which have been formed recently are in the early stages which deal more with employee information processing (Ireri, 2015). However, most Saccos still use HRIS as database HR transactional tasks only, and have not yet optimized the actual capability of HRIS. Hence, little is known about the e- human resource planning systems on the organizational efficiency of the Saccos. Therefore, the purpose of this study was to investigate e-human resource planning systems and its effect on organizational efficiency of Saccos in Kenya

LITERATURE REVIEW

Resource Flow Theory

Management theorist Henry Mintzberg adopted the concept of flows into the theory of organization. The researcher used the flows of authority, material, information and decision processes between line and staff units to illustrate organizational complexity (Mitzberg H, 1979). The resource based view argued that firms possess resources, a subset of which enables them to achieve competitive advantages and a subset of those that lead to superior long term organization performance. The four attributes of competitive advantage included mainly access

to capital, IT managerial skills, technical skills and proprietary technology. A resource-flow view of the HRIS focused on the flow of human resources through the firm. It recognized that the firm's environment provided a pool of potential employees who are subjected to a screening process before joining the firm. While in the firms, the employees undergo training and education in order to perform their tasks and receive evaluations. The employees are compensated for their efforts with money and other non -monetary benefits. Eventually the employees terminate their employment and return to the environment which is the society. The employees who retire also continue to receive benefits. The task of the HRIS was to gather data that tracked this human resource flow, store the data until it is needed, and use the data to produce information that enabled persons both in the firm and its environment to monitor the flow.

Viewing phenomena in terms of resource flows is an example of systems theory, and several respected authors have taken such an approach. The first to achieve worldwide fame was Jay Forester of MIT (1962), who used resource flows as a basis for his theory of industrial dynamics. Forester explained that his theory showed ''how company success depends the interaction between the flows of information, materials, money, manpower, and capital equipment which were major organization features (Forrester, 1968). Two University of Washington professors Stanely Brewer and James E.Rosenzweig, used the term rheumatics to describe the way materials flow through an organization (Brewer & Rosenzweig, 1993). The term was provided from a Greek "rhoe", and "chrema" meaning materials. Rosenzweig also teamed with two other Washington professors to define a general approach to system design that included the identification of material, energy, and information flow [Johnson, 1963]. One of the most thorough definitions of the resource flow theory was provided by Richard J.Hopeman, of Syracuse University. In a 1969 text, he described the manufacturing process as a combination of material, machine, manpower, money and information flows (Hopeman, 1969).

The HRSP survey findings provided a rich database for use in studying the extent to which firms have implemented HRIS applications that can be used in a resource-flow manner. The resource-flow analysis was facilitated by reallocating the applications areas and renaming the major components as used in human resource management. Workforce Planning occur mainly prior to the flow of human resources through the firm, and provided the basis for that flow. The planning enabled the management to adjust its human resource activities so as to accomplish both short and long term organization objectives. Recruiting enables the firm to bring new employees into the firm, and Workforce management consists of all activities that occur mainly during the time of employment, including such tasks as training, performance appraisal, and deployment. Also during employment, employees receive compensation in such

terms as hourly earnings, salary, and bonuses, and benefits in such forms as insurance and stock purchase plans. Many of the employee benefits continue through retirement.

E-human Resource Planning Systems

Human resource planning consists of putting right number of people, right kind of people at the right place, right time, doing the right things for which they are suited for the achievement of goals of the organization. It utilizes the following procedure 1. Analyze the current manpower inventory. 2. Making future manpower forecasts. 3. Developing employment programmes. 4. Design training programmes. It embraces analysis on supply demand, surplus, shortages and utilization of human resources. Its concepts are also concerned with the development of critical human competence skills and attitude necessary to the development of an organization guided by the corporate policies and objectives (Decenzo & Robbins, 1996). Nowadays, new information technology is constantly used to improve the whole process and organization overall competitiveness. This makes human resource professionals free from manual routine and provides scope for improving service function and strategic decision making of the organization (Duff, 1989).

The addition of information technology to the human resource industry has revolutionized the contemporary workplace. HR professionals now have an improved capacity not only to gather information, but also to store and retrieve it in a timely and effective manner. This has not only increased the efficiency of the organization but also the effectiveness of the human resource management function, (Mujtaba, Afza, & Habib, 2011).Human resource information is key to making strategic decisions and providing an opportunity for human resource professionals to contribute to organizational strategy. The provision of HRIS has increased quite significantly among organizations of different sizes due to their enhancing the strategic human resource management role in the firm.

Nagendraa and Deshpande (2014) investigated Human Resource Information Systems (HRIS) in HR planning and development in mid to large sized organizations in India. The study revealed that the greatest uses of HRIS were its contribution to the efficiency and effectiveness of HR planning through HRIS skills' inventory, HRIS training needs analysis, HRIS succession planning and HRIS labour demand and supply analysis. Results showed that identification of unfilled job positions accurately is the most frequently accepted HRIS feature. Organizations can record good HR planning efficiency and effectiveness if HRIS aligns with information system strategy and HR strategy. Organizations need to integrate HRIS functions with other business functions. The study revealed that HRIS needs to offer more intelligent capabilities to increase the effectiveness of HR planning. Similarly, Afzal et al., (2013) examined the effect of

human resource planning on organizational performance of Telecom sector in Pakistan. The results from the factor analysis on HRP measures selection, training, and incentives and the organizational performance measures which are job satisfaction, efficiency, employee motivation and technology constitutes significant and a positive relationship with other. Anya, Umoh and Worlu (2017) investigated human resource planning and organizational performance in oil and gas firms in Port Harcourt, Nigeria. The study established a significant relationship between human resource planning and organizational performance and that the relationship between the variables is moderated by organizational structure. A survey conducted on commercial banks in Kenya establishes that e-succession planning has a significant effect on organization performance (Opiyo, 2015). However, most of these studies were not specific to the financial services sector such as the Sacco industry where organizational efficiencies are important not only to service delivery but to asset performance.

Organizational Efficiency

Researchers mostly use performance to express the range of measurements of transactional efficiency and input and output efficiency (Stannack, 1996). Daft (2000) states performance as the same as efficiency and effectiveness for a specific program or activity. *Ibid* further states that organizational performance is an effective and efficient manner for organization's activity to achieve goals by using resources. Efficiency in production can be assessed by the following factors; (a) increase in the size of the production (b) lesser time in the production of a unit of output (c) lesser wastage in resources including defective output (d) the use of same or less factor inputs per more output than before. Hellriegel et al (1999) define productivity as efficiency in the employment of factors of production such as land, labor and capital to produce higher output. The higher the numerical value of the ratio, the greater the productivity (Onah, 2010). In the present study, the efficiency of the organization was measured in terms of Activity Processing Time and Speed**.**

Technical efficiency requires getting the most from inputs; there must be no way to obtain greater output from those we are using. It underpins cost efficiency, which requires using the production technique that sacrifices least value from other outputs foregone. Allocative efficiency demands that resources cannot be redirected to produce outputs of higher value and in turn has both technical and cost efficiency as necessary preconditions (Seldon, 2007). Allocative efficiency is by far the most problematic. Few economists object to the Pareto principle, which states that resources are being misused if redeploying inputs or redistributing outputs can yield added benefits for some members of society without harming any others. However, it is rare to find real-world cases that simple and even when it can be applied, the

approach risks biasing policy toward piecemeal methods when broader perspectives may be called for. The Kaldor-Hicks approach in part overcomes these limitations, but at a price. Since it sanctions what may be substantial income redistribution, willingness to accept its implications is much less certain.

RESEARCH METHODOLOGY

Research Philosophy

The research philosophy that was used in the study was that of post positivist philosophy. This held a deterministic approach which used the underlying philosophy that that uses probability to determine effects or outcomes (Kothari, 2008). It reflected the need to identify and assess the causes that influence the outcome. It reduced the ideas into small, discrete set of ideas to test such as variables that comprise of hypotheses and research questions. Further, it enabled the development of numeric measures of observations for studying the behavior of respondents towards their perception of HRIS implementation in the organization.

Research Design

The study adopted a cross-sectional survey research design, whereby information was gathered on a population at a single point in time because a pre-determined set of questions was used to elicit a pre-formulated set of feelings and answers from the respondents based on the objectives of the study (Mugenda&Mugenda, 2003). The main objective of this type of design was to obtain insight into the relationships between variables and new ideas relating to the research problem.

Target Population

The study targeted 18 Saccos in Kenya that utilized human resource information system or use human resource management modules. These Saccos were chosen because they are in their early and middle stages of the implementation of HRIS. From these, the accessible population were the human resource managers, assistant human resource managers and human resource officers in each of the 18 Saccos who are in charge of human resource practices and HRIS implementation within the Saccos.

Sampling Design

The study adopted a purposive sampling technique, whereby all Saccos using HRIS were involved in the study. Hence this formed a sample frame for the study of 54 personnel in the Saccos who are both in the early and middle stages of HRIS adoption who were directly in charge of HRIS implementation. The human resource manager, assistant human resource

manager and human resource officer in each of the 18 Saccos were purposively selected for the study purposes.

Data Collection Instruments and Procedure

The study used primary data collected using researcher developed structured (closed-ended) questionnaires. The questionnaire was pilot tested and also subjected to validity and reliability tests. Content validity was employed to test the validity of the research instrument while internal consistency test using the Cronbach's alpha reliability coefficient was used to estimate the reliability of the instruments (Saunders, Lewis & Thornhill, 2009). The questionnaire had 75 items which had an overall Cronbach's alpha reliability coefficient of 0.969, this was above the recommended values of 0.700 and, therefore, considered "acceptable" for the study.

Data Analysis and Presentation

The analysis was quantitative in nature and was analyzed using descriptive and inferential statistical methods. Descriptive measures involved frequencies, percentages and chi-squares while inferential statistics used were the Pearson correlation co-efficient and regression analysis. The regression model was assumed to hold under;

$$y_i = ß_0 + ß_1 + ε$$

or more precisely**;**

$$y_i \text{ (OP)} = ß_0 + ßPM + ε$$

Where:

$y_{i(OP)}$ is the Organization Efficiency (value of dependent variable)

$ß_0$ is the Model Constant

$ß_1$**PM** is the E-Human Resource Planning Systems and its coefficient

E is the regression error term

RESULTS AND DISCUSSIONS

Response rate

The researcher issued 54 questionnaires to selected Saccos in Kenya using the human resource information systems. The 54 questionnaires were successfully filled and returned representing 100% response rate was.

The Results on the Effects of E-human Resource Planning Systems on Organization Performance

Table 1: Effects of E-human Resource Planning Systems on Organization Performance

(n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. Our HRIS has helped with forecasting staffing needs.	0(0%)	0(0%)	1(2%)	26(48%)	27(50%)	24.11	0.000
2. HRIS information has helped the SACCOs to make more effective decisions on promotions.	0(0%)	0(0%)	1(2%)	34(63%)	19(35%)	30.33	0.000
3. The information generated from HRIS has helped on deciding when to hire.	0(0%)	0(0%)	8(15%)	28(52%)	18(30%)	11.11	0.004
4. As a result of HRIS there is timeliness in the processing of HR functions.	0(0%)	0(0%)	10(19%)	11(20%)	33(61%)	18.78	0.000
5. Our HRIS has made our HR decision making more effective.	0(0%)	0(0%)	1(2%)	22(41%)	31(57%)	26.33	0.000
6. The HRIS has helped with data about employees and evaluation of their experiences.	0(0%)	0(0%)	1(2%)	32(59%)	21(39%)	27.44	0.000
7. The HRIS has helped in the assignment of employees.	0(0%)	1(2%)	8(15%)	29(54%)	16(30%)	32.07	0.000
8. The HRIS has helped in the analysis of internal, external, vacations and healthcare reports.	0(0%)	1(2%)	0(0%)	38(70%)	15(28%)	38.78	0.000
9. The HRIS has helped in the statistics of employees and position description.	0(0%)	0(0%)	1(2%)	26(48%)	27(50%)	24.11	0.000
10. The HRIS has improved the organization charting and workforce models within the Saccos.	0(0%)	7(13%)	2(4%)	18(30%)	27(50%)	27.93	0.000

Table 1...

11. The HRIS has helped in the tracking and controlling of the different HR function.	0(0%)	1(2%)	3(6%)	23(43%)	27(50%)	39.93	0.000
12. The HRIS has helped the HR in job change decisions.	0(0%)	1(2%)	3(6%)	28(52%)	22(41%)	40.67	0.000
13. HRIS is used effectively in the making of the HR job budgets.	0(0%)	0(0%)	1(2%)	35(65%)	18(30%)	32.11	0.000

The respondents in the study strongly agreed that the HRIS had helped with the forecasting of the staffing needs in the Sacco which was with $(\chi^2 = 24.1, P < 0.05)$ this indicated there was a positive and significantly strong correlation between HRIS and forecasting of staffing needs in the firm. This showed that the system was effective in determining future staffing needs of the organization. The respondents also agreed that the HRIS information had helped the Sacco to make more effective decisions on promotions which was represented with $(\chi^2 = 30.3, P < 0.05)$ this provided a stronger evidence against the null hypothesis therefore concluding that there is a positive and significant relationship between HRIS and effective decisions on promotions. This implied that the system was effective in determining the promotions of the staff due to adequate employee records. The respondents also agreed that that the information generated from HRIS had helped on deciding when to hire which had $(\chi^2 = 11.1, P < 0.05)$ this showed that the system was significant and positive relationship between HRIS and the determination of hiring in the firm. The respondents in the study also strongly agreed that as a result of HRIS there was timeliness in the processing of human resource functions which is demonstrated with $(\chi^2 = 18.8, P < 0.05)$ this indicated that there was a strong and positive correlation between HRIS and timeliness in the processing of human resource functions.

The study concluded that HRIS was able to provide proper demand forecasting of labour by the use of technologically advanced software therefore providing accurate estimates on the human resource needs of the organization. This also provided for proper decisions on human resource functions such as the timeliness in hiring and promotion of the employees. The respondents strongly agreed that HRIS had helped to make the HR decisions making to be more effective which is represented with $(\chi^2 = 26.3, P < 0.05)$ this showed that the observed data were statistically different from the expected values, therefore there is a positive and

significant relationship between HRIS and effective HR decision making. This implied that the system allowed for electronic recording of activities and provide for proper decision making of human resource functions. This is in agreement with Asafo (2007) in which the author agreed that the data collected from HRIS provided management with decision making tool.

The respondents strongly agreed that HRIS had helped with data about employees and evaluation of their human resource experiences which is represented with $(\chi^2 = 27.4, P < 0.05)$ hence the positive and significant association between HRIS and data about employees and evaluation of the human resource experiences. This implied that the system allowed for electronic recording of activities and provide for proper evaluation of human resource functions. The respondents also agreed that HRIS had helped in the development of assignment for employees which had been represented with $(\chi^2 = 32.1, P < 0.05)$ this showed that there was a strong and positive correlation between HRIS and development of assignment for employees. This implied that the system was helpful in task specification due to electronic recording of employee tasks.

The respondents in the study agreed that HRIS had helped in the analysis of internal, external, vacations and healthcare reports which had $(\chi^2 = 38.8, P < 0.05)$ this indicated that the effect of HRIS on analysis of internal, external, vacations and healthcare reports were positive and significant. This showed that the system was able to provide for adequate report generation due to proper data management. The respondents also strongly agreed that HRIS had helped in the statistics of the employees and position description which had $(\chi^2 = 24.1, P < 0.05)$ this indicated that there was a strong and statistically significant relationship between HRIS and proper maintenance of statistics of the employees and position description. This implied that HRIS had helped in proper data management of employee records and also provided proper job analysis reports which provided adequate description of employee work specification. It also helped to maintain all general records regarding employee activities in the firm. This is in agreement with Ruel *et al*. (2004) in which the author stated that the importance of records keeping systems which is being highly recognized by the organizations.

The majority of the respondents strongly agreed that HRIS had improved the organization charting and workforce models within the Saccos which was represented with $(\chi^2 = 27.9, P < 0.05)$ hence the association between HRIS and improved organization charting and workforce modelling being positive and significant. This showed that the system helped in providing the roadmap of organization activities due to adequate job analysis. The respondents

strongly agreed that HRIS had helped in the tracking and controlling of the different human resource functions which had $(\chi^2 = 39.9, P < 0.05)$ this indicated that there was a strong evidence against the null hypothesis this therefore concluded that there was a significant and positive relationship between HRIS and tracking and controlling of human resource functions. This showed that the system was able to plan and evaluate human resource functions due to proper records. The respondents of the study also agreed that HRIS had helped in the human resource in job change decisions which had $(\chi^2 = 40.7, P < 0.05)$ this showed that the observed data was statistically different from the expected values and therefore concluded that the association between HRIS and human resource job change decisions were positive and significant. This implied that the system was used for job simplification due to adequate records of tasks.

Lastly the respondents also agreed that HRIS was used effectively in the making of human resource job budgets which had $(\chi^2 = 32.1, P < 0.05)$ this indicated that the effect of HRIS and effectiveness in making of human resource job budgets was positive and significant. This implied that HRIS had helped to determine proper organization charting of the firm and controlling of the human resource function. This also provided for making effective decisions on the job design and also provided for proper budgeting of human resource functions and activities. This is in agreement with the study by Al-Tarawneh and Tarawneh (2012) in which the authors indicated that there was a significant effect between the quality of output of human resource information systems and institutional performance in the banking sector in the Jordanian firms.

The Effects of E-HRP on Activity Processing Time and Speed

Table 2: Effects of HRIS on Activity Processing Time and Speed

SACCOS performance on Processing time (n = 54)	SD	D	UD	A	SA	χ^2	P Value
1. The HRIS has decreased the time spent on recruiting	0(0%)	0(0%)	0(0%)	18(30%)	36(67%)	9.00	0.011
2. The HRIS has decreased the time spent on training	0(0%)	0(0%)	0(0%)	31(57%)	23(43%)	0.074	0.785
3. The HRIS has decreased the time spent on making staff decisions.	1(2%)	1(2%)	1(2%)	31(57%)	20(37%)	1.85	0.174

Table 2...

4.	The HRIS has decreased the time spent on inputting the data.	0(0%)	0(0%)	8(15%)	21(39%)	25(46%)	0.67	0.414
5.	The HRIS has decreased the time spent on communicating information within our institution.	0(0%)	0(0%)	1(2%)	35(65%)	18(33%)	30.33	0.000
6.	The HRIS has decreased the time spent in processing paperwork.	0(0%)	0(0%)	0(0%)	21(39%)	33(61%)	39.48	0.000
7.	The HRIS has decreased the time spent on correcting the errors in human resource department.	0(0%)	0(0%)	1(2%)	28(52%)	25(46%)	22.33	0.000
8.	The HRIS has reduced the time spent on making strategic human resource management decisions.	0(0%)	0(0%)	10(19%)	36(67%)	8(15%)	27.44	0.000

Majority of the respondents strongly agreed that the HRIS had decreased the time spent on recruiting which had a p $(\chi^2 = 9.0, P < 0.05)$ this showed that there was a strong and positive relationship between HRIS and decreased time spent on recruiting. This implied that recruitment was done much faster using the HRIS. The respondents in the study also agreed that HRIS had decreased the time spent on training this was indicated with a $(\chi^2 = 0.1, P > 0.05)$ this showed that there was not significant relationship between HRIS and decreased time spent on training. The respondents of the study agreed that the HRIS had decreased the time spent on that making staff decisions which had $(\chi^2 = 1.9, P > 0.05)$ this indicated that there is a not positive and not significant relationship between HRIS and the time spent on making staff decisions. Majority of the respondents also strongly agreed that HRIS had decreased the time spent in inputting the data which had $(\chi^2 = 0.7, P > 0.05)$ this showed that there was a positive but insignificant relationship between HRIS and decreased time spent in inputting data in the department. This had implied that the HRIS was able to reduce the time spent for making strategic decisions in areas of recruitment, training and also processing of employees' data.

The respondents in the study also agreed that HRIS had decreased the time spent on communicating information within the institution which had $(\chi^2 = 30.3, P < 0.05)$ this indicated that the effect of HRIS on decreased time spent on communication within the institution is positive and significant. This implied that communication was enhanced by the electronic

communication network. Majority of the respondents strongly agreed that HRIS had decreased the time spent in processing paperwork which had $(\chi^2 = 39.5, P < 0.05)$ this showed that the observed data are statistically different from the expected value and therefore a strong and significant relations between HRIS and reduced time spent on paper work, which it showed that the system was able to reduce the paperwork in the department.. The respondents of the study agreed that HRIS had decreased the time spent on correcting errors in the human resource department which had $(\chi^2 = 22.3, P < 0.05)$ this showed a strong and positive correlation between HRIS and decreased time spent on correcting errors in the human resource department. This implied that the errors brought about by the manual system were reduced. The respondents also agreed that HRIS had reduced the time spent on making strategic human resource management decisions as indicated with $(\chi^2 = 27.4, P < 0.05)$ hence the association of HRIS and reduced time spent on strategic human resource management decisions were significant and positive. The study also concluded that HRIS had enhanced communication and the time spent on processing of the paper work within the department. It had also enhanced strategic decision making within the department. This had been reinforced by Zafar, (2013) who indicated in his study that majority of the organizations had implemented HRIS to improve the administration, decision making and sharing of information.

Regression Analysis

Table 3: The Regression Model Coefficients Estimate

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Durbin Watson
	B	SE	Beta			Tolerance	VIF	
(Constant)	28.787	8.517		3.38	0.001			1.995
E-HR Planning	-0.135	0.17	-0.112	-0.793	0.432	0.36	2.778	

a. Dependent Variable: Organization Efficiency b. Predictors: (Constant), E-HR Planning

Table 4: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	54.973	1	54.973	3.59153	.109b
Residual	750.008	49	15.3063		
Total	804.981	50			

The results in Table 3 suggests that there is no linear relationship between E-human resource planning system and organization efficiency. This means other models which are not necessarily linear could be used to explain the relationship between the two variables. Therefore, the null hypothesis is upheld.

HO*: E-human resource planning system has no significant influence on organization performance.*

These findings depart from the views of Mujtaba et al., (2011) who stated that e-HRPs has not only increased the efficiency of the organization but also the effectiveness of the human resource management function. The findings also disagree with Nagendraa and Deshpande (2014) study on Human Resource Information Systems (HRIS) in HR planning and development in mid to large sized organizations in India which revealed that the greatest uses of HRIS were its contribution to the efficiency and effectiveness of HR planning through HRIS skills' inventory, HRIS training needs analysis, HRIS succession planning and HRIS labour demand and supply analysis. This development could, however, be explained by the observation that most Saccos still use HRIS as database HR transactional tasks manager only, and have not yet optimized the actual capability of HRIS(Ireri, 2015).

CONCLUSION AND RECOMMENDATIONS

The study sought to determine the effect of e-human resource planning on organizational efficiency of Saccos in Kenya the findings established that e-human resource planning had a negative influence on time and speed of human resource processes, human resource efficiency and market share. This finding is contrary to that of Opiyo (2015) in which the researcher established that e-succession planning had a significant effect on the organization performance. The HRIS also had a positive influence on the firms cost effectiveness. The HRIS had helped in forecasting the staffing needs, make more effective decisions on promotions and helped in deciding when to hire. The HRIS provided timeliness in processing the human resource functions, helped the decision making to be more effective, provide proper evaluation of employees, assignment of employees and also provide analysis of internal, external and healthcare reports. The HRIS provides proper statistics of employees, workforce model, tracking and evaluation of different human resource functions. The HRIS had helped the human resource department in job change decisions and in the making of the human resource job budgets. These findings indicated that the HRIS system should be able to help in strategic human resource management which is in agreement with the study done by Duff (1989) in which he indicated that HRIS is important for organization overall competitiveness and it improves service function as well as to provide room for strategic decision making of the

organization. The study, therefore, concludes that e-human resource planning had no significant influence on organization efficiency. The variable had a negative influence on the firms market share, time and speed of human resource processes and had a positive influence on the human resource efficiency and cost effectiveness. This can be attributed to the firm maybe not engaging more on the strategic decision making that can be utilized in HRIS.

The study recommended that for the e-human resource planning systems the firm need to incorporate more systems which allow for adequate strategic planning in the firm. This will help the firm to be cost effective and also have timely processes of human resource functions especially in the establishment of human resource goals which are critical for the planning process in the human resource department.

REFERENCES

Ademba, R. (2010). Saving and investment Patterns of Cooperative farmers in Southwestern Nigeria. Journal of Social Science, 3, 268-367.

Afzal, F., Mahmood, K., Sherazi, R., Mohsin, S., Sajid, M., & Hassan, M. (2013). Effect of human resource planning on organizational performance of telecom sector. Information and Knowledge Management, 3(2), 173-182

Al-Tarawneh, M., &Tarawneh, H. (2012). The effect of applying human resources information system in corporate performance in the banking sector in Jordanian firms. Intelligent Information Management, 4(02), 32.

Anya C.J.P., Umoh, G.I. &Worlu, G. (2017). Human Resource Planning and Organizational Performance in Oil and Gas Firms in Port Harcourt, Nigeria. International Journal of Advanced Academic Research, Social & Management Sciences. 3(9)

Asafo, A. A. (2007). The Role of Human Resource Information Systems (HRIS) in Strategic Human Resource Management (SHRM). Swedish School of Economics and Business Administration.

Biswajeet P. (2010). Human Resource Management, Third Edition. New Delhi: PHL Learning Private Limited

Daft, R.L. (2000). Organization Theory and Design. (7thed) South – Western College Publishing, Thompson learning, U.S.A.

DeCenzo, D. A., & Robbins, S. P. (1998). Supervision today. New Jersey, Prentice Hall

Dyer, L. & Reeves, T. (1995). Human Resource Strategies and Firm Performance: what do we know and where do we need to go? International Journal of Human Resource Management, 6(3), 656 - 670.

Hellriegel, D., Jackson, S.E. & Slocum, J.W. (1999). Management a competency-based approach, Cengage learning, New Delhi.

Ireri, J. K. (2015). Constructing a portrait of Kenyan journalists in the 21 st century: Demographics, job satisfaction, influences on news values and autonomy, and standards of journalism training (Doctoral dissertation, Indiana University).

Katou, A.A. &Budwar, P.S. (2007). The effects of human resource management policies on organizational performance in Greek Manufacturing firms. Thunderbid International Business Review, 49(1), 1-35.

Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.

Mugenda, O. M., &Mugenda, G. A. (2003). Research methods Quantitative and Qualitative Approaches. Nairobi: ACTS.

Mujtaba, B. G., Afza, T., & Habib, N. (2011). Leadership Tendencies of Pakistanis: Exploring Similarities and Differences based on Age and Gender. Economics and Behavioral Studies, 2(5), 199-212.

Nagendra, A., & Deshpande, M. (2014). Human Resource Information Systems (HRIS) in HR planning and development in mid to large sized organizations. Procedia-Social and Behavioral Sciences, 133, 61-67.

Omoankhanlen, J.A. (2013). Human Resource Planning: A key factor in ensuring the effectiveness and efficiency of organization. Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 4(4): 388-396.

Onah, N.G. (2010). Culture, women and Hiv/aids IN Nigeria: Implication for National Development. A paper presented at 2nd National Conference at International Association for Gender Equity. University of Port Harcourt, Chaoba. 19-22 April.

Opiyo, A. P., &Abok, A. (2015). Effects of Human Resource Information System On Performance Of Commercial Banks In Kenya: A Case Of Kenya Commercial Bank. Journal of Business Management, 1(1).

Ruel, H. J., Bondarouk, T. V., & Van der Velde, M. (2007). The contribution of e-HRM to HRM effectiveness: results from a quantitative study in a Dutch Ministry. Emp. Rel, 29(3), 280 - 291.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Understanding research philosophies and approaches. Research methods for business students, 4, 106-135.

Stannack, P. (1996). Perspective on Employee Performance Management Research News, 19(4/5), 38-40.

Yılmaz, R., &Bulut, F. M. (2015). The Effect of Human Resources Management on Organisational Performance. KwartalnikNaukowyUczelni Vistula, (2 (44)), 5-13.

Zafar, H. (2013). Human Resource Information Systems: Information Security Concerns for Organizations. Human Resource Management Review, 23(1): 105-113.

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6TH March 2017

Ministry of Education, Science and Technology
National Commission for Science, Technology and Innovation.
9th Floor, Utalii House,
P.O Box 30623-00100.
NAIROBI

Dear Sir/Madam

SUBJECT: RESEARCH BY GDB/M/0275/09/09 - DOREEN NJENJE

The above named is a Doctoral student at Kabarak University in the School of Business & Economics . He is carrying out a research entitled *"Effects of Human Resource Information Systems on the Performance of Saccos in Kenya"*

The information obtained in the course of this research will be used for academic purposes only and will be treated with utmost confidentiality.

Please provide the necessary assistance.

Thank you.

Yours Faithfully,

KABARAK UNIVERSITY
POSTGRADUATE STUDIES & RESEARCH DEPT
5 MAR ...
PRIVATE BAG - 20157, KABARAK

DR. BETTY TIKOKO
DIRECTOR POSTGRADUATE STUDIES & RESEARCH

Kabarak University Moral Code
As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord. (1Peter 3:15)

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/49309/17147**

Date: **12th May, 2017**

Doreen Atieno Njeje
Kabarak University
Private Bag - 20157
KABARAK.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effects of human resource information systems on the performance of SACCOs in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **11th May, 2018.**

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

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nakuru County.

The County Director of Education
Nakuru County.

THIS IS TO CERTIFY THAT:
MS. DOREEN ATIENO NJEJE
of KABARAK UNIVERSITY , 14012-20100 NAKURU,has been permitted to conduct research in *Nakuru County*

on the topic: *EFFECTS OF HUMAN RESOURCE INFORMATION SYSTEMS ON THE PERFORMANCE OF SACCOS IN KENYA.*

for the period ending:
11th May,2018

Permit No : NACOSTI/P/17/49309/17147
Date Of Issue : 12th May,2017
Fee Recieved :Ksh 2000

.....
Applicant's Signature

Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No. A 14085

CONDITIONS: see back page