EFFECT OF HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEM PRACTICES ON EMPLOYEE PERFORMANCE IN THE CIVIL SERVICE OF KENYA: MODERATING ROLE OF TOP LEVEL MANAGEMENT SUPPORT

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DEDICATION

I dedicate this work to the Almighty God for His divine strength and ability over the doctoral study period. I am also highly indebted to my family for their continued support and understanding for the many hours spent in the research work.

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ABSTRACT

HR function is bedeviled with a myriad of challenges including a mundane system, low performance, resistance to change and aging workforce that is largely unresponsive to the needs of the customers. For that reason, there is a growing number of reforms initiatives geared towards revamping the operation including HRMIS. Therefore, the study sought to establish the effect of human resource information system on employee performance in the civil service of Kenya as moderated by top level management support. To address this objective, the study examined the effect of HRMIS design, integration, operation and planning on employee performance in the civil service in Kenya. Furthermore, the study investigated the moderating role of top-level management support on the relationship between HRMIS design, integration, operation and planning on employee performance in the civil service in Kenya. The theories that informed this study were Resource-Based Theory, Contingency theories, Human Capital Theory, Diffusion of Innovation Theory and the updated De Lone and McLean information system success model (modified). This study methodology used was a descriptive research design and a positivist research philosophy. Target population of the study was 1384 personnel assigned to human resource management (HRM) departments in various National Government Ministries. Out of the targeted population, a sample size of 549 respondents was obtained. Primary data was collected using questionnaires. The gathered data was analyzed using descriptive and inferential statistics with the help of SPSS program and presented inform of percentages and frequency tables. In order to test for the nature of relationships between variables, regression analysis was carried out. The study findings revealed that the design, integration, operation and planning of the human resource technology significantly influence employee performance in the civil service of Kenya. Furthermore, it was observed that top level management support significantly moderated the relationship between Human Resource Information Systems and performance of employees in the Civil Service sector of Kenya. Therefore, the study recommended that HRMIS utilization should be optimized to improve employee performance in the civil service. Further, top level management should enhance coordination effort among the employees, provide work instruments, recognize their contributions and create a sense of involvement.

TABLE OF CONTENTS

xiii

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

CFA	Confirmatory Factor
E-HRM	electronic Human Resource Management Analysis
EFA	Exploratory Factor Analysis
GHRMIS	Government Human Resource Management Information System
GTI's	Government Training Institutes
HR	Human Resource
HRMIS	Human Resource Information System
HRMIS	Human Resource Management Information Systems
KIA	Kenya Institute of Administration
MNC	Multi-National Corporations
MSPS	Ministry of State for Public Service in Kenya
PCA	Principal Component Analysis
RBT	Resource-Based Theory
SCA	Sustained Competitive Advantage
SWOT	Strength, Weakness, Opportunity, Threat
TAM	Technology Acceptance Model

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The creation of a productive, responsive and dynamic workforce has always remained a top priority for most governments globally (Pot, Totterdill & Dhondt, 2016). Organizations have started embracing the use of information systems in many tasks and operations in the last few decades to boost performance and productivity due to the growing effects of globalization and technology. When using human resource management techniques, different firms exhibit various traits. Institutions in nations like the United States of America have greater managerial freedom, whereas in Europe, human resource management strategies are more constrained in terms of employee development (Kaufman, 2019).

Organizational learning is developed by human resource departments in Asian transitional economies in order to boost creativity (Wilckens, Wohrmann, Deller & Wang, 2019). To develop employees through internal on-the-job training and teach them firm-specific knowledge and skills to increase productivity, quality, and performance, Japanese HR gives employees lifetime employment (Ballard & Grawitch, 2017). As a result, Japanese businesses concentrate on internal development when hiring new personnel (Hayashi, Ozawa, Kawabata & Takemi, 2016). In Germany, labor unions are solely responsible for negotiating wages and working conditions. This country also uses a regional, sector-wide negotiation system to achieve real employee involvement (Eckardstein & Konlechner, 2017).

HRMIS continues to enable organizations to innovate strategies for efficient storage, management, retrieval of information and organizational effectiveness. Like change, additional adoption of technology adds complexity to organizational operations and becomes unpleasant for some employees (Garda de Soto, Agusti-Juan & Hunhevicz, 2019). Nevertheless, it allows

1

management to spend less time on administrative activities and more on making strategic decisions. Most importantly, HRMIS helps organizations to gain competitive advantage and efficiency (Sadia, 2015).

In light of the aforementioned, HRMIS uses a comprehensive strategy to maintain, gather, store, access, and validate data on an organization's human resources (Stone et al., 2015). Organizations may now produce real-time information, offer self-service, and foster a dynamic work environment thanks to technological improvements (Amarakoon, Weerawardena & Verreynne, 2018). In recent years, it has also given the human resource function a strong platform for the transition from manual personnel records to more complex and automated reporting and decision-making systems (Amarakoon et al., 2018). HRMIS, then, is the automated process that combines human resource support activities, policies, and procedures with organizational strategic and operational capabilities (Chauhan et al., 2011).

The effective use of HRMIS is touted to provide significant employee outcomes in government ministries and functions. To realize this goal, HR managers are expected to plan, design, integrate and finally operate an electronic platform that not only enhances employee performance, but also, reduces processing and administrative costs associated with human resource management. The system is also anticipated to be adaptable to user needs and capable of enhancing human resource management while supporting government ministries' core missions.

To realize the aforementioned benefits, managers are expected to engage in effective HRMIS planning prior to its rollout. Planning denotes activities associated with defining HR requirements within the confines of technology. This process requires organization-wide participation and accommodation of innovative ideas that are in harmony with organizational goals (Ochlin & Roberts, 2011). It is desirable that a properly planned HRMIS balances

2

performance appraisal and compensation. HR planning is based on the ideology that people are the most essential part of an organization. In order to sustain them over time, it also entails matching organizational needs with available resources. On this backdrop, it is the onus of management to provide timely information to secure employee commitment (Ngai & Wat, 2006).

Ideally, managers are expected to use the information gathered during planning in the design of HRMIS. This is done through a mindful and coordinated approach meant to create a human resource management architectural tool in the confines of technology (Al Shobaki, Naser, Amuna & El Talla, 2017). The design of the HRMIS ought to be user friendly, efficient and adaptive to a wide range of information within human resource operation. Being of special importance, HRMIS design bring on board a set of properties inherent to HRMIS by which a system can be developed, implemented and permanently improved (Mueller, Strohmeier & Gasper, 2010). To be more concrete, HRMIS design characteristics helps managers to validate the capabilities of HRMIS and derive necessary improvement measures in order to warrant successful implementation.

It is worth to note that a properly designed system is expected to integrate the needs of every user department. As one of the critical pillars of HRMIS, integration promotes coherence in execution of functions and helps government ministries to minimize; work-related errors, operational costs at the same time promoting employee innovativeness and compliance to laid down procedures and policies. In the process of integration, organizations create, update, and de-activate user records associated with individuals and clusters of employees (Dilu, Gebreslassie & Kebedeto, 2017). A properly integrated system is becoming an indispensable aspect of HR operations that leads to improved performance. Besides the collection and storage of data, integration enables managers to analyze and produce real-time personnel information

(Bhatia, 2016).

As a result, HRMIS operation is becoming an important part of an effectively managed organization. HRMIS operation underpins the ability of organizations to enable teams and individual employees to work towards the set goals within the context of organizational efficiency and avoidance of role conflict (Maditheti & Gomes, 2017). Therefore, HRMIS operation ensures that employees acquire the right data and enables them to organize the same into meaningful products and services. Furthermore, HRMIS continues to be an ideal solution for streamlining and optimization of HR processes. As managers contend with the challenge of aligning their operations to the needs of their departments, Lee et. al. (2012) asserts that an efficiently operated system provides motivation to a workforce for performance.

In Africa, the indigenous human resource development strategies and ideals have evolved through time. However, this development has remained important in the majority of developing-country institutions (Hedayati & Li, 2016). Today, there is a paradigm change and fierce rivalry in the continent in human resource management methods as a fundamental component of successful and efficient institution performance (Horwitz, 2017).

Implementing indigenous development methodologies and smart tactics that are tied to cultural values and crucial business goals can improve institutional performance and human resource management practices. Government human resource development today has the challenging task of ensuring that employee performance matches the complex needs of a growing and educated population (Kiiza & Basheka, 2018).

According to Lufunyo (2015) of Tanzania, decentralized local government services that are multidimensional and integrated in character constitute a barrier to human resource development in East Africa. They are separated into a number of groups, including performance motivation-induced issues, policy-induced challenges, and skill, task, and organization-

induced difficulties. Low pay-related work satisfaction, a lack of funding for training and development, and unequal training and development opportunities for all employees are a few of them (Ndikumana, 2018).

Several interventions have been formulated and implemented over time to address the issue of employee performance. Locally the Kenyan government has initiated a number of Human Resource Reform agenda. These reforms were meant to improve employee competencies, efficacy and customer satisfaction. Reforms were captured in initiatives such as performance Contracting of 2003, Rapid Results Approach of 2004 and the Citizen Transformative Leadership reform of 2007 (Kilelo, 2015) which were later followed by digitization of the human resource operations as envisaged by the Kenyan Digital Blue Print (2013).

The need to revamp operation of human resource in Kenya dates back to 1980s after the recommendation of government Sessional papers number one of 1986 and that of 1992 as well as 1994. The sessional papers highlighted the need for structural adjustment programs (SAPs) which included civil service reforms. The expansion of the primary and secondary SAPs has since been integrated as human resource policy tools (Rono, 2002). Accordingly, rationalization in the management of human resource was undertaken in several government functions as exemplified in staff rationalization of 1996 so as to balance operational and maintenance expenditure. As a consequence, significant reduction of wage bill, payroll controls and strengthening of personnel capacity and efficiency was enhanced (GOK, 2007). The Vision 2030 blue print, however introduced technological reforms in the human resource management where operations were required to integrate automation. The Vision 2030 blueprint spelt out the use of technology in the civil service as one of the greatest enablers in HR functions in Kenya (Datche & Mukulu, 2015).

There exists a large variation of adoption of technology in the management of human resource practices among organizations which largely determines their performance. Being dynamic, adoption of technology varies significantly between countries and organizations. While developing countries grapple with mundane technologies, their developed counterparts continue to advance in HR technologies. For example, there exists deepened use of technology among large corporations compared to the small enterprises. As most countries in the sub-Saharan Africa remain at exploratory levels in their adoption of technology in human resource operations as observed by Mutisya (2014), Jemine and Guillaume (2021), those in developed countries such as the United states of America, United Kingdom and Germany among others have reported advanced forms of electronic human resource systems with reduced paper work.

Unlike some countries in Africa, the rapid growth in technology provided the impetus for E-government initiatives in Kenya. Some of the flagship technology integration in Kenya include the e-citizen and HRMIS as shown by Datche and Mukulu (2015). As such, the Kenyan digital blue print report shows a remarkable progress in the adoption, integration and advancement of human resource technology among government ministries. Therefore, HR operations in government ministries such as payroll, recruitment, leave management inter alia are now housed in electronic platforms. Nonetheless, there is concern about top level top level management support in integration of these technology initiatives among HR professionals, consultants, government and academics.

1.1.1 Top level management support

Top level management support is touted to be one of the corner stone and widely cited factor of performance (Liu & Seddon, 2009). Therefore, success or failure of HR function in organizations or ministries depends on the intensity of support from the top-level management. Top level management support underlies the willingness of strategic leaders of the organization

to participate and provide the much-needed support to the human resource function.

It entails giving resources to all employees in order to preserve and enhance service delivery success and the accomplishment of the organization's vision and goal (Matata, 2015). The management must also establish ambitious goals and ambitions for the business and present a clear picture of its future. Organizations can only reach their goals via this unity of purpose and direction. By building trust and removing fear, managers are expected to maintain an environment where people can participate fully.

Organizations with bureaucratic rigidity are known to hinder close involvement of top management in the work processes. As a matter of fact, majority of developing countries have bureaucratically rigid systems. These includes organizations in the Middle East countries including Pakistan (Haque & Anwar, 2012) and those in the sub-Saharan countries such as Kenya. The systems impede close interaction between management and the human resource department processes. On the contrary, organizations in the United states of America and those in the United Kingdom constitute of lean structures that promote close involvement of management in the day to day HR operations and in decision making. In the systems, appropriate messages are easily conveyed from top level management to enhance performance (Sial et al., 2013). Ideally, managers are expected to have direct access to the operations of HR to enable them provide resources, enhance the flow of information and engage in collective responsibility in order to promote employee performance (Kuesten, 2013). So, in this study, human resource departments in the Kenyan civil service studied the impact of HRMIS practices on employee performance as it was influenced by top-level management support.

1.1.2 Civil Service of Kenya

Kenya's civil service consists of individuals appointed by the national government based on their professional excellence to provide support services and implementation of policy directives in the management of ministries and departments. Kenyan civil servants are those employees who work for the government. Twenty-one (21) Ministries currently make up Kenya's civil service as per the Government of Kenya executive order (1) of 2020. In the current government system, ministries are headed by cabinet secretaries who are appointed by the President upon approval by parliament through vetting process. The Cabinet Secretaries are assisted by Principal Secretaries who carry out administrative functions of the ministries and also act as accounting officers. Human resource as a technical function in the ministry, is headed by the Directorate of Human Resource Management and Development who advices on matters of human resource acquisition and deployment. This is a critical component in service delivery for Kenya's sustainable socio economic development.

1.2 Statement of the Problem

Ideally, A productive, adaptable, and dynamic workforce is produced through the use of HRMIS techniques, specifically: planning, design, integration, and operation in the context of top-level management assistance across government ministries and divisions. As a result, human resource experts believe that technology enhances the building of organizational capacities in the operation of the HR function. In such organizations, technology in human resource improves employee competence, efficacy and promotes customer satisfaction. Technology is also known to promote significant reduction in wage bill and strengthen personnel capacity and efficiency (GOK, 2007).

However, the HR function is bedeviled with a myriad of challenges including a mundane system and workforce that is largely unresponsive to the needs of the customers, (Public

Service Commission of Kenya annual performance evaluation report,2017). Further, to the subsequent performance index report for the year 2018/2019, performance in the civil service declined from 31% in 2016/2017 to 25.32% in 2018/2019 thus causing a concern. For that reason, the government initiated a number of reforms initiatives geared towards revamping the performance of the civil service. The reforms included: developing strategies to re-engineer the civil service delivery abilities, sustenance of high-performance culture, productivity measurement framework and implementation of training programs for skills acquisition among others. These reforms followed calls by a number of stakeholders dating back in 1990's to review the operations of the civil service in enabling the government to achieve its mandate as documented in Government Sessional papers number one of 1986, 1992, and 1994 as well as in the vision 2030 and digital blue print of 2013.

Numerous studies on employee performance and HRMIS have been carried out across industries as alluded to by (Quereshi Mohamed Owais et al, 2013; Ahmed Tanjil, 2019; Nazari Somaye, 2015; and Hasan Maruf et al., 2014). However, the studies which in cooperates the moderating role of top-level management support on the aforementioned constructs remain scanty. Most of the studies on HRMIS have been undertaken in developed countries, as noted in investigative studies by Nagendra and Deshpande (2014) and Zhao and Xu (2016). Locally, studies conducted by Maina and Kwasira (2015), Mbiu and Nzulwa (2018) as well as Akoyo and Muathe (2017) for developing countries reveal that HRMIS remain at exploratory stages. Thus, the current study seeks to examine the interaction of top level management support on the relationship between employee performance and HRMIS.

1.3 Objectives of the Study

The study was guided by the following research objectives: -

1.3.1 General Objective

The general objective of the study was to establish the effect of human resource information system on employee performance in the civil service of Kenya. The moderating role of top-level management support.

1.3.2 Specific Objectives

Specific objectives of the study were: -

    i.   To evaluate the effect of HRMIS planning on employee performance in the civil service in Kenya.

    ii.   To evaluate the influence of HRMIS design on employee performance in the civil service in Kenya.

    iii.   To evaluate the effect of HRMIS integration on employee performance in the civil service in Kenya.

    iv.   To evaluate the effect of HRMIS operation on employee performance in the civil service in Kenya.

    v.   To evaluate the effect of moderating role of top-level management support in the relationship between human resource management information system and employee performance in the civil service in Kenya.

    Va   Evaluate the effect of the moderating role of top level management support on the relationship between HRMIS planning on employee performance at the civil service in Kenya.

vb.   Evaluate the effect of moderating role of top-level management support on the relationship between HRMIS design on employee performance at the civil service in Kenya

Vc.   Evaluate the effect of moderating role of top-level management support on the relationship between HRMIS integration on employee performance at the civil service in Kenya.

Vd.   Evaluate the effect of moderating role of top-level management support on the relationship between HRMIS operation on employee performance at the civil service in Kenya.

1.4 Hypotheses of the Study

The study was premised on the following research hypotheses: -

H_{01}: HRMIS planning has no statistically significant effect on employee performance in the civil service of Kenya.

H_{02}: HRMIS design has no statistically significant effect on employee performance in the civil service of Kenya.

H_{03}: HRMIS integration has no statistically significant influence on employee performance in the civil service of Kenya.

H_{04}: HRMIS operation has no statistically significant effect on employee performance in the civil service of Kenya.

H_{05a}: Top level management support has no statistically significant moderating effect on the relationship Between HRMIS planning on employee performance at the civil service of Kenya.

H₀₅b: Top level management support has no statistically significant moderating effect on the relationship Between HRMIS design on employee performance at the civil service of Kenya.

H₀₅c: Top level management support has no statistically significant moderating effect on the relationship Between HRMIS integration on employee performance at the civil service of Kenya.

H₀₅d: Top level management support has no statistically significant moderating effect on the relationship Between HRMIS operation on employee performance at the civil service of Kenya.

1.5 Significance of the Study

As indicated by Randall at al. (2015), human asset forms a basic section and a real wellspring of development for organizations. As organizations attempt to get on the forefront to fulfill their goals and mandate, several have received and grasped the use of data innovation and especially Human Resource Management Information Systems with the aim to reinforce productivity and adequacy within the administration of their human resource capability. HRMIS benefit organizations through planning work, reviewing strategies, organizing, and tracking operations. Further, they can access other functions like applying for leave, accessing their pay slips and determining their performance level (Karanja et al., 2018). Efficiency in an organization can also be attained through saving time using this system. To academicians and students in the HR field, the study will help augment the current arts of HR knowledge concerning the public sector. It will also lead to an increase in the analysis of HR functions in the public sector with an aim of refining and expanding the field to cover relevant areas in the Public Sector in Kenya.

As much as the government is doing the best to boost and enhance service delivery through programs such as Results Based Management, Rapid Results Initiative, Performance Contracting and lately operational systems like Government Human Resource Information system (GHRMIS), this has not yielded important positive results for much of the functional processes are yet to be automated thus lacking behind in meeting timely performance targets (Randall, Shaista & Huub, 2015). This study will therefore benefit the government and organization in establishing the right policies that will ensure the operation of HRMIS yields the best results in employee performance and public service. Further, it will also add to the scholarly knowledge in the HR discipline as well form a base for new research studies through the recommendations given.

1.6 Scope and Justification of the Study

The study was focused on three constructs namely: HRMIS, employee performance and top-level management support. The study targeted personnel in the human resource departments of the 21 Ministries of national government with headquarters in Nairobi. The study adopted a descriptive research design and collected quantitative data. Data was collected between March 2021 and September 2021.

The findings will help civil service stakeholders develop effective HRMIS policies. Additionally, the findings of the study on the relationship between HRMIS practices and employee performance will help the civil service sector implement the best HRMIS practices, whether in groups or as a single independent practice, in order to get the most favorable impact on employee performance and meet corporate objectives. The creation of HRMIS practices aimed at achieving staff performance could benefit from executives' understanding of the relationship between particular HRMIS practices and workers' performance results.

1.7 Limitation of the Study

The study was exposed to two main limitations including scope and delay in data collection. On scope the study focused itself on three constructs including HRMIS, employee performance and top-level management support. Furthermore, quantitative data was collected from employees working within the HR departments of government ministries domiciled at the headquarters. Additionally, the study suffered from the delay of filling the research instrument which prompted the study to expend the period of data collection. Being a quantitative study, experiences of the respondents with regards to their interaction with HRIMS, performance and management involvement was missing.

1.8 Assumptions of the study

The researcher assumed that the selected employees in the national government ministries were adequate representative population of the civil service of Kenya. It was also assumed that the size was an adequate representation of the population. The study further assumed that the targeted government ministries conduct staff performance appraisal and that they have structures that promote top level management support.

1.9 Operational Definition of Terms

The following terms were adopted in the study: -

Civil Service
Kenyan civil servants are those employees who work for the government 21 ministries and specifically under human resource department which comprise of; Top level management, middle level/supervisory management and support staff.

Human Resource Management Information Systems:
The term refers to a system which is used to acquire, store, manipulate, retrieve and distribute pertinent information about an organization's Human Resource.

HRMIS Design:
A method for executing human resource, strategies and practices in associations through mindful and coordinated help with full utilization of innovations that are primarily internet based

HRMIS Integration:
An efficient and organized agent for sparking the connection between the management of the HR and the IT systems

HRMIS Operation:
A structure that gives the workers an integration of linked functions such as the workflows, tracking of employee performance through goals and evaluation on a continuous basis and elimination of duplicate work.

HRMIS Planning:
These refers to the process of ensuring that the requirements of HR are determined and plans are put in place to lead towards the realization of those requirements.

Top level management support:
This is the extent to which an organization provides the resources, communication, reinforcement and encouragement to enable employees improve well-being.

Employee Performance at the Civil Service:
This is how employees carry out their assigned tasks, fulfill their responsibilities, and adhere to ministry policies.

15

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Resource-Based Theory (By Porter)

The resource-based view (RBV) is a managerial paradigm for identifying the strategic resources that a business may employ to establish a long-term competitive advantage. Porter contends that the resource-based approach represents a significant advancement in human resource management since it offered a novel explanation for an organization's performance (Muller, 2003). The notion contends that a firm's ability to collaborate and pool resources with others is what distinguishes it from rivals and contributes to its success. Human resource, as well as the critical traits of knowledge, skill, know-how, and talent, are examples of such resources and capabilities. These resources and competencies may provide a competitive edge. According to this approach, an organization's HRM activities are oriented toward enhancing those critical talents and knowledge (Muller, 2003).

Wright and McMahan (2001) contend that in order for resources to be strategic for a company, they must be rare, valuable, specialized, or hard to transfer. This is feasible if the company uses HRM methods including recruiting key people, compensating them fairly, educating them to do a better job or acquire new skills, and motivating them through incentives. As a result, HRM practices are likely to have an impact on competitive advantage. Several authors have discussed this concept. How strategy, HRM procedures, and the pool of human resource capital are related (Wright & McMahan, 2001). Mueller (2003) raised an issue on the thoughtful application of human capital. Lado and Wilson (2004) looked at a firm's human resources as a potential source of competitive advantage.

In this way, the organization's resource-based strategy is offering human resource management a new perspective. The business creates and executes new policies and practices in a variety of areas, including salary, training and career development, recruiting and selection, and others. The majority of organizations invest in their employees' training and career development in an effort to increase productivity. In order to optimize and accelerate processes, a company will only train personnel in the competences and abilities required (Grant, 2004). The focus of compensation is on an employee's value and individual performance.

Nevertheless, there are two main assumptions that hinder the application of the RBV theory. These include the assumptions on heterogeneous and immobile nature of organizational resources. As one of the cardinal assumptions of RBV, it is assumed that resources such as skills, capabilities are heterogeneous among firms. Therefore, they can employ different strategies to outcompete each other. The second assumption is that resources are not mobile and do not move from company to company, at least in short-run. As a result, organizations cannot replicate rivals' resources and implement the same strategies.

Polemical scholars have put forward three criticisms against the application of the RBV First, there are concerns on the indeterminate nature of RBV - resource and value. Secondly, the concept of firm's competitive advantage has narrow explanation in the RBV. Furthermore, the common theme underlying these critiques is that the RBV has clung to an inappropriately narrow neo-classical economic rationality and has thereby diminished its opportunities for making further progress. Leveraging from the critiques and the discussions they have provoked, the study sought to suggest directions for future theorizing and research whereby the findings attempts to move the RBV into an inherently dynamic and subjectivist framework.

This theory will help in recognizing the value of human resources in the civil service in Kenya in terms of creating competitive advantages among the workers. The theory is key in helping

human resource management to develop and implement HRM methods that encourage employees, enhance their talents, and build new capabilities, all of which contribute to higher performance.

This idea was connected to objective one of HRMIS planning and provided the assumption that an organization is the sum of a mix of physical, human, and organizational resources, and when the business synchronizes the usage of its resources, it is able to create competitive advantage. Thus, the idea serves as the foundation for the investigation of how HRMIS strategy, design, integration, and operation affect employee performance in Kenya's civil service. However, the resource-based perspective theory was supplemented with predictions from contingency theory, human capital theory, and diffusion of innovation theory due to the complexity of the many elements that may affect employee performance in the Kenyan civil service.

2.1.2 Contingency Theory

The results of Ohio State University academics' research on leadership behavior led to the development of contingency theory in 1950. (Donaldson, 2001; Nohria & Khurana, 2010). The theory supports an approach to studying organizational behavior that provides justifications for how external elements like technology, culture, and the environment affect the structure and operation of organizations (Bastian and Andreas, 2012).

However, the idea of contingencies suggests that several approaches could work depending on the situation (Dobak-Antal, 2010). This may be regarded as one of the main findings of the theory since it aims to show that diverse conditions call for distinct organizational structures rather than advocating organization management concepts that are universally applicable (Baranyi, 2001).

The premise of contingency theory is that not all organizations require the same kind of organizational structure. Instead, organizational efficiency depends on how well the organization's size, organizational structure, information system, technology, and environmental volatility all work together. Additionally, this approach has been criticized for being static and unable to address organizational change and adaptability (Granlund & Lukka, 2017). Static in the sense that it discusses how a static condition of fit between structure and contingency results in good performance is at the core of structural contingency theory (Kihara, 2016). The contingency hypothesis fails to adequately explain why various leadership philosophies work for some leaders but not others. The idea also falls short in explaining how to deal with a leader/situation mismatch in the workplace (Northouse, 2007,).

This theory supports objective two on HRMIS design. In most cases, firms operate in a highly dynamic environment, therefore, contingency theory offers critical insights for managing emerging issues in their operations. The theory outlines measures for managing aspects such as technology and issues that may affect employee performance. Therefore, the theory provides a basis for explicating the role played by top level management in the study. Therefore, its theoretical underpinnings emphasize the interaction between the organization environment and top-level management. This hypothesis encourages research hypothesis number five and supports the investigation.

2.1.3 Human Capital Theory

Schultz proposed the Human Capital Theory in 1961, and Becker expanded on it significantly later in 1964 (El-Farr & Hosseingholizadeh, 2019). The theory (HCT) is a comprehensive approach to analyze a wide spectrum of the input of people in organizations. Education, in this approach, is placed at the center and considered the source of economic development of organizations. The theory proposes that training offered to staff boosts their productivity and

transmits usable information and skills. This approach is meant to deliver services at optimal levels. To do so, the theory proffers that effective organizations provide a framework that encourages optimization of workforce (El-Farr & Hosseingholizadeh, 2019). Training, for example, enables increase in organizational performance.

The theory presumes that individuals that acquire knowledge and skills through education and training increase their productivity in the workplace. As a result, they earn higher salaries. This is however an assumption of an ideal labour market. Therefore, people would invest in education up to the point where the private benefits from education are equal to the private costs. In light of this set of assumptions, the logic of HCT becomes clear that education and training ought to increase human capital and higher productivity rate, which in turn brings a higher wage for the individual. Based on this reasoning, it can be claimed that education and earnings are positively correlated and thus education/training should be promoted. The theory is largely aligned to employee performance in the study and other HRMIS practices.

However, the theory is criticized for failing to envisage the changing dynamic aspects of human capital including technology in its initial proposition. Therefore, the proliferation of the knowledge-based economy, and technological advancement continue to drive many governments and corporations to seek new tactics to maintain a competitive advantage (Allan et al., 2008). The common agreement in response is that success is highly reliant on individuals with higher levels of ability and dedication.

This theory supports objective 3 on HRMIS integration. The idea is pertinent to the research because it suggests that, as a consequence of investments in human capital, an employee's acquired skills and knowledge may easily be applied to specific goods and services (Ronner, 2005). Given that the accumulation of knowledge and skills via efficient HRM practices plays a crucial role in the development of human capital, there is a general opinion that learning is

the most essential aspect in increasing human capital. This suggests that learning is a critical component of acquiring such knowledge and skills through successful HRM practices (Sleezer et.al, 2006). It is increasingly acceptable for the conceptual underpinning of one's human capital to be built on knowledge and skills developed via successful HRM practices. Assuming that knowledge may generally incorporate other human capital components such as skills, experience, and competency, the relationship between human capital and knowledge has a broad implication that firms should invest in their people through successful HRM processes.

2.1.4 Diffusion of Innovation Theory (DOI)

Rogers pioneered the DOI theory in 1962 as cited in (Cirus & Simonova, 2020). It aims to address the how, why, and what questions about the pace at which a social structure facilitates the spread of new ideas and technology (Cirus & Simonova, 2020). Persons see innovation as an unknown concept, a lengthy process, and a difficult technique, but individuals in the same region regard diffusion as the movement of knowledge from one person to another. The theory assumes that problems can be solved by a particular system generated by innovation, especially those devised by 'experts' however not all problems can be solved by a particular system or innovation because organizations have unique needs which require different approaches.

The criticism of the theory avers that the pace of adoption of innovations affects a society's rate of adoption, regardless of the type and features of its people, according to O'Connor (2007). Following that, Barnett proposed in 1990 that an individual's acceptance or rejection of an invention is a personal decision including a succession of thought and decision-making (Cirus & Simonova, 2020).

The DOI makes an effort to characterize the speed at which technology advances over time within a social environment. The five attributes of an innovation are relative advantage—the belief that the innovation is better than its predecessor—complexity—the belief that the innovation is a complicated phenomenon—observability—the visibility of the innovation to potential adopters, which affects the rate of adoption—and trialability—the belief that the innovation is an experiment. The theory has been applied to the study of HRMIS at the individual, organizational, market, and societal levels (Cirus & Simonova, 2020).

This theory supports objective two on HRMIS operations. According to Rogers (cited in Cirus & Simonova, 2020), social structures in place, communication routes, creativity, and time all impact the diffusion of new ideas within social systems. Knowledge, persuasion, choice, execution, and confirmation are the stages of spread. Rogers further explains that, the stages produce six types of technology users: innovators, early adopters, early majority, late majority, laggards, and leap floggers which are significant to the operationalization of HRMIS.

2.1.5 Updated De Lone and McLean Information System Success Model (modified)

This model was proposed by William De Lone and Ephraim McLean in 2003 following extensive research and modifications of earlier similar models that had been criticized. This model is therefore as a result of previous model modifications to suit information system (IS) success measurement (De Lone & McLean, 2003).

The model defines, describes, and explains the connections between six key elements to provide a framework for evaluating the success of information systems. These are the dimensions: purpose to use/system usage, system quality, information quality, service quality, user satisfaction, and system net impacts. System use and user satisfaction are both affected by

and related to the quality aspects of information, systems, and services. Use is preferable to intention to use due to the difficulties in understanding usage.

Use of HRMIS must precede user satisfaction in a process sense. Positive experience with HRMIS use leads to user satisfaction in a causal sense and therefore, increased "user satisfaction" leads to increased "intention to use," and therefore further "use. "Consequently, use and user satisfaction leads to net impacts. After realizing positive or negative impacts from the system, feedback loops to "User Satisfaction" and to "Use," may depict less or greater use or user satisfaction (De Lone & McLean, 2003).

System quality, as shown in figure 2.1, focuses on the information system's usability, adaptability, dependability, and simplicity of learning and reaction times. Relevance, understandability, correctness, conciseness, completeness, understandability, currency, timeliness, and usability of the system outputs are all aspects of information quality. Service quality refers to factors like responsiveness, correctness, dependability, technical expertise, and empathy that IT support professionals provide to human resource department workers. Utilizing an information system's capabilities in terms of quantity, frequency, type, appropriateness, scope, and purpose is referred to as using it. The term "user satisfaction" describes how satisfied users are with reports, websites, and support services. The term "Net Impacts" describes how much information systems help people, groups, or organizations make better decisions and work more productively.

A couple of assumptions are put forth for the application of this model by the proponents. First, model proponents suggest that for IS studies to be comparable, they have to use extremely similar constructs from the model of which has proved challenging to many scholars due to varied environmental set-ups amongst IS studies. Second, they put forth the assumption that

usage of the model partially will not yield similar results as using all the constructs of the model at an instance. Thirdly, the model should be studied at one level at a go. Mixing levels such as individual level and organizational level within the model analysis will not yield valid results (Begona, 2010).

The criticism of the model is that it requires full psychological preparedness by employees to use it in view of easy involving processes. Some employees may resist to embrace the use of the system thus rendering the whole process a failure which negatively impacts on performance (mardiana et al., 2015).

This model is applicable in understanding HRMIS in the civil service and in predicting employee performance in that the human resource department employees in the civil service utilize HRMIS in their daily work activities while serving customers who are mostly other employees in the civil service. As a result, the model is able to assess the effectiveness of the current system, the information it produces, and the quality of the support they receive from IT staff when necessary. Quality is related to and predicts future use and satisfaction with the system of which determines net impact as a result of system use. Periodical maintenance of the system leads to feedback to further improve the system and therefore continuous improvement of the system.
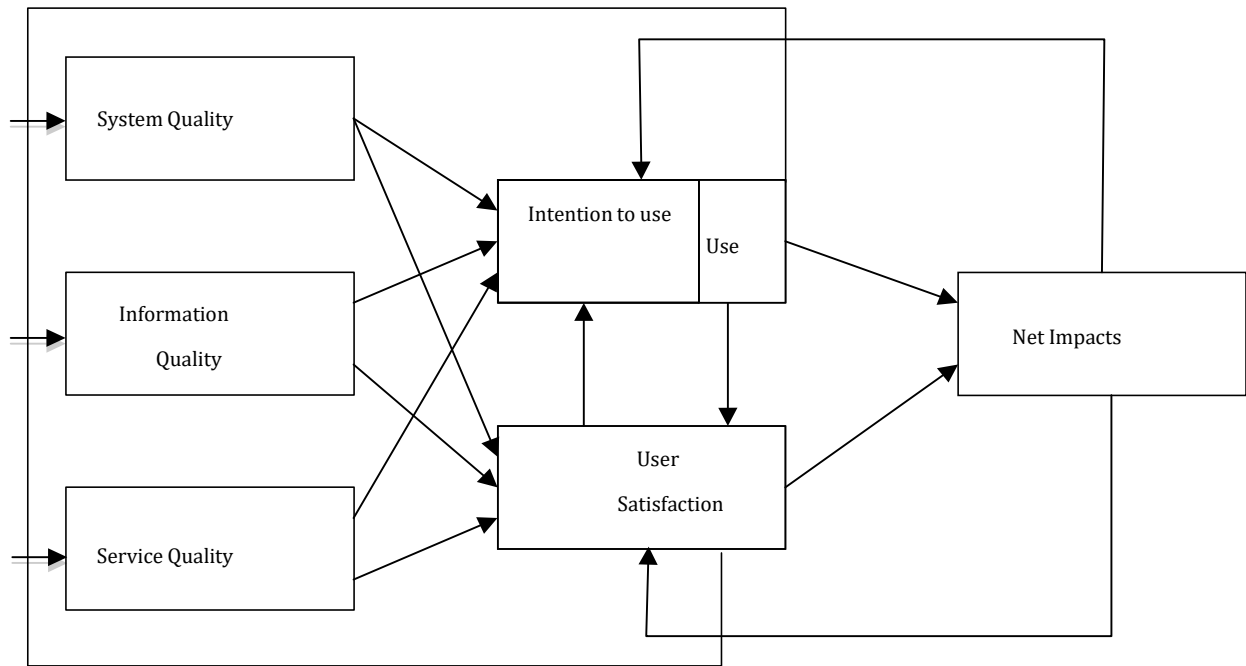
Figure 2. 1: Updated De Lone and McLean IS Success Model (modified).

2.2 Empirical Literature Review

2.2.1 HRMIS Planning and Employee Performance

The HRP (human resource planning) process, also known as employment planning, examines human resource requirements to make sure the company has the requisite amount of personnel with the right abilities to achieve its goals. According to Garg (2013), the HRMIS is used as a decision support system to perform tasks such as forecasting demand for labour considering organizational strategic and tactical plans, economic conditions, competitive trends, social concerns, and technological changes. HRMIS planning was measured by timely information dissemination, performance appraisal, employee commitment and fair compensation.

Rajesh (2012) did research to ascertain how HRMIS affected human resource practices. He made an effort to connect HRMIS to human resource planning, hiring, selecting, developing, and compensating employees, among other things. Five different banks were issued a survey form, and 61.5% of them responded. The HR departments, which comprise HR managers and

specialists in the Jordanian banking industry, were the target audiences for the questionnaire. Results showed a connection between organizational planning and the efficient planning of the operations of the human resource information system. Additionally, it was discovered that the human resources information system aspects of performance development, knowledge management, and records and compliance have a connection to other human resources functionality.

Khera (2012) investigated the impact of human resource information systems on human resource planning. This study employed an exploratory research design. A questionnaire was used to gather the data, and SPSS version 23 was used for analysis. The results showed that HRMIS has a number of advantages, the most important of which is that it preserves a wealth of employee data, hence accelerating the laborious process of HRP. HR managers may also get help from HRMIS with strategic responsibilities including succession planning, applicant tracking for recruitment and selection, and manpower planning. After evaluating HRMIS's overall contribution to HRP, it has been determined that it accurately and effectively identifies both open and filled positions inside an organization.

The University of Maryland Programs (UMB) sponsored a study by Obama et al. (2020) to look at how Electronic Human Resource Management (EHRM) practices affect organizational performance. The study's objectives were to identify current EHRM practices in University of Maryland programs, evaluate UMB performance levels, and ascertain how EHRM practices affect organizational success at UMB. In this study, a descriptive research design was employed. In her study, stratified sampling was used. The sample size for the study was 107 individuals. Surveys were utilized to gather primary data. The validity and reliability of the instrument were evaluated using the Cronbach Alpha test. The twenty-third edition of the Statistical Package for the Social Sciences was used to analyze the collected data (SPPS).

According to the poll, 88.1 percent of respondents knew that e-compensation and e-recruitment were both generally utilized at UMB, whereas 83.5 percent and 84.1 percent of respondents knew that e-compensation and e-recruitment were both widely used at UMB. Second, the poll found that 75.3 percent, 61.9 percent, 69.0 percent, and 67.0 percent of the respondents, respectively, agreed that workforce agility, organizational productivity, organizational effectiveness, and organizational flexibility are indications of organizational success at UMB. Finally, 76.8 percent, 76.05 percent, 76.3 percent, and 74.6 percent of respondents agreed that the implementation of e-recruitment, e-training, e-compensation, and e-performance had an impact on organizational flexibility, organizational effectiveness, workforce agility, and organizational productivity at UMB.

Khera and Gulati (2012) performed a study in the top seven IT organizations and focused on HRMIS roles in human resource planning. It was found that HRMIS worked best for the strategic activities that human resource managers needed to complete and that more was needed in the areas of succession planning, manpower planning, applicant monitoring, and training and development. Similar research was conducted by Kundu and Kadian (2012) on the use of HRMIS in HRM in Indian enterprises. The results showed that the majority of respondents considered personnel records, payroll, and corporate communication to be unimportant, but technical and strategic HRM, as well as performance and reward management, were thought to be essential to the firm.

A research on the impact of human resource information systems on planning and development in mid- to large-sized enterprises was conducted by Nagendra and Deshpande in 2014. The goal of this study is to examine the extent to which mid- to large-sized firms use an HRMIS and the benefits they derive from its implementation in the Human Resource Planning (HRP) sub functions. 50 senior and junior HR managers at three companies in Pune were surveyed to

gather primary data. The study of training requirements, the skills inventory, succession planning, and the analysis of labor demand and supply conducted by HRMIS are some of the most significant applications of HRMIS that have been identifiedThe most frequently endorsed HRMIS function, according to the results, is accurate vacant employment opportunity identification.

Using a straightforward random sample approach, Eketu and Edeh (2017) investigated the connection between human resource planning and organizational sustainability of certain telecommunications companies in Rivers State. The Krejcie and Morgan formula was used to calculate a sample size of 95. Eighty-two questionnaires were fully completed and returned for data analysis. Data analysis was done using the IBM statistics software for social sciences and Spearman's Rank Correlation Coefficient. Their study's findings showed that human resource planning and organizational sustainability are closely related. The study came to the conclusion that human resource management, as assessed by competence, age, and culture, improves organizational sustainability. One suggestion is that human resource professionals thoroughly consider each applicant's qualifications in order for the business to endure.

The influence of using an ERP system on Pakistan's human resource management practices was studied by Maryam et al. in 2014. They chose five firms, namely Orient Company Ltd., Mobilink, LUMS University, Nestle Pakistan Ltd., and Engro Foods Ltd. 300 employees made up the study's sample size. According to their research, implementing enterprise resource planning has a favorable link with training and development but a negative relationship with hiring and selecting employees. It did, however, indicate a relationship with pay and benefits. Second, they discovered that salary and benefits, training, and development, as well as recruitment and selection, had favorable relationships with organizational productivity.

Mbiu and Nzulwa (2018) investigated how human resource planning affected labor productivity in the Kenyan county government. A descriptive survey research approach was used in the study to gather information from 216 COG workers in Nairobi who had supervisory responsibilities. 55 respondents were chosen for the sample size using stratified sampling. An employee survey that included both closed- and open-ended questions was used to gather primary data. Data analysis was carried out using the Statistical Package for Social Sciences (SPSS) version 22 for both descriptive (frequency, percentage, and mean) and inferential data (correlation, and regression). The study's conclusions showed a strong and favorable correlation between the effectiveness of Kenya's Council of Governors and HR planning activities including recruiting and deployment, talent retention, development and training, and succession planning.

Human resource planning techniques were studied by Maina and Kwasira (2015) in relation to employee performance in Kenya. The survey was carried out among Nakuru County government employees who were linked to the county's administrative center in Nakuru Town, Kenya. The study made use of descriptive research methodologies. There were 45 employees that made up the target population. Primary data were gathered via a structured questionnaire. To evaluate the validity and reliability of the study instrument, a pilot test was carried out. Using the Statistical Package for Social Sciences program, descriptive and inferential statistics were used to examine the data. Tables were used to present the study's findings. It was determined that HRMIS planning had a beneficial impact on employee performance ($r = 0.415$; $p\ 0.01$).

Okiro and Kariuki (2021) did a research to see how human resource information system development techniques in parastatals in Nairobi impact employee performance. The primary theories employed in the study were social exchange theory, human capital theory, and social

learning theory. A cross-sectional descriptive approach was used to achieve the study's goals. A sample of 56 state companies was chosen for the study, which was conducted at various government parastatals in Kenya. The study relied only on primary data, which was collected through standardized questionnaires sent to HR managers in government parastatals or their equivalents. To analyze the connectivity among the variables, the acquired data was summarized using descriptive statistical methods and the regression model. The findings demonstrated a good and strong connection between employee work performance and training and development. Training and development, organizational development, incentives management, and performance assessment all had a substantial favorable influence on employee job performance among state firms in Nairobi, according to the research.

Kyambo et. al. (2021) conducted a review on integrated human resource information system framework for operational efficiency in Kenya. They found out that the increase in the amount of knowledge that affects organization's ways of doing business has necessitated strategic ways of managing the organizations' resources. The globalization of business is having a significant impact on human resource management practices. An important and fast-growing technological innovation is computer-based information systems. Information systems provide an opportunity for businesses to improve their efficiency and effectiveness, and even to gain competitive advantage. One of the information systems in use is the Human Resource Information System. Along with office automation systems capabilities, current Human Resource Information System include features of transaction processing systems, decision support systems, communication systems, and systems with elements of artificial intelligence. Modern Human resource information system should broaden its target and go beyond the organization's borders to address the needs of all stakeholders and help in decision making.

2.2.2 HRMIS Design and Employee Performance

Shareki et al(2019) .'s study examined the relationship between the effects of Human Resource Information Systems (HRIS) on HRM productivity in order to assess the influence of ICT adoption on Business Process Management (BPM). A conceptual model was developed for the study, and data from 187 HR professionals who have access to HRIS at work were acquired. Partial Least Squares-Structural Equation Modeling (PLS-SEM) analysis was used to test hypotheses and analyze data sets. The results of this study showed that the effectiveness of HRM is significantly impacted by HRIS when applied properly. These findings are appropriate for market-competitive firms seeking to improve HRM productivity through HRIS-enabled HR exercises. As a result, firms seeking to modernize their HRM-based business practices are encouraged by this research to implement an appropriate HRIS, particularly a performance management system (PMS), which is a critical aspect in their success.

Zhao and Xu (2016), on the other hand, conducted textual analysis on the role of HRMIS design on performance of large corporations. The study focused on the planning, requirement analysis, construction implementation and system application. An in-depth analysis of HRMIS design was conducted where information was collected from relevant sources. The study observed that an effective design ought to be carried out in conformity with the proposed blueprint. At the same time, it was observed that effective design requires a representation of HR professionals, taking the role of key users. The quantity of participants and their level of excitement are crucial factors in the deployment of HRMIS. It is also necessary to have good documentation during the construction phase.

Yusuf, Taslim, Wan, and Baharudin (2014) looked at the impact of Malaysian organizations' performance on the design of the HRMIS. The study was carried out in an active Human Resource Management Information System in a chosen Malaysian e-Government project (HRMIS). Data collection was carried out at Usability Lab in the Faculty of Computer and Mathematical Sciences, and focused on Leave Module of HRMIS. In the study, 5 participants who were involved in project implementation were requested to provide data which was analyzed. The findings revealed that the design of an HRMIS should take into consideration aspects such as screen management, graphic, icons as well as error handling.

In order to identify the extent to which the HRMIS improves design in a connected and comprehensive way, Kumar and Parumasur (2013) conducted a study (as determined by its impact on areas of HR, time management, cost management and managerial satisfaction with the system). Cluster sampling was used to choose a sample of 101 managers from a municipality in South Africa. A 28-item, self-developed closed-ended questionnaire was used to collect the data, and its psychometric features (validity and reliability) were statistically evaluated using factor analysis and Cronbach's alpha, respectively. Utilizing inferential statistics, data were examined. The findings showed that, while to varied degrees, HRMIS significantly improves organizational efficiency overall as well as its sub-dimensions (HR functions, time management, cost management, and managerial satisfaction with the system). Therefore, putting in place an appropriate HRMIS has the ability to improve operational effectiveness and the execution of the HR and company strategy, ensuring organizational effectiveness.

A review of the literature on the value of human resource information systems in the twenty-first century was conducted by Wandhe (2020). He found that human resource information systems (HRIS) are being used by corporations, governments, and non-profits all over the

32

world to facilitate information interchange and make downsizing and reengineering programs simpler. A combination of information technology and human resource management is called a human resources information system (HRIS). The HRIS, or human resource information system, uses technology to help HR managers carry out HR responsibilities in a more efficient, systematic, and organized way.

In the age of big data, Kaygusuz et al. (2016) investigated the growing significance of information, the design of information management systems, as well as its widespread application in human resources management and the increasing efficacy of human resources management information in strategic management processes. With a focus on the use of human resource information systems, the impacts of emerging new circumstances on organizational effectiveness and employee performance are thoroughly investigated (HRMIS). A survey was used as the method for gathering data for this study, with a sample size of 160 senior managers, midlevel managers, and workers from the banking and industrial sectors. The results, which included correlation and regression test models, revealed that human resource management activities carried out in firms via information systems contribute favorably to organizational efficiency and hence to employee performance.

Shaikh and Begum (2018) investigated the fundamental and preliminary models of analyzing, designing, and developing HRMIS in business organizations. The paper claims that a human resources management information system (HRMIS) is computer software designed to streamline and speed up the HR management process as well as enhance its quality through automation of fundamental (regular) organizational goals and operations. As a result of this benefit, an increasing number of companies use HRMIS effectively for public, government, e-Governance, and private company sectors, as well as converting to HRMIS to implement digital and virtual business. Additionally, it was found that creating uniform HRMIS standards

is crucial for enhancing HR management efficiency and transparency in particular departments as well as the public sector as a whole. Furthermore, it will be a key step toward the implementation of a single e-governance system and the rapid execution of business.

Arifin and Tajudeen (2020) did a research to investigate the utilization of information systems (IS) in security and defense companies. The research investigated the Malaysian Armed Forces (MAF) to discover the elements that impact personnel use of the system. It also intended to investigate the effect of Human Resource Management Information Systems (HRMIS) on MAF workers. According to the findings of this study, there were seven elements that affected staff usage of the HRMIS, and the system also had a favorable impact on employees. Studies on the application of the IS frequently include organizations, with minimal focus on security and defense groups such as the military services. In this aspect, the study's findings are notable since they are taken directly from system users.

A study on the impact of human resources management information system (HRMIS) architecture on the effectiveness of government departments in Zimbabwe was conducted by Malindadi (2016). His research concentrated on three departments under the Public Service Commission: personnel, human resources, and the Human Resources Management Information System. The study adopted a qualitative methodology and used in-depth interviews to gather data. Responses were obtained from fifteen respondents who represented all managerial categories. The responses obtained were coded and thematically analyzed in line with the research objectives. Analyzed data revealed that the Zimbabwe human resource departments were still using the manual system and had not migrated to the automated system. Findings also showed that the majority of respondents felt at ease using the manual system. It was also observed that the government had no capacity to implement an HRMIS due to financial constraints.

Ben-Moussa and El Arbi (2020) looked into how the adoption of HRIS in HR affected people's capacity for innovation. A research model was created with the help of 42 respondents, and associated hypotheses were examined in the human resources divisions of Tunisian companies. HRIS adoption improves individual creativity power of Tunisian HR employees, according to results calculated by Smart PLS software. Furthermore, the association between HRIS use and individual creative capability is moderated by employees' affective commitment. Indeed, the more employees are emotionally invested in their company, the more favorable and notable the impact of HRIS on HR staff's individual innovation behavior.

Bartai (2014) conducted research to determine how much adoption of human resource information systems was thought to affect the performance of Kenyan public universities. The study assessed 19 surveys using a structured questionnaire targeting 22 heads of human resource functions, yielding an 86.36 percent response rate. The study concludes that, while universities have deployed various HRMIS systems, it is mostly used as an administrative tool rather than a strategic tool at public institutions. Because HRMIS has not made the HR department significant in the company, the function that HRMIS can play in increasing the efficiency and performance of universities is lacking. Furthermore, the respondents were unable to create a direct relationship between HRMIS and its influence on their normal job, particularly on human resource management procedures such as performance management, human resource planning, recruitment and selection, and training and development. So, despite the fact that HRIS looks to have immense promise, it has not been effectively exploited to its full potential in Kenya's public institutions.

In order to ascertain how much the architecture of HRMIS affects employee performance in Kenya's private colleges, Kemei (2016) conducted a study. 507 employees of United States International University-Africa made up the study's population. An example sample of 84 respondents was created using the stratified random sampling technique. Utilizing descriptive statistics like frequencies and percentages, data was evaluated. The influence of the independent and dependent variables was examined using Pearson correlation and simple regression analysis. Data analysis was performed using SPSS version 22 (Statistical Package for Social Scientists). Figures and tables were used to present the data. The majority of respondents thought that the HRMIS system provided relevant information, according to the study's findings on the relationship between employee performance and HRMIS design. It had boosted their performance by enhancing their capacity to communicate information.

Olayo (2018) looked into how perceived information design techniques for human resource management affected parastatals' performance. A descriptive survey method fusing quantitative and qualitative techniques was employed in the study. 9600 Kenyans were the target of 32 parastatals with only commercial objectives. 240 respondents were selected from ten parastatals using the cluster random sampling methodology. Descriptive and inferential statistics were employed to analyze the data using the Statistical Package for Social Science (SPSS version 23). According to the conclusions of the study, parastatals' perceived performance was declining, and they were experiencing stiff competition from other businesses. According to the findings, perceived human resource management information design techniques had a considerable favorable impact on parastatal performance.

Warui (2016) looked into the variables influencing the Teachers Service Commission in Kenya's use of HRIS (TSC). The study investigated the effects of several factors on the proportion of HRIS usage in TSC operations. It employed an exploratory research methodology, with Kenyan TSC secretariat staff serving as the study population. The 204 respondents who made up the study's sample were chosen using deliberate stratified sampling. Data were gathered using a questionnaire that was self-administered. The use of descriptive statistics allowed results to be displayed as means. Multiple regression and analysis of variance were employed to test the hypotheses and linear relationships. The study discovered that managerial support, infrastructure, and organizational internal structure all had an impact on the use of HRIS in TSC operations across the country. The study concluded that greater managerial support, infrastructure, and organizational internal structure increased HRIS usage.

Juma (2018) conducted research to ascertain how HRIS affected employee commitment in the Nairobi steel and aluminum manufacturing sectors. The study used a descriptive research methodology and self-administered questionnaires as data gathering instruments. The study focused on permanent employees in Nairobi's aluminium and steel manufacturing businesses. The study focused on eight of Nairobi's 37 aluminium and steel manufacturing enterprises. Only 62 of the 92 respondents who were chosen from among the eight companies were able to submit their data for the study. The data were analyzed using descriptive statistics like mean and standard deviation. A single regression model was used to examine the degree to which HRIS has an impact on employee commitment. The study's data analysis revealed that HRIS had little to no effect on employee commitment in Nairobi's steel and aluminum manufacturing companies. It is challenging to gauge the system's effect on employee engagement because sectors have not fully embraced the use of HRIS.

In order to investigate the effects of human resource information system functions on organizational performance, Njeje (2018) surveyed a sample of Kenyan Saccos. Although the Saccos have HRIS modules, there hasn't been any research to show how these modules effect the performance of the organization, hence this was necessary. In order to better understand how these systems, affect organizational performance in Saccos, the study looked at their effects on e-performance management, e-staffing, and e-human resource planning systems. The technological acceptance model, the systems theory, the human resource information system model, and the resource flow model were among the theories and models used in the study. Purposive sampling was utilized to choose the 54 respondents for the study, who were mostly employees of human resource departments. The study used a cross-sectional survey approach with a census strategy that targeted 54 respondents. Data were gathered through the use of questionnaires, and they were both qualitative and quantitative in nature. Descriptive and inferential statistics, correlation, and tables were used to analyze and present the data. The validity and reliability of the instrument were evaluated using Cronbach's alpha. The results showed that E-performance management, E-staffing, and E-training and development all significantly affect Sacco performance.

The use of information systems in human resource practices and overall corporate success were the subjects of research by Muriithi (2014). This study specifically looks at how HRIS affects training and development. The performance of a firm was examined holistically in the sense that a balanced score card was utilized to view all manifestations of that performance. When creating the balanced score card, Kaplan and Norton suggested that financial metrics, staff growth and development, customer satisfaction, and internal business processes could all be used to gauge a company's performance. In order to ascertain whether there is a connection between HRIS and a company's performance, all of these variables were taken into account. Both quantitative and qualitative investigations were conducted. Both primary and secondary

data were used in this investigation. Secondary data for this study was given by the Capital Markets Authority. The information was presented in the form of financial statements from publicly traded companies between 2001 and 2011. Through the use of questionnaires and interviews, primary data was acquired. The study's conclusions showed that, at Nairobi Stock Exchange (NSE) listed companies, human resource information systems significantly influenced training and development as well as business performance.

2.2.3 HRMIS Integration and Employee Performance

An organization's most valuable asset is its workforce. An organization can make the most of this asset by using HRMIS, which is efficient and effective in raising employee performance. An organization that anticipates growth in the near future should think about investing in an HRMIS, according to a report by (Bhatia, 2016) on online HR software. This will improve employee and HR department performance. More than just gathering, storing, recording, managing, and transmitting employee data is involved in HRMIS integration. The system includes far more intricate operations like single point of data entry, performance management, benefits management, reporting, workforce analysis, and scheduling (Bhatia, 2016). Error reduction, expense reduction, employee innovation, and policy compliance were all examples of HRMIS integration.

In order to determine the degree of integration of an HRMIS in mid- to large-sized firms and the advantages associated with its adoption in the sub-functions of human resource planning (HRP), Nagendra and Deshpande (2014) performed research. 50 senior and junior HR executives/managers from three companies in Pune were surveyed to get primary data. The most often used applications of HRMIS were found to be its contribution to the efficacy and efficiency of HR planning through the analysis of training requirements, the skills inventory, succession planning, and labor demand and supply. The results show that an HRMIS that is

well integrated facilitates efficient organizational operations.

Beadles, Lowery, and John (2015) conducted a survey to determine the impact of HRIS on the public sector. Obstacles in the study included a lack of personnel, budgetary allocation, coordination among all business functions, a lack of technical support, and time management for HRIS management. These are some of the most frequent obstacles for every information system, but there are other factors that are more distinctive and could perhaps act as a barrier during the management and deployment of the system. These obstacles include finding the person in charge of the system's design, calculating the return on investment, and the extremely complicated procedures needed in creating HR policies and ensuring that they are in compliance with the nation's national laws, identifying the person in charge of the system's design, measuring the return on investment (ROI), and the risk of losing personal data that HRIS contains.

Man, Ahmad, and Khurram (2012) investigated the elements influencing the efficiency of the HR Department's information systems. In order to determine how human resource directors view the variables influencing Human Resource Information Systems (HRIS), turnaround times for all activities, costs related to performing HR functions, and the use of information by various management levels within the company, the study's methodology included the use of a questionnaire with Likert-type items and open-ended questions. The study only included the replies from 18 of the 20 HR experts that took part in the survey. According to the report, businesses are becoming more aware of the need for faster information access and the ability to store large volumes of data in a more secure manner.

An empirical research on the effects of cloud-based human resource information systems and how they are incorporated into human resource management tasks was undertaken by Sanjeeve and Natrajan (2020). The goal was to determine how HRIS has transformed human resource

management. They discovered that digitization has had a profound effect on how organizations manage their data. Management information systems (MIS) are critical to an organization's survival. To maintain a competitive edge, organizations must evolve and upgrade in response to changing technology. Human capital is an organization's most valuable asset, and many have already implemented human resource information systems (HRIS). Human resource processes and decisions are based on HRIS reports. The volume of data generated by businesses is increasing at a breakneck pace, necessitating massive investments in IT infrastructure. With the cloud-based model of on-demand resource usage, the Internet has elevated data, file, and application storage to a new level. Cloud computing, as one of the segments of information technology, contributes billions of dollars on a global scale. The availability of a low-cost model for resource sharing and utilization contributes to its popularity. Not only the private sector, but also the public sector, have begun to embrace cloud- based work.

In their 2018 study, Puspitarini et al. looked into the factors that affect how well the Human Resources Information System (HRIS) is implemented at the Indonesian Ministry of State-Owned Enterprises (MSOE). 22 factors, which are categorized into four dimensions—human, organization, technology, and environment—influence the success of HRIS implementation, according to the DeLone and McLean information system success model, HOT (human-organization-technology) fit model, and TOE (total organizational effectiveness) (human-technology-organization- environment). Through the use of a questionnaire, the study used a quantitative method of data collection. The weight of success criteria and dimensions, as well as their rankings, were computed using the entropy approach to data analysis. There were 99 HRIS users who contributed data via questionnaires that were delivered to them. According to the findings of the study, the aspects determining the effectiveness of HRIS adoption at the MSOE in priority order are technology, people, the environment, and the organization. Furthermore, five characteristics were chosen with the greatest weights: information quality,

service quality, top level management support, system quality, and social influence.

In Bangladesh's hospital sector, a developing nation, Alam et al. (2016) performed study on the elements that affect management choices about the installation of human resource information systems (HRIS). The Human Organization Technology Fit (HOT-fit) model and the Technology Organization Environment (TOE) framework were merged in this study to better comprehend this issue. To determine how they affected hospital HRIS adoption decisions, thirteen variables were looked at across four dimensions. 550 copies of structured questionnaires were sent to HR directors at 92 private hospitals in Bangladesh using a non-probability sampling technique. A real response rate of 69.63% was shown by the respondents' completion of 383 surveys. Based on the first HRIS installation, the samples were divided into three basic groups: adopters, prospectors, and laggards. Five crucial factors are identified: IT infrastructure, top-level management support, IT employee skills, perceived cost, and competitive pressure. Furthermore, of the four suggested factors, the technological component is the most crucial, followed by the organizational, human, and environmental dimensions. The study also discovered that various adopting groups significantly differ from one another in these characteristics. In order to increase the chance of HRIS adoption, the study's findings also provide academics, hospitals, and the government with useful guidance. The results of this study are crucial for comprehending how HRIS is used in low-income nations.

In the Western Province of Sri Lanka, Perera (2018) conducted research to assess the impact of HRMIS integration on HRM effectiveness in a few large apparel companies. The investigation used a survey methodology. Twelve major garment companies were chosen as the study's sample, and 28 statements on a five-point Likert scale were used in a self-administered survey of all HR department personnel. The statistical data analysis tool SPSS (version 23.0) was used to analyze and assess the data using univariate and bivariate

techniques. The study's findings indicate that HRMIS is responsible for 85% of the variation in HRM performance. The results of this study also showed that HRMIS integration helps managerial effectiveness.

Maamari and Osta (2021) conducted study to assess the impact of effective HRMIS integration deployment on employee engagement, job satisfaction, and involvement in their jobs in small and medium-sized enterprises (SMEs). A positivist viewpoint and a quantitative research design were used in the study. The results show that, despite explaining just a small amount of the variation in work participation and engagement, effective HRMIS deployment has a considerable impact on employee job satisfaction. Furthermore, there is a bad correlation between job participation and both the success of HRMIS deployment and job happiness. In other economic sectors, the researchers were unable to conduct comparable analyses of employee performance.

(2015) Nyame and Boateng looked on how Human Resource Information Systems (HRIS) were used in Ghanaian companies. With an 86 percent response rate, a survey was conducted on 129 businesses out of 150 randomly chosen samples from the nation's public and private sectors. Two-thirds of enterprises in Ghana don't now utilize HRIS, according to the data, which first suggested that this is not a common practice in Ghanaian firms. The industry that businesses are involved in as well as firm size, organization type, and age are important common denominators for HRIS adoption and utilization. The low percentage of adoption was attributed by businesses to things like a small workforce, high installation costs, ignorance, and a low priority for such a system. The study's conclusions indicate that HRIS integration in businesses is essential for raising worker productivity. It helps to streamline HR procedures and to make communication between employees and between employees and management easier.

Noutsa et. al. (2017) performed a study to identify key elements that enhance HRMIS integration and utilization in Cameroonian organizations, as well as their impact on performance. Using currently available pertinent literature, we identified a number of criteria that were contrasted with the findings of a survey we conducted of 258 HR employees and 12 HR managers. With the help of Smart PLS 3.2.4, data were analyzed. According to the study's findings, the sole predictor of HRMIS adoption is the quality system. Furthermore, it found that integration and use, as well as user happiness, had a considerable impact on organizational performance.

In order to evaluate the readiness for HRIS implementation, identify pertinent elements, and analyze implementation issues in public hospitals and health departments, Dilu et al. (2017) conducted research in the Amhara National Regional State, Ethiopia. In Ethiopia's Amhara National Regional State, 19 public hospitals and health departments conducted an institution-based cross-sectional survey that was supplemented by a qualitative study from February 15 to March 30, 2016. Through the use of a self-administered questionnaire, the data was gathered. The questionnaire was created using the 32-item Management Science for Health (MSH) HRIS readiness assessment instrument and includes questions assessing technical, human, and organizational factors in addition to socio-demographic parameters. Descriptive statistics, bivariate, and multivariate logistic regression analyses were all performed using statistical software to enter and analyze the data. Using odds ratios with a 95% confidence interval, the statistically significant factors associated with HRIS implementation readiness were found. In-depth interviews and observation checklists were used to collect qualitative data. Thematic content analysis was employed to examine the qualitative data. Insufficient logistical support, a lack of skill, a lack of commitment, and a lack of resources were found to be the barriers to HRIS deployment. The study discovered that there was little readiness for HRIS implementation. The implementation process would be aided by strategies aimed at improving

HR staff abilities, awareness, and attitude.

At contrast, Kemei (2016) carried out a study to ascertain the impact of HRMIS integration on worker performance in Kenyan private universities. 507 employees of United States International University-Africa made up the study's population. An example sample of 84 respondents was created using the stratified random sampling technique. Utilizing descriptive statistics like frequencies and percentages, data was evaluated. The influence of the independent and dependent variables was examined using Pearson correlation and simple regression analysis. Data analysis was performed using SPSS version 22 (Statistical Package for Social Scientists). Figures and tables were used to present the data. The results of the study on the relationship between HRMIS integration and employee performance demonstrated that a decrease in HRMIS errors enhanced service quality, which in turn boosted employee performance. The results also demonstrated that employees performed better since they were always aware of the duties and responsibilities that were assigned to them.

Weru et al. (2017) carried out research to determine how the adoption of quality management systems affected by the integration of human resource information systems in Kenya's ISO-certified state firms. A descriptive survey was the suggested research method. The Kenya Bureau of Statistics determined that the population consisted of fifty-nine state-owned businesses that were ISO certified in accordance with the 9001:2008 series. The collected data were evaluated using SPSS version 20 (Statistical Package for Social Scientists). The analysis included factor analysis, descriptive statistics in which the means, Standard Deviations, and variances for each factor tested in the questionnaires were determined, correlation analysis between the independent sub variables and the dependent variable, linear regression analysis as well as the t-test for the significance test of individual coefficients. For measuring the model's capacity for explanation, R-squared was used. Results showed that successful HRMIS

integration ensures organizational performance.

Njeje (2018) used a survey of several Kenyan Saccos to look into how the integration of human resource information systems affected organizational performance. The 54 respondents, the majority of whom were employees of human resource departments, were chosen by purposeful sampling. 54 respondents were the target group for the study's cross-sectional survey methodology, which used a census approach. According to the report, E-staffing, E-performance management, and E-training and development all have a significant impact on Sacco performance.

By evaluating the degrees of system manipulation of human resource functions like e-recruitment, e-training and development, e-payroll management, and performance management on proper decision making, Muchelule et al. (2017) conducted a study to determine the underlying assumption of this research study. This study employed a descriptive research design methodology, which combines qualitative and quantitative approaches. The study's target audience was 1689 persons, and 313 HRIS users and service providers from Vihiga County made up its sample. Utilizing questionnaires, data that was both quantitative and qualitative was gathered. Utilizing stratified sampling, the study's respondent categories were determined. On qualitative data, thematic analysis was employed, and on quantitative data, statistical analysis. Descriptive and inferential statistics were employed to analyze the data in order to establish the relationship between the research variables. E-recruitment lowers recruiting costs, according to the survey, with the remaining respondents either neutral or disagreeing. According to the report, e-training also ensures that a skills inventory is current and enhances the efficiency of employee data collection.

The usage of HRIS integration in Kenyan processing sectors was the subject of Nga and Wat's (2012) investigation. In their study, the researchers employed descriptive statistics. The study

found that the higher access speed to information, which boosted efficiency and dependability, was the most significant benefit realized from the use of human resource information systems. Financial support was the main obstacle because there was little to no money, if any, to meet the expenses. The study also discovered that factors such as user engagement, attitudes, traits, and intents, as well as computer experience, external pressure, top-level management support, external information, and training, all have a big impact on how successfully information technology is adopted and how widely it is accepted.

2.2.4 HRMIS Operation and Employee Performance

Three ways that information and communication technology operations impact the HR function were examined by Laval and Diallo (2007). Their conclusions were supported by Reddick's research (2009). They came to the conclusion that the HR department is impacted by HRMIS both operationally and relationally. The ability to increase the effectiveness of human resource operations, automation of regular HR tasks and operations, and finally an increase in HR personnel productivity can be summed up as the operational impact. Shortening the time it takes to fulfill customer requests and improving HR employee satisfaction and business acceptance are what the relational impact looks like.

In view of the sharp drop in paper use, Bidan (2010) emphasized the crucial role that information system operation plays in guaranteeing sustainable development. Rangriz et al. (2011) assert that HRMIS helps to assist strategic decisions in a similar manner. In fact, the system's information will be applied at a high level of hierarchy to help with strategic decision-making. Information lessens uncertainty, bridges the gap between predictions and actions, and generates facts that may be used to make decisions. This explains why businesses spend money on human resources to build up their organizational capacities and ensure their long-term survival in the modern world. In a knowledge-based economy, the performance of the

company's people resources actually changes the standard for measuring success (Chakraborty & Abu Mansour, 2013).

In order to determine the current state of knowledge in this field and to suggest some intriguing future research areas, Maditheti and Gomes (2017) conducted a review study on the topic of human resource information systems. For the study, a thorough analysis of 155 cited articles on human resource information systems was carried out. In order to establish the present body of knowledge, the paper's objective was to examine research on the subject of human resource information systems. The study involved a systematic review of 155 referred literature on the subject and offered several potential directions for further investigation. The results complement prior research on human resource information systems and contributed to a more complete understanding of the topic. Additionally, a conceptual framework was provided with the intention of guiding and influencing future research initiatives. Not all papers on the subject of human resource information systems could be fully covered by the research. However, given the research methodology employed, it is conceivable that the review process covered a sizable fraction of the available studies. Additionally, as far as the author is aware, there has never been a thorough assessment of human resource information systems published in a scholarly journal.

DiRomualdo et. al. (2018) conducted a study to determine the impact of digital technology on the types of human resource services offered and how those services are provided. The authors examined how the expanding importance of technology will affect the corporate center, global business services (GBS), centers of excellence (COEs), and field-based human resources (HR). The writers examined the impact of shifting activities on present roles (both changing and vanishing), as well as the requirement of developing new occupations within human resources. The authors used early indicators from The Hackett Group's 2017 HR Digital Transformation Study, as well as The Hackett Group's extensive database of paid HR benchmarks with Global

1000 companies, to develop a perspective on how digital technology will transform HR processes, roles, and organizational structure. The findings of the study indicated that Human resource firms should begin planning for the modifications necessary to meet the demands of corporate digital transformation and capitalize on opportunities to improve human resource capabilities, service offerings, and performance.

In their 2011 study, Schuler, Dolan, and Jackson examined the development of human resource management, its present applications, and the inclusion of transnational and international perspectives. The role HR personnel play inside the company determines the degree to which firms may obtain a competitive advantage through the use of HRIS. If the HR department's culture of personnel role does not change, even the most effective HRIS will not give a business a competitive advantage. Users struggle to understand the report the system generates and are unsure of how to use it to add value, which prevents the information gathered from the system from being fully utilized. They are unable to decide tactically depending on the information at hand. Overall, this indicates that additional research is required to identify other strategic benefits of HRIS that the entire firm may benefit from while also boosting operational effectiveness.

Three ways that information and communication technology operations impact the HR function were examined by Laval and Diallo (2007). Their conclusions were supported by Reddick's research (2009). They came to the conclusion that the HR department is impacted by HRMIS both operationally and relationally. The ability to increase the effectiveness of human resource operations, automation of regular HR tasks and operations, and finally an increase in HR personnel productivity can be summed up as the operational impact. Shortening the time it takes to fulfill customer requests and improving HR employee satisfaction and business acceptance are what the relational impact looks like.

In order to ascertain the extent to which the HRMIS enhances organizational efficiency in a comprehensive and linked way, Kumar and Parumasur (2013) conducted a study. The 28-question self-developed closed-ended questionnaire used for data collection was tested statistically for its psychometric properties using factor analysis and Cronbach's alpha, respectively. According to the findings, HRMIS significantly increases organizational efficiency overall as well as its sub-dimensions, such as human resource functions, operations, time management, and managerial satisfaction with the system, albeit to varying degrees.

Zahari et. al. (2018) conducted a research on the impact of Human Resources Management Information Systems (HRMIS) on employee productivity and satisfaction after the system was implemented. The Terengganu Police Contingent has 191 workers from several departments participating in the study. The data were collected using a basic random sample method and evaluated using reliability analysis, descriptive frequency analysis, and Pearson's correlation analysis. When these factors were assessed at the same time, the results revealed that the HRMIS program, user characteristics, and organizational support all have a beneficial impact on the happiness of Terengganu Police Contingent staff. The report also gives many stakeholders, including policymakers and organizational members, significant insight into the relevance of HRMIS enforcement in the company.

Mulegi (2014) evaluated the performance of human resource functions and practices in Tanzania using a human resource information system. The goals of this research were to uncover the most important elements influencing HRIS installation in Tanzania Revenue Authority (TRA), to define the functions and performance of HRIS in TRA, and to look into measures to enhance HRIS. Random and judgmental sampling approaches were used in the investigation (purposive). Although 45 respondents were expected to participate, the actual data obtained came from just 40. The study's findings show that implementing HRIS in TRA

has resulted in more significant improvements in the performance and practice of human resource tasks. HR functions have been streamlined and simplified. The performance has been of a high standard, resulting in high-quality outputs and the achievement of corporate objectives. However, a number of obstacles stood in the way of this system's successful adoption, including staff preparedness, a lack of finances for training and system maintenance, and network issues.

In order to ascertain the effects of HRMIS operation on employee performance in Kenya's private universities, Kemei (2016) conducted a study. 507 employees of United States International University-Africa made up the study's population. An example sample of 84 respondents was created using the stratified random sampling technique. Utilizing descriptive statistics like frequencies and percentages, data was evaluated. The influence of the independent and dependent variables was examined using Pearson correlation and simple regression analysis. Data analysis was performed using SPSS version 22 (Statistical Package for Social Scientists). Figures and tables were used to present the data. The study findings on HRMIS operations and employee performance showed that it led to better planning by cutting down repetitive work and by managing each employee contribution to enable thorough performance tracking.

In Kenyan public universities, Midiwo (2015) conducted a study on HRMIS on HR activities, including hiring and selection, training and development, payroll, and performance management, all of which are susceptible to system manipulation. Descriptive survey method with qualitative and quantitative components was used. The study's target audience was HRMIS users and providers with two years or more of experience at public institutions. Both quantitative and qualitative data were collected using questionnaires and interviews. To choose the university staff for the study, stratified sampling was used. After that, basic random

sampling was used to conduct the interviews. MS-Excel and the Statistical Package for Social Sciences were used to analyze the data (SPSS). However, the results showed that low computer proficiency and a lack of financial support prevent the efficient use of human resource information systems. The performance of institutions was the study's main focus. This results in a performance gap for employees, which this study aims to close.

A study on the impact of HRMIS operations on organizational performance was carried out by Akoyo and Muathe (2017). The ability of human resource information systems to consistently manage and develop people based on the value of each person's contribution at work is a fundamental capability. Employees can access the HRMIS operation component to seek time off, and managers can visit the manager's portal to view and approve processes. Employee performance is tracked continuously through goals and evaluations, and redundant tasks are eliminated through the integration of these services.

Ben Moussa and El Arbi (2020) conducted a study on the influence of human resource information systems (HRMIS) operation on human resource departments (HR) on individual creativity capabilities. A descriptive study approach was adopted, and 42 respondents were recruited to test associated hypotheses within the human resources departments of Tunisian businesses. According to the results calculated by Smart PLS software, HRMIS utilization boosts Tunisian HR personnel' individual creativity capabilities. Additionally, it was shown that employees' emotional commitment acts as a moderator of the association between HRMIS use and individual creativity potential.

2.2.5 Top level management support

Lee (2014) studied the adoption and embracing of technology: A case of Internet Technology in Medium-Scale Businesses. A poll of 100 senior HR managers was conducted in all companies with more than 500 workers. Only a quarter of those polled agreed that IT systems

supported strategic HRM operations like performance management, leadership development, and workforce planning extremely well. Directors participated in the research should address the study gap between administration support functions and human resource strategies in order to offer the best outcomes to the board of management. According to the conclusions of the study, human resource management has been evolving and taking on a more strategic role that is supportive of a company's core objectives. However, some of the systems utilized by human resource departments do not fulfill the required criteria. This indicates that a firm, particularly its human resource directors, should equip themselves with the greatest tools and technology systems available.

According to Kovach and Cathcart (2010), senior management's commitment and support play a major role in HRIS adoption in firms, and this is confirmed by the literature on HRIS adoption, as evidenced by the research findings. The lack of interest, support, and attention by management to IT adoption is one of the three most critical issues noted by Bhattacherjee (2008). Having the backing of the company's top management is critical to the success of Information Systems (IS). Senior management, according to these academics, is directly responsible for implementing and improving change. It was determined that, in order for IT to flourish in businesses, one of the major factors had to be met, which was controlling expenses.

The effect of the human resource information system on employees was studied by Weeks (2013). According to the inquiry, the persistent problem with the current HRIS was brought on by a lack of support systems, inadequate preparation, and inefficient operations. Staff complaints about the system's interfaces being too complicated have also been mentioned, along with the system's complexity, rigidity, and incompatibility with other systems inside the corporation. Many companies struggle to put HRIS goals into practice on a budget and to give employees access to information. Continuous training of staff to ensure proper usage of HRIS

and to ensure the system is adequately utilized is another issue confronting firms that use HRIS. Successful organizations' human resource management systems emphasize consistency and dependability. Numerous businesses will experience rapid increase in the future as a result of human resource use (E-HR). This is the human resource strategy that is responsible for delegating human resource functions to the organization's commercial partners. One of the primary deterrents to these systems has been their high implementation and maintenance costs, which businesses are unable to support.

Ebenezer, Ankrah, and Sokrohuman (2012) looked into how resource information systems may be used as a tactical tool in human resource management. This study's goal was to identify the strategic advantages that companies can get from using HRIS and the part that HRIS plays in ensuring the effectiveness of strategic human resource management. The study found that CTS and DMC benefited from the implementation of HRIS. In order to test the relationship or connection between the independent variable, in this case HRIS, and the dependent variables, in this case Cost and Time Savings (CTS), Employment Development Commitments (EDC), and Quality Information Effects, a conceptual model was developed based on multiple reviews of the HRIS literature (QIE).Organizations that place a premium on integrating HRIS and its applications will benefit from improved time management, reduced operational expenses, and increased strategic decision-making. Financial assistance and resource allocation are crucial throughout the first stages of establishing HRIS and also for its long-term sustainability.

Research on human resource information systems and its impact on employee activity was done by Karikari and Boateng (2015). In order to understand the role, issues, and benefits of HRIS in the hotel industry in Greater Region (Ghana), this study conducted interviews with two HRIS managers. The system was found to be crucial in analyzing the duties of each departmental position and its job title within the company, identifying open positions,

providing extra details on training gaps and staff in need of upskilling, facilitating quick succession planning, and quickly identifying and training key employees. The investigation came to the conclusion that HRIS was crucial to human resource management. By integrating HRMIS with other internal business systems, businesses may receive information faster and make decisions more quickly.

Katou (2012) investigated how the performance of manufacturing enterprises was impacted by human resource management training methodologies. This study sought to ascertain whether training strategies used in human resource management (HRM) had an impact on an organization's performance in the industrial sector. The study sample consisted of a modest number of businesses that represented the whole industry. The research investigation was done using an implausible model of human resource management. The concept got widespread acceptance, indicating that organizational performance when HRMI systems were used was favorably associated to employee training, promotion, incentives, human resource management recruiting policies, employee benefits, employee participation, and health and safety conditions.

Ismail et al. (2019) investigated the moderating impact of manager support on the relationship between employee performance and recruitment and selection, training and development, compensation, performance evaluation, and succession planning. Data from 450 academics at Nigeria's state-owned polytechnics were collected using the cross-sectional survey method. PLS (partial least squares) and bootstrapping techniques were used to assess the study's hypotheses. The data provided full support for four of the five proposed direct linkages. Likewise, the eighth and ninth theories were confirmed. The overall results show that hiring and selection, training and development, performance evaluation, and succession planning are all significant and positive predictors of employee performance. Top level management support

also acts as a moderator in the relationships between employee performance compensation and training and development.

Ben Moussa and El Arbi (2020) investigated the moderating influence of management assistance on the effect of Human Resource Information Systems on individual innovation capabilities in Tunisian firms. According to the results calculated by Smart PLS software, HRMIS utilization boosts Tunisian HR personnel' individual creativity capabilities. Additionally, it was shown that employees' emotional commitment acts as a moderator of the association between HRMIS use and individual creativity potential.

An essential element to improving employee performance is top-level management assistance. Employees are more loyal to their organizations, according to Kwenin, Muathe, and Nzulwa (2013), when they believe that their managers care about their welfare. Employees are more inclined to stay with organizations if their skills, dedication, and good attitudes are valued (Terera & Ngirande, 2014). Top level management support is determined by provision of instruments to support employees work, provision of the needed support to staff members, proper management coordination, deliberate flow of knowledge among the staff, involvement of employees in decision making and encouragement of staff contributions by the management.

Al-Harazneh and Sila's (2021) evaluation of the impact of e-HRM installation on the efficiency of the HRM system. Three theories served as the foundation for this study: the leader-member exchange theory, the social exchange theory, and the unified theory of technology adoption and utilization. Using structural equation modeling based on covariance, the proposed model and its underlying assumptions were examined. 282 responses from Jordanian employees of two telecommunications companies were included in the sample. The study's findings indicate that behavioral intention to use an e-HRM system was significantly positively influenced by

performance expectancy but not by effort expectancy. The use of the e-HRM system is greatly influenced by enabling circumstances. HR professionals had a negative effect on e-HRM usage, but top level management support and line managers' HRM roles had a positive influence on behavioral intention to use e-HRM and actual usage of e-HRM. Finally, the effectiveness of the HRM system was significantly impacted by the actual use of e-HRM.

Kinyua (2012) looked into the difficulties Kenyan government institutions have implementing HRIS. It was appropriate to conduct a census survey from a representative subset because the research was done in real time, and the data provided was accurate. A semi-structured questionnaire was used in the study, which included all of Kenya's state-run enterprises and allowed for flexible primary data collection. Human resource managers in charge of HR operations in state enterprises received the surveys and comments via email. Using coding methods and descriptive statistics, the data was examined and coded. The study's findings indicate that adopting information and communication technology is one of the biggest challenges faced by most human resource managers when implementing HRIS in government entities (ICT). Kenyan state-owned businesses made sure they had qualified and competent employees, prioritized time management, and made sure there was enough financing and IT support to make the process possible. The primary obstacle to deploying HRMIS in Kenyan state-run firms is still the adoption and use of ICT.

The adoption of human resource information systems by the Kenya Revenue Authority was investigated by Fatuma (2014). The researcher's survey was designed in a descriptive manner. The study group was composed of personnel from the Nairobi-based Kenya Revenue Authority (KRA). A random stratified strategy was used for the sampling process. All respondents received the questionnaire, which was used as the primary method of data collection. The data, which comprised ranking lists, frequency tables, percentages, mean scores, and pie charts, were

analyzed using descriptive statistics. According to the respondents, top level management support, effective communication, training, assistance from the ICT department, assistance from the HR department, and user involvement all had an impact on the implementation of HRIS at KRA. According to the study, management should set aside adequate resources for the deployment and upkeep of the HRIS. Communication between managers and employees needs to be encouraged. The main responsibility of HR managers is to take a more active role in helping the whole HRIS implementation process in their organizations. The results of the current study have important ramifications for other academics whose main objective is to comprehend HRM, HRIS adoption, and implementation in underdeveloped countries. The study offers public institutions ways to overcome obstacles by providing more thorough information on how to facilitate HRIS implementation. This information should aid HR professionals in understanding benefits, HRIS implementation status, barriers, and applications better and help them be more objective.

In Kenyan universities, Kanake & Onyiego (2016) investigated strategies and financial concerns around the use of Human Resource Information Systems. The major goals were to evaluate effective techniques for sustaining HRIS usage on service delivery in Kenyan institutions and to identify challenges associated with HRIS usage in terms of service delivery. Survey research methodology was used for this investigation. Employees from the finance departments, those from the two universities, information and communications technology, and human resource were the target group. Questionnaires were used by the researcher to get information from the respondents. It was noted that the new system received a poor reception from the workforce, who resisted the switch from manual to automated processes because of problems with HRIS usage. The colleges also struggled with a lack of competent staff,

expensive maintenance costs, and a culture that was resistant to change. The study's conclusions showed that in order to increase the use of HRIS, organizations need have definite goals and objectives for what they wish to accomplish. They should purchase a system that will serve their needs, make sure they have the necessary resources to set up HRIS, ensuring that all employees receive regular training so they can become more accustomed to the program, and make sure HR employs qualified personnel who are able to use the system.

2.2.6 Employee Performance

According to Xu, Ribeiro-Soriano, and Gonzalez-Garcia (2015) as well as Eniola and Entebang (2015), firm performance can be viewed as a firm's ability to bring about change in management through the acquisition of market opportunities, proper adaptation to the environment, and carrying key administrative features. New product improvements, exceptional qualities, and changes in the technology associated with them are generally the main factors that can improve firm performance. Sands, Kavanaugh, Murray, McNeal and Jemni (2017) noticed that despite the fact that HRMIS includes equipment and programming, it likewise comprises of individuals, techniques and data. Presently it has been noticed that HRMIS has laid more spotlight on key angles like staffing, execution and reward organization and robotization. As indicated by Eliona and Entebang (2015) the aftereffects of this as alluded to by (Adejugbe, 2013) demonstrate insufficiency of "strong, monetary process in these nations, keeps the development of economies and in this way the Government should assume a key part in making those conditions".

There is an unmistakable underline that "administration strategies cause an impact on" association's abuse, associations close affiliation in order to think of a consolidated power that can stop assets usage (Harvie, Narjoko & Oum, 2010; Okpara, 2011; Eliona & Entebang 2015). As indicated by Eliona and Entebang (2015) character and traverse of Government approaches

affect undertakings. Nath and Satardekar (2015) argued that human asset administration is worried by the "strategies and practices" that involve the human asset issues in the work output. According to Bartai (2014) current progressions in innovation have made it basic to the ongoing data based, self - benefit and intelligent workplace. Bartai (2014) further advances that HRMIS is accepted to be as an "efficient course of action of HR rehearses that empower associations to achieve their objectives and have the capacity to adjust themselves to the business technique set up". This implies HRMIS has upgraded and enhanced authoritative execution (Shaheen, Ghazanfar & Hussain, 2014).

As indicated by Usman, Khan, Ikhlaq and Mujtaba (Bartai, 2014), the rise of data innovation in the field of human asset has altered the working environment tremendously. Hierarchical execution is a definitive accomplishment of an association and involves measures, similar to the presence of focuses to be achieved, has time length inside which to accomplish the objectives and the acknowledgment of productivity and viability. Eliona and Entebang (2015) highlight that character and traverse of Government strategies affect execution. The legislature is required to make rules which will frame a reason for organizations to have the capacity to contend with each other however these tenets will undoubtedly change now and again

According to Mutisya (2014), performance appraisal is a procedure that involves the setting of work standards, evaluating the performance of the employees with regards to the standards, and giving a response to the workers with the aim of giving them motivation to better their performance. The performance appraisal process involves the description of the performance expectations, looking at the performance levels and the provision of feedback to the employees. Through the recording of accurate data assisted by HRMIS, an organization is able to track the performance of every employee and help give instant feedback to them on the areas that need to be improved in order to realize better performance levels.

2.3 Summary of Research Gaps

From the available literature that was reviewed on HRMIS planning and employee performance, it was indicated that HRMIS planning such as recruiting, selection, training and development, compensation procedures, and other factors (Rajesh, 2012; Khera, 2012; Nagendra and Deshpande, 2014; and Maryam et. al., 2014). These studies indicated that HRMIS planning are key in enhancing performance. However, majority of the employees like to be recognized formally by top level management for a job well done, hence need fair compensation, information dissemination and commitment. In addition, these studies were not carried out in the civil service sector. Further, majority of these studies used a small sample size and descriptive design.

Regarding to HRMIS design, various scholars have highlighted a possible significant effect of HRMIS design on employee performance (Yusuf, Taslim, Wan and Baharudin ,2014); Kumar and Parumasur ,2013; Kaygusuz et. al. 2016; Shaikh and Begum ,2018; Malindadi ,2016). The studies did not however indicate the influence of HRMIS design on employee's performance in the civil service. In addition, these studies did not distinguish how various HRMIS practices at the civil service which include and are not limited to data assimilation, information availability, system user friendliness and operational efficiency among others affect employee performance.

According to a review of the available literature on HRMIS integration, far more complicated processes including single point of data input, performance management, benefits management, reporting, workforce analysis, and scheduling are all involved. These studies, however, did not take into account the aspects of HRMIS integration that the current study wanted to explore, such as mistake reduction, cost reduction, employee innovation, and policy

compliance.

literature review on HRMIS operation and employee performance indicated that effective operation of HRMIS guarantees organizational performance (Weru et al, 2017; Midiwo, 2015; and kemei., 2016). However, majority of the employee's luck efficiency, inability to achieve goals and role conflict which this study sought to address.

Table 2. 1: Research Gaps Summary

Reference	Objective	Methodology	Findings	Gaps
Olayo (2018)	Determine the effect of perceived human resource management information design techniques on the performance of parastatals.	Descriptive research design	Human resource management information design techniques had a considerable favorable effect on parastatal performance	Limited target population to parastatals
Warm (2016)	To determine the factors that influence the use of HRIS in TSC in Kenya. The study looked into how various variables influenced the level of HRIS usage in TSC operations	Exploratory research approach	Managerial support, infrastructure, and organizational internal structure all had an impact on the use of HRIS in TSC operations across the country	Target population limited to TSC and the methodology differs from the descriptive design that will be applied in this design
Juma (2018)	To determine the impact of HRIS on employee commitment in the aluminum and steel manufacturing industries in Nairobi.	Descriptive research design	There was no substantial influence of HRIS on employee commitment in Nairobi's industry.	The study focused only on workers in the aluminium industry.

				service and thus it improves employee performance
				The study focused on HRMIS's effects on performance of employees in the private
Weru et al. (2017)	To ascertain the impact of human resource information systems integration on the adoption of quality management systems in Kenya's ISO-certified state enterprises	Descriptive survey	Findings indicated that effective integration of HRIMS guarantees organizational performance	The study used correlation to determine the relationship between variables. This study used both correlation and regression analysis.
Midiwo (2015)	To determine effects HRMIS on HR operations; recruiting and selection, training and development, payroll, and performance management are all subject to system manipulation in Kenyan public universities.	Descriptive survey	HRMIS had a significant positive impact on the performance of Kenyan public universities.	The study focused on descriptive analysis to show the relationship between HRMIS and HR practices.

Opiyo (2015)	Determine the effects of human resource information systems on commercial bank performance, with a focus on Kenya Commercial Bank.	Descriptive survey	HRIS is one of the most significant strategic areas for the growth of a bank's contact with internal and external clients.	The study used correlation to determine the relationship between variables. This study used both correlation and regression analysis.
Maina and Kwasira (2015)	To examine the role of human resource planning practices on employee performance in Kenya.	Descriptive Survey	It was established that HRMIS planning positively affect employee performance	Correlation analysis was used to determine the relationship between variables. This study used both correlation and
Okiro and Kariuki (2021)	To determine how human resource information system development techniques in parastatals in Nairobi impact employee performance.	Cross-sectional descriptive approach	Training and development, organizational development, incentives management, and performance assessment all had a	Focus was given to correlation to determine the relationship between variables. This study used both correlation and regression analysis.

			substantial favorable influence on employee job performance.	
Kinyua (2012)	The challenges that government institutions in Kenya experience when implementing HRIS	Descriptive survey	Lack of support from the top management hinders an effective implementation of HRIS, which in return leads to poor	The study used correlation to determine the relationship between variables. This study used both correlation and
Fatuma (2014)	Factors that are thought to influence the Kenya Revenue Authority's implementation of Human Resource Information Systems	Descriptive survey	Top management influences the performance of employees and adoption of the HRMIS in organizations.	The study used a descriptive and correlation analysis. This study used both correlation and regression analysis.

			aluminum and steel manufacturing businesses	
Njeje (2018)	To examine the effects of human resource information system functionalities on organizational performance.	Cross-sectional survey method	E-training and development, E-performance management, and E-staffing have a substantial impact on Sacco performance.	The study focused on the performance of organizations as opposed
Muriithi (2014)	To determine if there was a link between the usage of information systems in human resource practices and overall business performance	Descriptive research design	Human resource information systems had a significant impact on training and development as well as company performance at NSE listed companies	The study focuses on HRIS' impact on human resource practices. The current study looks into HRMIS practices on employee performance.
Kemei (2016)	To determine the effects of HRMIS integration on employee performance in private universities in Kenya.	Descriptive research design	HRMIS integration and employee performance showed that reduction of errors on HRMIS improved the quality of	The study used simple linear correlational. This study uses hierarchical regression with a moderator variable.

Table 2.1 gave a summary of author's, objective, methodology, findings and the existing gaps. The HRMIS planning in the civil service should be able to disseminate information and commit employees to the ideals of the organization. The next stage involves system design which generates data for availability of information, user friendliness and operational efficiency. Thirdly, the system should be able to integrate various processes of information by reducing errors, cost involvement with the view to promote employee innovation and comply with policies of the system set up. Finally the system should allow smooth operations within the organization in order to achieve the organizations goals, work efficiently and reduce conflict of roles.

2.4 Conceptual Framework

A conceptual framework may be regarded as a systematic diagram depicting at a glance the interrelationships among the factors that are regarded to be essential to the elements of the circumstance being examined. It is a model of how one hypothesizes or comprehends the connections among a few factors that have been indistinguishable to the key research issue (Ravitch and Riggan, 2016). The independent variables were HRMIS design, HRMIS integration, HRMIS operations and HRMIS planning. Top level management support was the moderator while the dependent variable was employee performance in the civil service as shown in figure 2.2.

Independent variable

Human Resource Information System

HRMIS Planning
- Information Dissemination
- Manpower forecasting
-Employee Commitment
- Fair Compensation

H_{01}

Dependent variable

HRMIS Design
- Data Assimilation
-Availability of information
-System user friendliness
- Operational efficiency

H_{02}

H_{01} H_{02} H_{03} H_{04}

Employee Performance
-Competence
-Alignment of HR strategies
-Customer Satisfaction.
- Efficacy
-career reviews

HRMIS Integration
- Error reduction
- Cost reduction
- Employee innovativeness
- Policy compliance

H_{03}

H_{05} (a, b, c, d)

Top level management support

HRMIS Operations
- Goals achievement
- Work efficiency
- Role conflict

H_{04}

-Provision of Resources
-Flow of information
- Collective Responsibility

Moderating Variable

Figure 2. 2: Conceptual Framework

Source: Researcher, 2021.

2.4.1 HRMIS Planning

Human Resource Planning (HRP) process reviews human resources requirements to ensure that the organization has the required number of employees, with the necessary skills, to meet its goals, also known as employment planning. According to Strohmeior (2007), the HRMIS is used as a decision support system to perform tasks such as forecasting demand for labour considering organizational strategic and tactical plans, economic conditions, competitive trends, social concerns, and technological changes.

2.4.2 HRMIS Design

HRMIS is still developing through computerization. HRMIS makes it possible for various system components to converse with one another, offering useful reporting and analysis capabilities. A company that employs HRMIS, according to Kemei (2014), benefits from improved data consistency and integrity since redundant data entry is reduced, leading to increased efficiency. HRMIS gives an organization room for data and information availability. Due to the system's ability to save and retrieve any data or information, information management is made possible. Employees are constantly informed about the business and its customers. An employee can log into the system even after receiving training to acquire material that will improve their understanding of the company.

2.4.3 HRMIS Integration

An organization's most valuable asset is its workforce. An organization can make the most of this asset by using HRMIS, which is efficient and effective in raising employee performance. An employer that anticipates expansion in the near future should think about investing in an HRMIS, according to a report by (Bhatia, 2016) on Empxtrack (online HR software). This will improve employee and HR department performance. More than just gathering, storing, recording, managing, and transmitting employee data is involved in HRMIS integration. The

system includes far more intricate operations like single point of data entry, performance management, benefits management, reporting, workforce analysis, and scheduling (Bhatia, 2016).

2.4.4 HRMIS Operations

HRMIS is a comprehensive system that is used to collect, store, manage, deliver, analyze, and show human resource information for a business, according to Hendrickson (2003). This system consists of databases, software, hardware, and computer applications. According to Strohmeior (2007), the organizing, carrying out, and connecting information technology activities of e-HRM serve as a method of tying people and groups together and keeping them committed to common human resources commitments. Some academics claim that HRMIS assists HRM in maintaining, monitoring, and making choices that have an influence on the entire organization in their efforts to define HRMIS (Strohmeior, 2007). The system promotes productive outcomes in an organization and among its employees in a number of different ways.

Employers who use HRMIS systems are better able to regularly manage and grow staff based on each person's value to the company (Eniola and Entebang, 2015). Employees can access the portal to seek time off, managers can watch and approve workflows on the managers' portal, and HRMIS can continuously evaluate and track employee performance while also removing duplication of effort through the integration of these features.

2.4.5 Employee Performance

According to Xu, Ribeiro-Soriano, and Gonzalez-Garcia (2015) and Eniola and Entebang (2015), firm performance may be improved by acquiring market openings, adjusting to the environment, and bearing key administrative features. HRMIS encompasses people, processes, and data, according to Sands, Kavanaugh, Murray, McNeal, and Jemni (2017). Currently,

HRMIS is focusing on critical areas including staffing, execution, incentive, and robotization. According to Eliona and Entebang (2015), the lack of "strong, monetary process in these nations prevents the growth of economies, therefore the Government should assume a major part in producing such circumstances". The current study sought to address employee performance by evaluating the level of competence of the employees in various ministries, alignment of the HR strategies, customer satisfaction, efficacy and career reviews.

2.4.6 Top Level Management

A successful HR function in organizations or ministries depends on the intensity of support from the top-level management. Top level management support underlies the willingness of strategic leaders of the organization to participate and provide the much-needed support to the human resource function (Liu & Seddon, 2009). This study incorporated top level management for the purposes of provision of resources needed in performance obligations, providing avenues of flow of information and feedback and encouraging collective responsibility among employees to promote ownership and significance of the employees to the organization.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Philosophy

Researchers employ mental models in modern social science research to structure their thinking and observation (Bhattachenjee, 2012). These frameworks are known as research philosophies. According to Cohen and Crabtree (2006), the foundational tenet upon which research and advancement in the field of inquiry are built is the research philosophy or paradigm. The main philosophies of research include positivism, pragmatism and interpretivism (Thorpe & Jackson, 2008). A positivistic paradigm is founded on the idea that all researchers are imperfect and consists of a number of assumptions about how a researcher might make sense to others. Therefore, it is proposed that human behavioural research should be carried out in the same way as research in the natural sciences (Blumberg et al., 2005). In that positivism looks for the truths "out there," it might be said that positivism is based on realism. Pragmatism evaluates theories or beliefs in terms of the success of their practical application to investigations. According to interpretivism, reality is formed and shaped by social, cultural, ethnic, and gender aspects. Researchers frequently engage in discussion with individuals to learn about their views and meaning. Interpretivism links values and facts within this connection in an effort to comprehend reality within a social context.

Therefore, the study was based on positivism research philosophy. This is due to positivists' heavy emphasis on the quantification of constructs and their conviction that quantitative measurement is the best method for determining the characteristics of phenomena. Therefore, the production of quantitative data based on large samples as well as theory and hypothesis testing are the defining characteristics of a positivistic philosophy. A number of studies have

used positivism to relate human resource constructs; for example, Malindadi (2016) used the philosophy to determine a relationship between the performance of government departments in Zimbabwe and their use of the human resources management information system (HRMIS), while Kemei (2016) used it to investigate the impact of employee performance on the use of HRMIS in private universities in Kenya. However, there are few instances of this theory being used in research by Kenya's public service.

3.2 Research Design

This study used a descriptive approach research design, whose major goal was to use a quantitative technique to characterize the state of things at the time of the investigation. It is a process of gathering information in order to respond to inquiries that aim to explain the current situation of the study's participants (Creswell and Creswell, 2017). The study's design allowed for the collection of quantifiable data that was used for statistical inference on the target audience of the researcher in order to determine the impact of HRMIS on employee performance. This type of research consequently appears as closed-ended questions, which limits its ability to provide remarkable experiences. In any case, utilized legitimately it enabled an association to better characterize and measure the hugeness of something about a gathering of respondents and the populace they speak to (Creswell and Creswell, 2017).

Researchers like Garg (2013) conducted a study on the importance of HRMIS in successful workforce planning using a descriptive survey research style. He discovered that the primary objective of HRMIS is to improve the HR function, which will indirectly boost business. Research that answers the who, what, where, when, and how questions while also describing information about the population or phenomenon being examined is known as descriptive research, often known as statistical research. It is utilized in statistical computations for frequencies, averages, and other data (Meyers, Gamst and Guarino, 2016). In order to gather

primary data for this study, questionnaires were used. The quantitative research method, which is the systematic empirical investigation of social phenomena, was incorporated into the design because it establishes a fundamental link between empirical observation and the expression of quantitative relationships, which can be generalized to a larger population, and the qualitative research methods of content and thematic analysis, which are intended to describe and are frequently followed by analyses of why the observations are made and what they mean (Thorpe & Jackson, 2008).

3.3 Study Area

The study was conducted in Nairobi where all the government ministries are headquartered. The researcher aimed at including all government ministries into the study. There are 21 ministries in the national Government with one additional without portfolio. It is at the headquarters, that majority of the HR decisions and polices emanate and cascaded to field offices for implementation.

3.4 Target Population

The study population constituted 1384 personnel drawn from 21 HRM departments of government ministries headquarters in Nairobi, Kenya (Civil Service of Kenya, 2021). Therefore, the study population was 1384 personnel comprising of top level management, supervisors as well as HRM support staff. The study focused on the directorate since their services were significant and primary to this study hence were considered key to performance. The heads of the directorate are involved as they represent management and critical in policy making and provision of resources in the civil service.

Table 3.1 A table showing top, middle level managers and support staff in the civil service of Kenya population

S/No	Name of Department	Top Level Management	Middlelevel managers/Supervisors	Support staff	Total
1	Interior and Coordination of National Government	1	16	37	**54**
2	Devolution and the ASALS	1	19	37	**57**
3	Foreign Affairs	1	20	57	**78**
4	Defense	1	4	7	**12**
5	Education	1	20	58	**79**
6	National Treasury	1	18	68	**87**
7	Health	1	17	53	**71**
8	Transport, Infrastructure, Housing, Urban Development and Public Works	1	4	34	**39**
9	Environment, and Forestry	1	4	26	**31**
10	Labor and Social Protection	1	5	79	**85**
11	Land, and physical planning	1	15	82	**98**
12	Information communication and technology	1	16	44	**61**
13	Sports, Culture and Heritage	1	16	60	**77**
14	East African Community (EAC) and Regional Development	1	15	35	**51**
15	Energy	1	14	88	**103**
16	Agriculture, Livestock and Fisheries	1	17	41	**59**
17	Industry, Trade and Cooperatives	1	14	76	**91**
18	Tourism and Wild life	1	13	20	**34**
19	Petroleum and Mining	1	12	60	**73**
20	Water and Sanitation	1	12	76	**89**
21	Public Service and Gender	1	10	44	**55**
	Total	**21**	**281**	**1082**	**1384**

Source: Directorate of Human Resource, Kenya (2019)

3.5 Sample and Sampling Design

Sampling is a strategy that utilizes a variety of approaches to pick a suitable sample, or a

representative portion of a population, for the aim of ascertaining the parameters or

characteristics of the entire population (Mugenda & Mugenda, 2003). It assures that the study's conclusions are generalizable to the entire population. Stratified random sampling technique was used to identify respondents. Stratified sampling is a probability sampling method that is implemented in sample surveys. The target population's elements are divided into distinct groups or strata where within each stratum, the elements are similar to each other with respect to select characteristics of importance to the survey. The technique was achieved by separating the sample according to ministries. As a result of stratification, opinion, and perception towards HRMIS, top level management support of personnel in each ministry was included in the study.

3.5.1 Sample size

The desired sample size was determined using the formula of Fisher et al. (Chow, Shao, Wang and Lokhnygina, 2017):

$$n = \frac{z^2 pq}{d^2}$$

Where-:

n - The desired sample size (since the target population is less than 10,000)

z - The standard normal deviation, set at 1.96, which corresponds to 95% confidence level

p - The proportion in the target population estimated to have a particular characteristic. If there is no reasonable estimate, then use 50 percent (the study will use 0.50).

$q = 1.0 - p$

d = the degree of accuracy desired, here set at 0.05 corresponding to the 1.96.

In substitution, n= $\frac{1.962^2 \times 0.5 \times (1-0.5)}{0.05^2}$ = 384

A 30% sample size was increased to the main sample in order to cater for non-response 384/0.7 = 549. The most popular and efficient method for guaranteeing a high response rate, according to Bartlett et al. (2001), is to raise the sample size by 1–50% during the survey's initial dissemination. Therefore, the study sample size was found to be 549 personnel working in HRM departments in 21 Government Ministries. The study used stratified random sampling to select the respondents. Table 3.1 shows the sample distribution across the 21 ministries (strata).

The sample sizes from every ministry were obtained using a proportionate ratio determined through dividing the target population by the required sample size.

$$proportionate\ ratio = \frac{1384}{549} = 2.5$$

This ratio was then used to divide the total population in every ministry to obtain the sample sizes, which are shown in table 3.1. Individual sampling units were arrived at using online stat-trek random number tables whereby all individuals in the target population were assigned numbers and only individuals with numbers that were generated were included in the study as the sampling units.

The aforementioned population size was deemed suitable because earlier studies on HRMIS produced respectable results with smaller sample sizes. Ikhlas and Al-Shqairat (2010) used a sample size of 20 when reviewing the use of HRMIS in Jordanian services; Burbach and Dundon (2005) used a test size of 50 when assessing the critical ability of HRMIS to support individual administration activities in the Republic of Ireland; and Delorme and Arcand (2010) when examining the expansion of the roles and responsibilities of HR professionals from a conventional point of view.

Table 3.2: A Table Showing Top, Middle Level Managers and Support Staff in the Civil service of Kenya Sample Size

S/No	Name of Department	Top Level Management	Middle level managers/Supervisors	Support staff	Total
1	Interior and Coordination of National Government	1	6	14	**21**
2	Devolution and the ASALS	1	7	15	**23**
3	Foreign Affairs	1	8	22	**31**
4	Defense	1	1	3	**5**
5	Education	1	7	23	**31**
6	National Treasury	1	7	27	**35**
7	Health	1	6	21	**28**
8	Transport, Infrastructure, Housing, Urban Development and Public Works	1	1	13	**15**
9	Environment, and Forestry	1	1	10	**12**
10	Labor and Social Protection	1	2	31	**34**
11	Land, and physical planning	1	6	32	**39**
12	Information communication and technology	1	6	17	**24**
13	Sports, Culture and Heritage	1	6	24	**31**
14	East African Community (EAC) and Regional Development	1	5	14	**20**
15	Energy	1	5	35	**41**
16	Agriculture, Livestock and Fisheries	1	6	16	**23**
17	Industry, Trade and Cooperatives	1	5	30	**36**
18	Tourism and Wild life	1	5	8	**14**
19	Petroleum and Mining	1	4	24	**29**
20	Water and Sanitation	1	4	30	**35**
21	Public Service and Gender	1	4	17	**22**
	Total	**21**	**102**	**426**	**549**

Source: Directorate of Human Resource, Kenya (2019)

3.6 Data Collection

Prior to gathering data, the researcher applied for a research permit online with the National Commission for Science, Technology, and Innovation (NACOSTI) in order to interview potential respondents who were working for various national government ministries. The researcher contacted all the Heads of Human Resource Departments in the Ministries about the prospective study's goal and scheduled delivery of questionnaires for data collecting.

3.6.1 Instrumentation

A standardized questionnaire for civil service employees was used in this study. Based on the goals and hypotheses of the research, the questionnaire was created. To gather data, the researcher used closed-ended questions with 1–5 Likert scale statements. The answers to closed-ended questions would be uniform and easy to code, with a high response rate. After receiving approval from the directorate of human resources, the researcher handed the questionnaires to the participants. The respondents had 14 days to complete the questionnaires before the researcher collected them in line with Bryman's guidelines (2017).

3.6.1.1 Validity of the Research Instrument

According to Zohrabi (2013), a study is deemed legitimate if it derives meaningful and practical conclusions from its findings and if the information it collects accurately reflects the study's stated goals. In order to improve the validity of some of the questionnaires used in this study and transfer that improvement to the data and outcomes, they were pilot tested and evaluated (Hagan, 2014). In order to establish content validity, the questionnaire was examined by my supervisors and two experts of human resource selected from ministry headquarters offices. These experts reviewed the questionnaire to make sure it was appropriate, succinct, clear, and relevant, that it had purpose, and that it wasn't objectionable. Before being utilized in the study

field, the questionnaire was modified and altered in accordance with the advice of the two experts to strengthen the validity of its contents.

3.6.1.2 Reliability of the Research Instrument

According to Taber (2017), reliability is defined as the consistency of a set of measurement items; as a result, reliability describes the consistency of an instrument's measurements and the extent to which an instrument can reproduce the same results with similar subjects under the same circumstances. It therefore relates to a measurement's repeatability. If a respondent receives the same result after taking the test twice, the measurement tool is said to be reliable. The results of the pilot test were entered into SPSS and used to conduct an overall examination of the questionnaire's reliability and internal consistency in order to calculate a reliability coefficient. Utilizing Cronbach Alpha, the dependability and internal consistency were evaluated. A measurement of the link between various variables in a single study is called internal consistency. Heale and Twycross (2015) state that a consistency score of less than 0.9 indicates excellent consistency, less than 0.8 indicates good consistency, less than 0.7 indicates acceptable consistency, less than 0.6 indicates doubtful consistency, and less than 0.5 indicates poor consistency. This study used 0.7 as the minimal threshold for reliability.

The internal consistency evaluation of Cronbach Alpha was used to assess the reliability of the data gathering tool. According to the findings, top-level management support had a coefficient of 0.714, employee performance items had a coefficient of 0.881, HRMIS design had a coefficient of 0.834, HRMIS integration had a coefficient of 0.822, HRMIS operations had a coefficient of 0.811, and HRMIS planning had a coefficient of 0.842. Cronbach's alpha values for each variable were more than 0.7. The scales utilized in this research were therefore determined to be accurate in terms of capturing the factors.

Table 3.3: Reliability Test Results

Variable	No. of Items	Respondents	α=Alpha	Comment
Employee Performance	8	50	0.881	Reliable
HRMIS design	10	50	0.811	Reliable
HRMIS Integration	9	50	0.822	Reliable
HRMIS operations	4	50	0.811	Reliable
HRMIS planning	5	50	0.842	Reliable
Top level management support	7	50	0.714	Reliable

Source: Researcher, 2021

To achieve this purpose, the researcher conducted a pilot study in the Youth Enterprise Development Fund using 10% of the sample size. Therefore, 50 (10/100*549) questionnaires were administered to the heads of department and other personnel in the lower cadre who were not included in the final study. The respondents were selected using stratified random sampling across critical sections in which aspects like the Planning, Design, Operation and Integration are key in work execution and accomplishment.

3.6.2 Data Collection Procedures

A questionnaire's completion was expected to take roughly 25 minutes. The researcher self-administered the questionnaires. Before data collection began, participants' permission to share their information was requested. Under the supervision and direction of the study's supervisor, the participants were given time to complete the questionnaires. For primary data, all heads of HR departments, as well as employees in the lower cadre, completed structured questionnaires that were utilized to collect quantitative information. The use of questionnaires to collect data is recommended since they are simple to administer and produce quicker results. In addition, the Five points Likert scale were used with responses ranging from 5= strongly agree to 1= strongly disagree.

3.7 Data Analysis and Presentation

Data was cleaned, coded, categorized, and entered into SPSS (Statistical Package for Social Sciences, version 25) when data collection was complete. This procedure produced both descriptive and inferential statistics using SPSS V25.

3.7.1 Descriptive Analysis

Descriptive statistics were used to analyze quantitative data obtained from structured questions from the questionnaires. Descriptive statistics empowers the depiction and correlation of variables numerically (Mugenda and Mugenda, 2003). The primary goal of the descriptive statistics is to portray a circumstance by summarizing data such that it features the critical numerical highlights of the data. Data was summarized and presented in percentages, frequencies, mean and standard deviation.

3.7.2 Factor analysis

Factor analysis is a strategy of decreasing the number of indicators from a substantial number of measurable indicators with the assistance of SPSS program. The study looked at indicator loadings in a given factor utilizing factor analysis so as to diminish the number of indicators under each research variable and hold the indicator fit for clarifying the variable. Principal component analysis was used to conduct factor analysis. Abbie (2013), considered factor analysis as a productive strategy for finding overwhelming patterns among a large number of variables. Factors with factor loading values less than 0.4 were dropped, while those with estimations of 0.4 or more were withheld (Henn, Weinstein and Foad, 2009).

3.7.3 Inferential Analysis

Inferential analysis entails use of sample statistics to generalize findings in a population.

Pearson product moment correlation (r) was derived to show the nature and strength of the relationship among the variables in the study. The Pearson correlation r, takes a range of values between +1 to -1. An r -value of 0.01- 0.29 shows a weak relationship, an r-value of between 0.3 - 0.59 shows a moderate relationship whereas an r-value of between ≥ 0.6 and above shows a strong relationship (Cohen, 2018). Correlation results are reported at a significance level of 0.01 in line with other studies such as Pierce (2014).

To obtain population parameters from the sample statistics, simple and multiple regression model was utilized whereby the independent variables were regressed against the dependent variable to obtain population parameters. The use of simple and multiple regression model was preferred due to its ability to show whether there is an effect of the independent variables on dependent variables. In addition, multiple regression was used in showing linear elasticity/sensitivity between independent and dependent variables (Konasani and Kadre, 2015).

Also, the regression coefficients showed whether the hypothesized relationships were significant or not. A regression coefficient with a p-value of less than 0.05 indicated the significance of the independent variables (HRMIS design, integration, operations and planning) in predicting the dependent variable (employee performance). Therefore, the study used the following model to test the effect of HRMIS on employee performance in the Civil Service in Kenya.

To analyze objective one; which was to determine the effect of HRMIS design on employee performance at the civil service of Kenya using simple linear regression as shown:

$$Y = \beta_o + \beta_i X_i + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\textbf{i}$$

Where

Y = employee performance at the Civil Service of Kenya (dependent variable)

$\beta_{o=}$ represents Interceptor the value of Y when all X values are zero.

$B_{i=}$ represents Coefficients of the independent variables

X_i represents independent variables (HRMIS design)

ε represents the error term (To account for all other Variables or elements not considered in the study), assumed to be normally distributed with mean zero and constant variance.

To analyze objective two; which was to determine the effect of HRMIS integration on employee performance at the civil service of Kenya using simple linear regression as shown:

$$Y = \beta_o + \beta_2 X_2 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\textbf{ii}$$

Where:

Y = employee performance at the Civil Service of Kenya (dependent variable)

$\beta_{o=}$ represents Interceptor the value of Y when all X values are zero.

$B_{i=}$ represents Coefficients of the independent variables

X_i represents independent variable (HRMIS integration),

ε represents the error term (To account for all other Variables or elements not considered in the study), assumed to be normally distributed with mean zero and constant variance.

To analyze objective three; which was to determine the effect of HRMIS operations on employee performance at the civil service of Kenya using simple linear regression as shown:

$$Y = \beta_o + \beta_3 X_3 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\textbf{iii}$$

Where:

Y = employee performance at the Civil Service of Kenya (dependent variable)

$\beta_{o=}$ represents Interceptor the value of Y when all X values are zero.

$B_{i=}$ represents Coefficients of the independent variables

X_3 represents independent variable (HRMIS operations)

ε represents the error term (To account for all other Variables or elements not considered in the study), assumed to be normally distributed with mean zero and constant variance.

To analyze objective four; which was to determine the effect of HRMIS planning on employee performance at the civil service of Kenya using simple linear regression as shown:

$$Y = \beta_0 + \beta_4 X_4 + \varepsilon \dotfill iv$$

Where:

Y = employee performance at the Civil Service of Kenya (dependent variable)

$\beta_{o=}$ represents Interceptor the value of Y when all X values are zero.

$B_{i=}$ represents Coefficients of the independent variables

X_i represents independent variable (HRMIS planning)

ε represents the error term (To account for all other Variables or elements not considered in the study), assumed to be normally distributed with mean zero and constant variance.

To analyze the combined effect of human resource information system on employee performance at the civil service of Kenya using simple linear regression as shown:

the following model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dotfill (v)$$

Where:

Y = employee performance at the Civil Service of Kenya (dependent variable),

β_o = represents Interceptor the value of Y when all X values are zero.

β_1-β_4= represents Coefficients of the independent variables

X_1 = HRMIS Design

X_2 = HRMIS Integration

X_3 = HRMIS Operations

X4= HRMIS Planning

ε = the error term

Using SPSS, the regression model was tested on how well it fits the data. The significance of each independent variable was also tested; t- test and F-test were used to test the significance of the overall model at a 95 percent confidence level. The p-value for the F-statistic was applied in determining the robustness of the model. The conclusion was based on the basis of p value obtained as compared to 95% confidence level.

3.7.4 HRMIS, Top level management support and Employee Performance

The moderating effect was introduced and regressed between the moderator top level management support and each independent variable. Therefore, the interaction term between predictor and moderating variable was obtained by multiplying the two variables that produced an interaction effect done.

Objective five (a), sought to evaluate the role of top level management support on the relationship between HRMIS design on employee performance at the civil service of Kenya. Hierarchical regression model was used.

$$Y = \beta o + \beta_1 X_1 M + \varepsilon \text{.. v(a)}$$

Y = Employee Performance,

β_o = Constant (coefficient of intercept),

β_1 = change in employee performance for each increment change in X_1,

M = Moderator variable (top level management support) that affects the relationship of X and Y

X_1M = Interaction between top level management support and HRMIS and design

ε = error term

Objective five (b), sought to determine the moderating role of top level management support on the relationship between HRMIS integration on employee performance at the civil service of Kenya. Hierarchical regression model was used.

$$Y = \beta_0 + \beta_2 X_2 M + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots v(b)$$

Y = Employee Performance,

β_0 = Constant (coefficient of intercept),

β_2 = change in employee performance for each increment change in X_2,

M = Moderator variable (top level management support) that affects the relationship of X and Y

X_2M = Interaction between top level management support and HRMIS integration

ε = error term

Objective five (c), examined the moderating role of top level management support on the relationship between HRMIS operation on employee performance at the civil service of Kenya. Hierarchical regression model was used.

$$Y = \beta_0 + \beta_3 X_3 M + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots v(c)$$

Y = Employee Performance,

β_0 = Constant (coefficient of intercept),

β_3 = change in employee performance for each increment change in X_3,

M = Moderator variable (top level management support) that affects the relationship of X

and Y

X_3M = Interaction between top level management support and HRMIS operation

ε = error term

Objective five (d), sought to determine the moderating role of top level management support

on the relationship between HRMIS planning on employee performance at the civil service of

Kenya. Hierarchical regression model was used

$$\mathbf{Y = \beta_0 + \beta_4X_4M + \varepsilon}\text{.. } \mathbf{v(d)}$$

Y = Employee Performance,

β_0 = Constant (coefficient of intercept),

β_4 = change in employee performance for each increment change in X_4,

M = Moderator variable (top level management support) that affects the relationship of X

and Y

X_4M = Interaction between top level management support and HRMIS planning

ε = error term

A hierarchical regression model was used to analyze combined effect of the moderating role of

top level management support on the relationship between human resource information system

on employee performance at the civil service of Kenya.

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_1{*}M + \beta_6X_2{*}M + \beta_7X_3{*}M + \beta_8X_4{*}M + \varepsilon\ldots$ (5)

Where: Y = Employee Performance,

β_0 = Constant (coefficient of intercept),

$Q_1 \ldots\ldots Q_4$ = the coefficients of the variables in the model; employee performance at the

civil service of Kenya for each increment change in X_{1-4}

X_1= HRMIS Design

X_2= HRMIS Integration

X_3= HRMIS operation

X_4= HRMIS planning

M = Moderator variable that affects the relationship of X and Y

X_{1-4}M = Interaction between top level management support and human resource information system design, integration, operations and planning.

ε = the error term

3.7.5 Hypotheses Testing

The proposed hypotheses were tested as shown in table 3.3:

Table 3.4: Summary of Hypothesis Testing

Null Hypothesis	Analytical Model	Probability (p) values	Decision Rule
H_{01}: HRMIS design has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_1 X_1 + \varepsilon…I$	F=355.877,P<0.05	Reject null hypothesis
H_{02}: HRMIS integration has no statistically significant influence on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_2 X_2 + \varepsilon..ii$	F=466.394,P<0.05	Reject null hypothesis
H_{03}: HRMIS operation has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_3 X_3 + \varepsilon..ii$	F=197.606,P<0.05	Reject null hypothesis
H_{04}: HRMIS planning has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_4 X_4 + \varepsilon..iv$	F=556.086,P<0.05	Reject null hypothesis
H_{05a}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS design on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_1 X_1 M + \varepsilon$ ….v(a)	F=206.47,P <0.05	Reject null hypothesis
H_{05b}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS integration on employee performance at the civil service of Kenya	$Y = \beta_o + \beta_2 X_2 M + \varepsilon$ ….v(b)	F=282.208,P<0.05	Reject null hypothesis
H_{05c}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS operation on employee performance at the civil service of Kenya	$Y = \beta_o + \beta_3 X_3 M + \varepsilon$ …. v(c)	F=174.84,P<0.05	Reject null hypothesis
H_{05d}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS planning on employee performance at the civil service of Kenya	$Y = \beta_o + \beta_4 X_4 M + \varepsilon$ …. v(c)	F=764.228,P<0.05	Reject null hypothesis

Source: Researcher, 2021

3.8 Ethical consideration

Webster New World dictionary defined ethical as conforming to the standards of conducts of a given profession or group. To ensure the confidentiality of the respondent, the researcher sought permission from the institution and the concerned respondents as well. Also, the researcher designed the questionnaire to exclude personal details like names to protect the anonymity of respondents. In addition, the questionnaires were administered to each respondent in sealed envelopes and were collected in the same manner to ensure that responses are kept secret. All these measures were aimed at ensuring the confidentiality of the respondent.

CHAPTER FOUR

DATA FINDINGS, ANALYSIS AND DISCUSSIONS

4.1 Response Rate

The study's sample size was 549, however the researcher was able to collect replies from 455 participants, of whom 421 were deemed to be valid, translating to a response rate of 77%. According to the criterion established by Holbrook (2009), who argues that a response rate of 50% is sufficient for analysis, which will lead to reliable results, this was a sufficient sample for analysis and drawing conclusions for this study. Results for response rate are shown in Table 4.1.

Table 4.1Response Rate

Sample size	Number	Percent
Questionnaire given out	549	100.00
Questionnaire Returned	455	83
Questionnaire Not returned	60	11
unusable questionnaire	34	6
Usable questionnaire	421	77

Source: Researcher, 2021

4.2 Data Cleaning and Screening / Data Management

Raw data must first be cleaned and screened before analysis can be done. Data screening is essential to find any potential violations of the fundamentals of multivariate techniques (Hair et al., 2010). Before analysis, the collected raw data must be cleaned up in order to prepare for the multivariate data analysis. Outliers, errors, and missing data are carefully handled in order to achieve this.

4.2.1 Analysis of Missing Data

After receiving the completed surveys, the researcher reviewed each question to see if it had been appropriately handled. When there are fewer than 5% missing values for each item, according to Hair et al. (2013), the missing values should be replaced using the mean. In this study, however, missing value analysis showed that 27 questionnaires had unreported values. As a result, the questionnaires were eliminated because they could not be used for further analysis.

4.2.2 Analysis of Outliers

Outliers occur due to omission or commission error (Churchill Jr. and Iacobucci, 2004). Presence of outliers generates inaccurate results and therefore giving inconclusive results (Hair Jr*et al.,* 2010) which cannot be generalized to the population (Tabachnick and Fidell, 2013).

4.2.2.1 Univariate Outliers

SPSS was employed to highlight any errors of perceived variables in the information file. Kurtosis and Skewness on every one variable were investigated for univariate

4.2.2.2 Multivariate Outliers

To deal with all outliers, linear regression included Mahalanobis distance. The four items produced three degrees of freedom with p 0.001 and were therefore multivariate outliers, according to the results (Tabachnick & Fidell, 2013). Therefore, cases with a value of 0.001 or less were not included in the analysis.

4.3 Background Information of the Respondents

4.3.1 Gender of Respondents

The researcher sought to establish the representation of gender among the respondents. Categorization of gender was meant to assist the researcher to determine whether the constitutional gender rule was enforced in the civil service. The findings were presented in table 4.2.

Table 4. 2: Gender of respondents

Gender	Frequency	Percent
Male	206	48.9
Female	215	51.1
Total	**421**	**100.0**

Source: Researcher, 2021

Results indicated that there were more female (51.1%) than male (48.9%) among the respondents. The disparity between the gender was weak depicting a balanced approach in the recruitment of personnel to the civil service in compliance with the provisions of the Kenyan constitution.

4.3.2 Age of Respondents

Respondents' age was operationalized into five categories. This helped determine the largest group within the civil service sector that got affected by human resource information systems as presented in table 4.3

Table 4.3: Age of respondents

	Frequency	Percent
<25	27	6.4
25 - 35 years	206	48.9
36 - 50years	88	20.9
51 - 60years	85	20.2
61 years and above	15	3.5
Total	**421**	**100.0**

Source: Researcher, 2021

Results indicated that almost half of the respondents were aged between 25-35 years of age at 48.9 percent. They were followed by those aged between 36 -50 years at 20.09 percent and those aged between 51-60 years at 20.2 percent. It was observed that few employees were above 61 years and below 25 years of age. This is because those above 61 years had met the prerequisite age of retirement while those below 25 years had not joined the labour market. The study findings indicated that most respondents were young and middle-aged people.

4.3.3 Level of Education for staff in the Civil Service

The researcher sought to establish the levels of education of members of staff working in the civil service in Kenya. Results are shown in table 4.4.

Table 4.4: Education Level of the Respondents

	Frequency	Percent
O-Level	4	1.0
College Diploma	86	20.4
Bachelor's Degree	267	63.4
Post Graduate Degree	64	15.2
Total	**421**	**100.0**

Source: Researcher, 2021

According to table 4.4, the majority of respondents (63.4%) and respondents with college diplomas (20.4%) both held undergraduate degrees. 15.2% of responders, a remarkably low percentage, obtained postgraduate degrees. Because of their educational backgrounds, the respondents were able to reply to inquiries about HRMIS, performance, and top-level management. This suggests that the respondents had the ability to provide useful responses for the investigation's goals. The fact that they often use human resource management information systems in the process of decision-making in the Ministries also shows the fact that they have a high degree of literacy and awareness of information technology and the overall performance of the Ministries.

4.3.4 The Level of Experience of Employees in Civil Service

The study sought to find out the respondent's experience in the civil service. The findings are shown in Table 4.5.

Table 4. 5: Respondent's Years of Experience

	Frequency	Percent
Less than 1 year	27	6.4
1-2 years	90	21.4
3-5 years	173	41.1
6-10 years	85	20.2
More than 10 years	46	10.9
Total	**421**	**100.0**

Source: Researcher, 2021

The majority of public service personnel (41.1%), as indicated in table 4.5, had been employed for a tenure of three to five years. Those who had worked for between six and ten years came after them. Fewer than half of those surveyed had worked for less than a year or for more than ten years. As a result, a sizable portion of the staff is familiar with how the HRMIS system works.

4.3.5 Employee Position

The study sought to find out the position the respondents' held and the findings presented in table 4.6

Table 4.6: Employee Position

	Frequency	Percent
Top Level Management	18	4.28
Middle management/ Supervisor	97	23.04
General Staff	306	72.68
Total	**421**	**100.0**

Source: Researcher, 2021

Majority of respondents were general staff (72.68%) while 23.04% were middle management/supervisors. Top management had a 4.28% representation. The findings revealed

a fair participation of respondents from higher level, middle level management and general staff. This implied that diverse opinion and experience was expressed that was key to this study.

4.3.5 Duration spent in Ministry
The study sought to find out the duration of the respondents' in their respective ministries. The findings are presented in table 4.7.

Table 4.7: Duration of employee in ministry

	Frequency	Percent
Less than 1 year	28	5.1
1-5 Years	145	26.4
6-10 years	255	46.4
11-15 years	100	18.2
16years and above	21	3.8
Total	549	100.0

Source: Researcher, 2021

Majority of respondents had stayed in the ministry for 6-10 years (46.4%) while 26.4% had a duration of 1-5 years. Those that had stayed for 11-15 years were 18.2%. The least groups were that of less than a year in the ministries (5.1%). The findings revealed a fair participation of respondents from those that had stayed for long in the ministries to those that had stayed in less than a year.

4.3.6 Effect of Demographics on Expected Outcomes
The study sought to assess the effect of this demographics on employee performance in the civil service. This was meant to determine if the demographics were likely to affect the final outcome of the study. A significant relationship would indicate effect on outcome and hence the variable would have had to be controlled in the regression. The study findings were presented in table 4.8

Table 4.8: Effect of Demographics on Expected Outcomes

Chi-Square Tests Results on Age and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.752[a]	80	0.051
Likelihood Ratio	82.781	80	0.394
Linear-by-Linear Association	0.096	1	0.756
N of Valid Cases	349		

a. 82 cells (78.1%) have expected count less than 5. The minimum expected count is .02.

Chi-Square Tests Results on Gender and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.421[a]	20	0.901
Likelihood Ratio	14.052	20	0.828
Linear-by-Linear Association	0.027	1	0.869
N of Valid Cases	349		

a. 21 cells (50.0%) have expected count less than 5. The minimum expected count is .44.

Chi-Square Tests Results on Level of Education and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	66.689[a]	60	0.258
Likelihood Ratio	63.935	60	0.34
Linear-by-Linear Association	0.763	1	0.382
N of Valid Cases	349		

a. 63 cells (75.0%) have expected count less than 5. The minimum expected count is .04.

Chi-Square Tests Results on Work Experience and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	79.522[a]	80	0.494
Likelihood Ratio	85.708	80	0.311
Linear-by-Linear Association	0.088	1	0.767
N of Valid Cases	349		

a. 81 cells (77.1%) have expected count less than 5. The minimum expected count is .05.

Chi-Square Tests Results on Position in the Org and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.981[a]	40	0.156
Likelihood Ratio	46.956	40	0.209
Linear-by-Linear Association	1.729	1	0.188
N of Valid Cases	349		

a. 45 cells (71.4%) have expected count less than 5. The minimum expected count is .05.

Chi-Square Tests Results on Duration with Org and Performance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	99.626[a]	80	0.068
Likelihood Ratio	84.686	80	0.339
Linear-by-Linear Association	0.522	1	0.47
N of Valid Cases	349		

a. 83 cells (79.0%) have expected count less than 5. The minimum expected count is .05.

Source: Researcher, 2021

The Chi-Square test results showed no significant relationship between age and performance (p=0.051), no significant relationship between gender and performance (p=0.901), no significant relationship between level of education and performance (p=0.258), no significant relationship between work experience and performance (p=0.494), and no significant relationship between position in the organization and performance (p=0.156). These findings suggested that the outcome was unaffected by the demographic findings. Therefore, there was

no need to include them as a control in the final regression equation.

4.4 Descriptive Statistics for Various Variables under Investigation

The aim of descriptive statistics is to allow the investigator to use indices or statistics to portray meaningfully a distribution of results or measurements. To present the descriptive results, the research used mean, standard deviations, skewness and kurtosis. The study evaluated descriptive statistics: HRMIS design, integration, operation and planning.

4.4.1 Descriptive Analysis of HRMIS Planning

The study aimed at exploring HRMIS Planning and how it has affected performance of employees in the civil service. All the descriptive results of HRMIS planning were summarized in table 4.9.

Table 4.9: Descriptive Results of HRMIS Planning

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
The HRMIS aids in quick planning and timely dissemination of information on recruitment of potential employees for the organization.	421	1	5	3.40	.699	.183	.143
Through HRMIS planning, it is easy to appreciate every employee based on the work they have done.	421	1	5	3.53	.701	.345	.157
HRMIS has been an effective change agent for positive planning and shaping the employees' attitudes towards the use of technology.	421	1	5	3.55	.667	.054	.125
The HRMIS planning has increased employee commitment with the design by boosting their motivation and communication confidence levels.	421	1	5	3.41	.685	.124	.321
Compensation of employees has been made easy and quick through the HRMIS planning	421	1	5	3.50	.693	.245	.131
AVERAGE MEAN				**3.478**			

Source: Researcher, 2021

The results of analysis reveal that using HRMIS in planning helps to appreciate employee work activities in the civil service (Mean=3.53; SD=.701). Similarly, the study observed that HRMIS had become a change agent in shaping employee attitude towards technology (Mean=3.55; SD=.667). Furthermore, respondents agreed that using the system, it was easier to plan for employee compensation (mean=3.50; SD=.693).

However, respondents were indifferent with the view that HRMIS facilitates timely planning and dissemination of information on recruitment of potential employees for the civil service Mean=3.40; SD=.699). Likewise, respondents felt that the planning of HRMIS activities neither increased nor hindered employee commitment and motivation.

Table 4.8, shows most of the HRMIS Planning items normal curve has skewness of between -1 and -0.5 and kurtosis <3, with distribution being moderately skewed and platykurtic hence no perfect distribution was observed. The normal curve of all the items is skewed to the left.

4.4.2 Descriptive Results of HRMIS Design

The study's first objective was to evaluate the effect of HRMIS design on employee performance at the civil service of Kenya. Using a five-point Likert scale, the research attempted to understand the amount of agreement between participants on different HRMIS design statements.

Table 4.10: Descriptive Results of HRMIS Design

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
HRMIS design has made integration of different parts easy and efficient.	421	1	5	3.03	.663	.095	.263
HRMIS has improved the ability to coordinate different functions in the organization.	421	1	5	3.66	.671	-.040	.234
With HRMIS systems, it is easy to identify roles and goals to achieve.	421	1	5	3.57	.673	.198	.321
It is easy to send and receive feedback using HRMIS	421	1	5	3.52	.689	.437	.452
HRMIS design enhances effectiveness of generation of data on employee's training needs	421	1	5	3.50	.664	.192	.345
HRMIS design enhances user-friendly infrastructure for working and career development process.	421	1	5	3.33	.649	.024	.342
HRMIS design increases efficiency of operation in different departments in the design through the availability of ready data, which leads to an enhanced performance in the Department.	421	1	5	3.32	.628	.187	.231
HRMIS through data integration improves use of data to plan and administer all types of training interventions	421	1	5	3.51	.676	.072	.222
Overall, HRMIS design is effective with the generated information in benefiting employees and improve the strategic decision making.	421	1	5	3.90	.812	-.721	.237
Through HRMIS design, it is easy to access and use design data for the purposes of training employees and improving services.	421	1	5	4.19	.836	-.802	.234
Mean				**3.553**			

Source: Researcher, 2021

Results of analysis revealed that most respondents agreed that the design of HRMIS had improved the ability of the civil service to coordinate different functions in the organization (Mean=3.66; SD=.671), they also agreed that the design of the system is easy to identify roles and goals of the civil service (Mean=3.57; SD=.673). Findings also revealed that its design; made it easy to send and receive feedback using the HRMIS system (Mean=3.52; SD=.689), promoted generation of data on employees training needs (Mean=3.50; SD=.664), facilitated integration and administration of employee training data (Mean=3.51; SD=.676).

Furthermore, results revealed that most respondents agreed that the design of HRMIS generated information that was of benefit to both employees and management (Mean=3.90; SD=.812) and enabled ease of retrieval of data for purposes of training and improvement of services (Mean=4.19; SD=.836). The findings however revealed that most respondents were indifferent with the view that the design of HRMIS; enabled the integration of different parts easy and efficient (mean=3.03; SD=.663), that the system had user-friendly infrastructure for career development process (Mean=3.33; SD=.628) and that the design of the system increases efficiency of operation in different departments (Mean=3.32; SD=.628).

These responses are similar to the findings of Kemei (2014) and Bartai (2014) which stated that a design that uses HRMIS enjoys improved data integrity and consistency because redundant data entry is eliminated hence increasing efficiency; HRMIS allows room for data and information availability in an organization. Odunga (2012) had also found out that the recruitment process had been made easier by the use of HRMIS, as applications could be reviewed and responded to on a rolling basis.

Table 4.9 shows the results of skewness and kurtosis that were taken as major determinants of the normal distribution. In this study values of skewness and kurtosis swung between -0.5 and 0.5 and most values are close to zero, hence normal distribution was assumed and parametric tests were used to analyze the data. As shown in table 4.9, most of the HRMIS design items normal curve has skewness between -0.5 and 0.5 and kurtosis<3, with the distribution being approximately symmetric and platykurtic, hence no perfect distribution observed. The normal curve of all the items is skewed to the left.

4.4.3 Descriptive Analysis of HRMIS Integration

The study looked at the effects of human resource information system integration on employee performance. The study sought to find out whether with less error on human resource information system if the respondent involved in the study were content with the HRMIS service it offers.

Table 4.11: Descriptive results of HRMIS Integration

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
Through electronic record keeping of employees and product profiles and other data, there are minimal errors in the process of decision making	421	1	5	3.46	.608	-.121	.121
HRMIS integration ensures minimal wastage of time in sorting data.	421	1	5	3.54	.641	.063	.125
The integration of HRMIS in the selection process assures cost reduction in HR functions.	421	1	5	3.46	.649	.007	.245
The integration of HRMIS technology has helped in reducing the time and effort spent in preparing and recruiting new employees.	421	1	5	3.44	.690	-.136	.432
The HRMIS integration makes employees more creative and innovative.	421	1	5	3.48	.680	.006	.127
The integration of HRMIS in organizational processes ensures compliance with policy and organizational procedures.	421	1	5	3.51	.628	.056	.124
Challenges like corruption among the organizational staff have been overcome by effective HRMIS integration.	421	1	5	3.42	.630	.154	.193
Effective integration of HRMIS has made it easy for managers to track the performance of the organization and in making decisions.	421	1	5	4.20	.637	.026	.148
Management has become more efficient with the integration of HRMIS.	421	1	5	4.23	.908	-.946	.119
AVERAGE MEAN				**3.637**			

Source: Researcher, 2021

The findings indicated that a majority of the respondents agreed that use of electronic record

keeping using HRMIS exposed the civil service to minimal errors (Mean= 3.46:SD=.608).

Likewise, the system expedited sorting out data (Mean=3.54; SD=.641). It was also observed that the use of HRMIS facilitates cost reduction of the recruitment processes in the civil service (Mean=3.46; SD=.649). Besides employees agreed that use of HRMIS makes employees more creative and innovative in discharging their responsibilities (Mean=3.48; SD=.680).

Furthermore, adoption of the system enhances organizational processes and ensures compliance with the set policies and procedures (Mean=3.51; SD=.628) and enables managers to track performance (Mean=4.20; SD=.637) thereby facilitating an efficient management process (Mean=4.23; SD=.908). The respondents were however indifferent to the role of HRMIS technology in reducing time and effort spent in preparing and recruiting new employees (Mean=3.44; SD=.690) as well as its ability to address challenges like corruption among the organizational staff (Mean=3.42; SD=.630).

Bhatia (2016) has similar results, which stated that human resource management information system has played a key role in increasing the efficiency and effectiveness of performance management, analysis of the work force, employee benefits and reporting. Further, given the continuous update of data, the HR managers are able to make accurate decisions. These findings coincide with that of Zahari et al. (2018), which holds that organizations that have adopted HRMIS have an advantage of accessing improved and accurate data, which is also consistent. However, the respondents took note of logistical challenges that they face with the system, which stem from the ineffectiveness of the assigned officers to update the system with timely and relevant data. It was noted that many employees do not have a job description specified on the system. Further, there was no record of assigned roles, making the application of HRMIS stale. In this view, the ministries ought to train and reinforce the effective and appropriate use of the system to ensure that HRMIS integration are effective and efficient.

Table 4.10 shows the results of skewness and kurtosis that were taken as major determinants

of the normal distribution. In this study, values of skewness and kurtosis swung between -0.5 and 0.5 and kurtosis<3 with distribution being approximately symmetric and platykurtic, hence no perfect distribution was observed. The normal curve of all the items is skewed to the left.

4.4.4 Descriptive Analysis of HRMIS Operation

The study sought to determine the effect of human resource information system in operation on the performance of employees at the civil service. The responses obtained from the 421 respondents are analyzed.

Table 4.12: Descriptive Results of HRMIS Operation

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
The design is able to achieve its goals through the application of HRMIS.	421	1	5	3.41	.701	.227	.131
HRMIS improves the efficiency of performing the day to day activities in office.	421	1	5	3.52	.641	.335	.131
HRMIS ensures an elimination of duplicate roles in the office	421	1	5	3.50	.650	.131	.131
HRMIS operations ensure that employees meet their work targets.	421	1	5	3.56	.665	.126	.131
AVERAGE MEAN				**3.497**			

Source: Researcher, 2021

The findings presented in table 4.11 indicates respondents agreed that HRMIS operations ensure that employees meet their work targets (Mean=3.56; SD=.665). They also agreed that the system ensures that there is elimination of duplicate roles within the offices in the civil service (Mean=3.50; SD=.650). The respondents indicated that HRMIS improves the efficiency of the employees to handle their day to day activities (Mean=3.52; SD=.641).

Findings however revealed that respondents were indifferent with the use of the system to achieve the goals of the civil service in Kenya (Mean=3.41; SD=.701).

These findings concur with those of Akoyo and Muathe (2017) who stated that operations of HRMIS system have a key ability to consistently develop and manage employees based on the value an individual's contribution on the job. As shown in table 4.11, most of the HRMIS Operation items normal curve has skewness of between -1 and -0.5 and kurtosis <3, with distribution being moderately skewed and platykurtic hence no perfect distribution was observed. The normal curve of all the items is skewed to the left.

4.4.5 Descriptive Analysis of Employee Performance

The study dependent variable was employee performance in the civil service sector, Kenya. Using a five-point likert scale, the research attempted to understand the level of agreement between participants on different statements related to performance of employees in the civil service sector of Kenya.

Table 4.13: Descriptive Results of Employee Performance

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
HRMIS increases competitive advantage of the civil service.	421	1	5	3.51	.701	.175	-.235
HRMIS seeks to achieve alignment of HR strategies with civil service strategy to enhance performance	421	1	5	3.46	.636	.269	-.170
The HRMIS system is critical in doing career reviews in the Civil Service in Kenya geared towards better performance	421	1	5	3.43	.620	-.034	-.303
Citizens are satisfied with how the Civil Service delivers in terms of its performance.	421	1	5	3.44	.592	.073	-.399
HRMIS provides timely and quick access to information for decision-making in-service delivery	421	1	5	3.42	.604	.289	-.188
The HRMIS system is user friendly in tracking employee performance	421	1	5	3.41	.598	.098	-.320
The HRMIS system provides quick and timely employee performance results	421	1	5	3.44	.634	.142	-.190
The HRMIS process has enabled to identify and nurture individual talents and help to raise their performance.	421	1	5	3.51	.701	.175	-.235
AVERAGE MEAN				**3.45**			

Source: Researcher, 2021

According to the study, the use of HRMIS increased the competitive advantage of the civil service of Kenya (Mean=3.51; SD=.701). Most of the respondents also agreed that adoption of the system enabled the Civil service to align their HR strategies for performance (Mean=3.46; SD=.636). Furthermore, respondents agreed that HRMIS promoted the nurturing

of individual employee talent and helped to increase their performance (Mean=3.51; SD=.701).

On the other hand, respondents were indifferent with the role of HRMIS in career reviews (Mean=3.43; SD=.620). Findings also revealed that citizens seeking services were neutral to the quality of services offered in the public service (Mean= 3.44; SD=.592). respondents were also indifferent to the timely nature of decisions making process using HRMIS system (Mean=3.42; SD=.604). Furthermore, the system was inadequate in tracking employee performance (Mean=3.41; SD=.598) as well as providing timely performance results (Mean=3.44; SD=.634).

Table 4.12 shows most of the Employee Performance items normal curve has skewness of between -1 and -0.5 and kurtosis <3, with distribution being moderately skewed and platykurtic hence no perfect distribution was observed. The normal curve of all the items is skewed to the left.

4.4.6 Descriptive Analysis of Top-level Management Support

The study's objective was to determine the moderating effect of top-level management support on the connection between human resource information system and employee performance in the civil service sector, Kenya. Using a five-point Likert scale, the research attempted to understand the amount of agreement between respondents on different top-level management support statements. Table 4.14 illustrates the findings.

Table 4.14: Descriptive statistics on Top level management support

	N	Min.	Max.	Mean	SD	Skewness	Kurtosis
Are staffs provided with instruments to support them doing their work	421	1	5	3.44	.629	.175	-.187
Does the management provide needed support for members	421	1	5	3.49	1.703	.103	.535
Is there coordination of effort by members	421	1	5	3.50	.601	.410	-.193
Is there deliberate flow of knowledge amongst the staff	421	1	5	3.48	.597	.551	-.013
is there sense of involvement amongst the employees in decision making	421	1	5	4.50	.577	.663	-.060
Are contributions by staff encouraged by management	421	1	5	4.04	.592	.575	-.187
AVERAGE MEAN				**3.74**			

Source: Researcher, 2021

Results as depicted in table 4.13 shows that employees of the civil service are encouraged to offer their contribution (Mean=4.04; SD=.592). Furthermore, findings indicated that there was a sense of employee involvement in the decision-making process (Mean=4.50; SD=.577). As a result of this employees could develop a sense of ownership to their actions while at work.

There was consensus that the directorate of human resource within the civil service of Kenya provided the needed support for their members (Mean=3.49; SD=1.703). As a result, respondents agreed that there was better coordination among members of staff across the cadres (Mean=3.50; SD=.601). At the same time findings indicated that there was seamless flow of knowledge among members of staff in the civil service of Kenya (Mean=3.48; SD=.597). However, the findings indicated that management did not provide adequate tools

or instruments of work (Mean=3.44; SD=.629) which could impede their operations.

The responses obtained in the study were between 1 and 5. Table 4.13 also showed that top level management support items normal curve has skewness of between -1 and 0.5 and kurtosis <3, with distribution being moderately skewed and platykurtic hence no perfect distribution was observed.

4.5 Factor Analysis

The indicators factors were put via principal component factor analysis with varimax rotation to confirm the framework underlying the indicators of variables.

4.5.1 Factor Analysis of HRMIS Planning

The number of variables having relationships to one another was reduced using principal component factor analysis since these variables might not provide any more value to the important issues or the study that followed. This method makes use of underlying factors that exist and may be used to explain correlations between variables that have been observed (Collins, 1992).

Table 4.15a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.853
Bartlett's Test of Sphericity	Approx. Chi-Square	1015.358
	Df	10
	Sig.	.000

Source: Researcher, 2021

Kaiser-Meyer-Olkin Measure value was 0.853, surpassing the advised value of 0.6 (Kaiser 1970, 1974), and Bartlett's Test of Sphericity (Bartlett 1954) was significant with a p value less than 5% (Bartlett's test=1015.358, p.05). These findings are shown in Table 4.14a. These outcomes validated the feasibility of factor analysis.

Table 4.15b Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.351	67.016	67.016	3.351	67.016	67.016
2	.534	10.683	77.699			
3	.446	8.922	86.621			
4	.377	7.546	94.167			
5	.292	5.833	100.000			

Extraction Method: Principal Component Analysis.

Source: Researcher, 2021

The findings in table 4.14b revealed that HRMIS planning was explained by 67.02% of the total variance.

A principal component factor analysis with varimax rotation was used to analyze the difference between influence and non-influence scores for the five items that made up the HRMIS Planning factor in human resource management. The results of the factor analysis are displayed in Table 4.14c with the communalities of the 5 HRMIS Planning variables preserved.

Table 4.15c Component Matrix

	Component 1
The HRMIS aids in quick planning and timely dissemination of information on recruitment of potential employees for the organization.	.703
HRMIS has been an effective change agent for positive planning and shaping the employees' attitudes towards the use of technology.	.738
The HRMIS planning has increased employee commitment with the organization by boosting their motivation and communication confidence levels.	.707
Through HRMIS planning, it is easy to appreciate every employee based on the work they have done.	.741
Compensation of employees has been made easy and quick through the HRMIS planning	.603

Source: Researcher, 2021

Extraction communalities are estimations of the variation in each variable that the factors in the solution may account for, with larger values indicating a variable that has a greater influence on the choice of a component in the set. Since they show that each individual has a considerable impact on the final factor detection structure, all variables over 0.4 are suitable for inclusion in the correlation and regression models (Klien, 2005).

The most influential variable was through HRMIS planning, it is easy to appreciate every employee based on the work they have done with a value of 0.741, followed by HRMIS has been an effective change agent for positive planning and molding the employees' attitudes towards the use of technology with a value of 0.738. The variable which contributed the least was compensation of employees has been made easy and quick through the HRMIS planning with a value of 0.603.

4.5.2 Factor Analysis of HRMIS Design

In order to limit the number of variables that have a strong correlation with one another and may not further contribute to the importance of the research questions and the analysis that follows, principal component factor analysis was used. This method makes advantage of correlations between data variables and makes the assumption that there are underlying explanations for these correlations or interrelationships (Chatfield and Collins 1992). Due to high correlation and being too unrelated to support consistency in the study, the variables with loadings under 0.4 and those with a correlation of over 0.8 were eliminated.

Table 4.16a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	2496.921
	Df	45
	Sig.	.000

Source: Researcher, 2021

Table 4.15a shows that Kaiser-Meyer-Olkin Measure value was 0.925 exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant with p value less at 5% (Bartlett's test=2496.921, p<.05). These results confirmed that factor analysis can be conducted.

Table 4.16bTotal Variance Explained of HRMIS Design

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.904	59.041	59.041	5.904	59.041	59.041
2	.842	8.420	67.461			
3	.651	6.510	73.971			
4	.557	5.565	79.537			
5	.498	4.979	84.516			
6	.381	3.808	88.324			
7	.331	3.312	91.636			
8	.306	3.058	94.694			
9	.274	2.744	97.438			
10	.256	2.562	100.000			

Source: Researcher, 2021

The findings in table 4.15b revealed that HRMIS design was explained by 59.041% of the total variance

Table 4.16c Rotated Component Matrix

	Component 1
HRMIS design has made integration of different design parts easy and efficient.	.829
HRMIS design enhances user-friendly infrastructure for working and career development process.	.800
HRMIS through data integration improves use of data to plan and administer all types of training interventions	.797
With HRMIS systems, it is easy to identify roles and goals to achieve.	.788
HRMIS design increases efficiency of operation in different departments in the design through the availability of ready data, which leads to an enhanced performance in the Department.	.770
Overall, HRMIS design is effective with the generated information in benefiting employees and improve the strategic decision making.	.768
It is easy to send and receive feedback using HRMIS	.754
HRMIS design enhances effectiveness of generation of data on employee's training needs	.732
Through HRMIS design, it is easy to access and use design data for the purposes of training employees and improving services.	.728
HRMIS has improved the ability to coordinate different functions in the organization.	.709

Source: Researcher, 2021

Using principal component factor analysis with varimax rotation, the factor of HRMIS design and selection technique based on 10 items and their difference between influence and non-influence scores were evaluated. The results of the factor analysis of the 10 design variables for the HRMIS are displayed in Table 4.15c.

Estimates of the variation in each variable that the factors in the factor solution contribute to are known as extraction communalities. The more significant the value, the more weight the variable has in determining the factor. Small values indicate variables that may not be included in the analysis since they do not match the factor solution well. All the variables that received a score of more than 0.4, indicating that they affected and contributed to the final factor detection framework, were kept.

The most influential variable was, HRMIS through data integration improves use of data to plan and administer all types of training interventions, 0.797, followed by

HRMIS systems, it is easy to identify roles and goals to achieve with a value of 0.788, HRMIS design increases efficiency of operation in different departments in the design through the availability of ready data, which leads to an enhanced performance in the Department with a value of 0.770, overall, HRMIS is effective with the generated information in benefiting employees and improve the strategic decision making with a value of 0.768 , it is easy to send and receive feedback using HRMIS with a value of 0.754,HRMIS design enhances effectiveness of generation of data on employee's training needs with a value of 0.732,Through HRMIS, it is easy to access and use design data for the purposes of training employees and improving services with a value of 0.728 and HRMIS has improved the ability to coordinate different functions in the design with a value of 0.709. Variables which were extreme were; HRMIS has made integration of different design parts easy and efficient with a value of 0.829 and HRMIS design enhances user-friendly infrastructure for working and career development process with a value of 0.800.

To distinguish between the components clearly, the result of principal component analysis was rotated using the varimax approach. Given that each of the 10 general questions from the HRMIS design variable had a factor loading of greater than 0.4, it was determined that they all had an impact on the performance of workers in the public service. For each corresponding factor above 0.4, Table 4.15c lists the variables and the corresponding factor loading value. The correlation coefficient is used to measure factor loading, which reveals the relationship between the variable or item being measured and the extracted factors. Generally speaking, factor loading greater than or equal to 0.3 is considered moderate, while factor loading greater than or equal to 0.6 is considered high.

4.5.3 Factor Analysis of HRMIS Integration

A principal component factor analysis with varimax rotation was used to examine the factor analysis of the HRMIS Integration process, which is based on nine factors and the difference between influence and non-influence scores.

Table 4.17a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.921
Bartlett's Test of Sphericity	Approx. Chi-Square	2466.190
	Df	36
	Sig.	.000

Source: Researcher, 2021

Table 4.16a shows that Kaiser-Meyer-Olkin Measure value was 0.921 exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant with p value less at 5% (Bartlett's test=2466.190, p<.05). These results confirmed that factor analysis can be conducted.

Table 4.17b, Total Variance Explained

		Initial Eigenvalues		Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.689	63.209	63.209	5.689	63.209	63.209
2	.730	8.112	71.321			
3	.607	6.744	78.065			
4	.483	5.363	83.429			
5	.390	4.329	87.758			
6	.342	3.803	91.560			
7	.304	3.374	94.934			
8	.236	2.627	97.561			
9	.220	2.439	100.000			

Source: Researcher, 2021

The findings in table 4.16 b revealed that HRMIS Integration was explained by 63.21% of the total variance.

Table 4.17c Component Matrix

	Component 1
Through electronic record keeping of employees and product profiles and other data, there are minimal errors in the process of decision making	.850
Management has become more efficient with the integration of HRMIS.	.825
The integration of HRMIS in the selection process assures cost reduction in HR functions.	.823
The HRMIS integration makes employees more creative and innovative.	.799
The HRMIS integration has helped in reducing the time and effort spent in preparing and recruiting new employees.	.798
The integration of HRMIS in organizational processes ensures compliance with policy and organizational procedures.	.793
HRMIS integration ensures minimal wastage of time in sorting data.	.772
Challenges like corruption among the organizational staff have been overcome by effective use of HRMIS integration.	.768
HRMIS integration has made it easy for managers to track the performance of the design and in making decisions.	.719

Source: Researcher, 2021

Estimates of the variation in each variable that the factors in the factor solution contribute to are known as extraction communalities. The more significant the value, the more weight the variable has in determining the factor. Small values indicate variables that may not be included in the analysis since they do not match the factor solution well. The factors that scored higher than 0.4, indicating that they contributed to and had an impact on the final factor detection structure, were kept.

The most influential variable was The HRMIS integration makes employees more creative and innovative with a value of 0.799, followed by the integration of The HRMIS technology has helped in reducing the time and effort spent in preparing and recruiting new employees with a value of 0.798. Other variables contributing much to structures are; The integration

of HRMIS in organizational processes ensures compliance with policy and organizational procedures with a value of 0.793, HRMIS integration ensures minimal wastage of time in sorting data with a value of 0.772, challenges like corruption among the organizational staff have been overcome by the HRMIS integration with a value of 0.768, and HRMIS integration has made it easy for managers to track the performance of the organization and in making decisions with a value of 0.719. Variables dropped were; Through electronic record keeping of employees and product profiles and other data, there are minimal errors in the process of decision making with a value of 0.850, followed by Management has become more efficient with the use of HRMIS with a value of 0.825 and the use of HRMIS in the selection process assures cost reduction in HR functions with a value of 0.823.

4.5.4 Factor Analysis of HRMIS Operation

In order to reduce the number of variables that have a strong correlation with one another and are assumed to be irrelevant to the research question and the analysis process, principal component factor analysis was used. This method makes advantage of correlations between data variables and makes the assumption that there are underlying explanations for these correlations or interrelationships (Chatfield and Collins 1992).

Table 4.18a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	775.501
	Df	6
	Sig.	.000

Source: Researcher, 2021

Table 4.17a shows that Kaiser-Meyer-Olkin Measure value was 0.828 exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant with p value less at 5% (Bartlett's test=775.501, p<.05). These results confirmed that factor analysis can be conducted.

Table 4.18b Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.850	71.255	71.255	2.850	71.255	71.255
2	.445	11.130	82.385			
3	.383	9.574	91.959			
4	.322	8.041	100.000			
Extraction Method: Principal Component Analysis.						

Source: Researcher, 2021

The findings in table 4.17b revealed that HRMIS Operations was explained by 71.21% of the total variance

Table 4.18c Component Matrix

	Component 1
HRMIS improves the efficiency of performing the day to day activities in office.	.763
The organization is able to achieve its goals through the application of HRMIS.	.757
HRMIS ensures an elimination of duplicate roles in the office	.744
HRMIS operations ensure that employees meet their work targets.	.712

Source: Researcher, 2021

Using a principal component factor analysis with varimax rotation, the factor of HRMIS Operations based on four items and the difference between influence and non-influence scores were examined. Table 4.17c displays the SPSS factor analysis output with the communalities of the four HRMIS operations retained because they were above 0.4 and below 0.8.

The most influential variable was HRMIS improves the efficiency of performing the day to day activities in office with a value of 0.763, followed by the organization is able to achieve its goals through the application of HRMIS with a value of 0.757. Variables which contributed least were that of outsourcing HRMIS services will improve the HR services a value of 0.354 followed by the organization being able to achieve its goals through the application of HRMIS with a value of 0.485. Generally speaking, factor loading greater than or equal to 0.4 is considered moderate, while factor loading greater than or equal to 0.6 is considered high. Since the communalities ranged from 0.4 to 0.6, the factor loading for this variable was moderate.

4.5.5 Factor Analysis of Top-level management support

In order to reduce the number of variables that have a strong correlation with one another and are assumed to be irrelevant to the research question and the analysis process, principal component factor analysis was used. This method makes use of correlations between data variables and makes the assumption that there are underlying explanations for these correlations or interrelationships.

Table 4.19a: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.630
	Approx. Chi-Square	623.509
Bartlett's Test of Sphericity	Df	15
	Sig.	.000

Source: Researcher, 2021

Table 4.19a indicates that Kaiser-Meyer-Olkin Measure value was 0.630 exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant with p value less at 5 % (Bartlett's test=623.509, $p<.05$). These results confirmed that factor analysis can be conducted on top level management support.

Table 4.19b: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.502	41.706	41.706	2.502	41.706	41.706	1.989	33.158	33.158
2	1.206	20.106	61.812	1.206	20.106	61.812	1.719	28.654	61.812
3	.864	14.399	76.210						
4	.652	10.866	87.077						
5	.523	8.721	95.797						
6	.252	4.203	100.000						

Extraction Method: Principal Component Analysis.
Source: Researcher, 2021

The findings in table 4.18b revealed that top level management support was explained by 61.8% of the total variance.

Using extraction measure, large values were an indication of well represented values in the common space while low values indicated variables with inadequate representation. Terms of its performance was the least represented, hence, the least influential variable with minimal contribution in the model.

Table 4.19c: Rotated Component Matrix[a]

	Component	
	1	2
Is there coordination of effort by members	.789	.262
Are contributions by staff encouraged by management	.775	-.231
Are staffs provided with instruments to support them doing their work?	.752	.393
Does the management provide needed support for members	.417	.353
Is there sense of involvement amongst the employees in decision making	.052	.840
Is there deliberate flow of knowledge amongst the staff	.154	.783

Source: Researcher, 2021

As Table 4.18c indicates, six variables were tested. "sense of involvement amongst the employees in decision making" with an extraction value of 0.840 was well represented making it the most influential. "Coordination of effort by members with an extraction value of 0.789. The statement 'contributions by staff being encouraged by management' had an extraction value of 0.775. Staffs provided with instruments to support them doing their work had an extraction of 0.752.

4.5.6 Factor Analysis of Employee Performance

Factor analysis was used to determine the proportion of each variable's variance that can be explained by the retained factors.

Table 4.20a KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	1996.610
	Df	28
	Sig.	.000

Source: Researcher, 2021

Table 4.20a shows that Kaiser-Meyer-Olkin Measure value was 0.913 exceeding the recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant with p value less at 5 % (Bartlett's test=1996.610, p<.05). These results confirmed that factor analysis can be conducted.

Table 4.20b Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.967	62.084	62.084	4.967	62.084	62.084
2	.807	10.085	72.169			
3	.560	6.999	79.168			
4	.493	6.165	85.333			
5	.348	4.352	89.685			
6	.338	4.220	93.905			
7	.253	3.157	97.062			
8	.235	2.938	100.000			

Extraction Method: Principal Component Analysis.
Source: Researcher, 2021

The findings in table 4.19b revealed that employee performance was explained by 62.08% of the total variance.

Using extraction measure, large values were an indication of well represented values in the common space while low values indicated variables with inadequate representation. Terms of its performance" was the least represented, hence, the least influential variable with minimal contribution in the model.

Table 4.20c Component Matrix

	Component 1
HRMIS increases competitive advantage of the civil service.	.613
The HRMIS system is critical in doing career reviews in the Civil Service in Kenya geared towards better performance	.748
The HRMIS system provides quick and timely employee performance results	.727
Citizens are satisfied with how the Civil Service delivers in terms of its performance.	.738
HRMIS provides timely and quick access to information for decision-making in-service delivery	.614
HRMIS seeks to achieve alignment of HR strategies with civil service strategy to enhance performance	.597
The HRMIS system is user friendly in tracking employee performance	.595
The HRMIS process has enabled to identify and nurture individual talents and help to raise their performance.	.524

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Source: Researcher, 2021

As Table 4.19c above indicates, a total of eight variables were tested. "The HRMIS system is critical in doing career reviews in the Civil Service in Kenya geared towards better performance" with an extraction value of 0.748 was well represented making it the most influential. "Citizens are satisfied with how the Civil Service delivers in terms of its performance with an extraction value of 0.738.

4.6 Correlation Analysis

To find the association between the independent variables, HRMIS Design, HRMIS Integration, HRMIS Operations, and HRMIS Planning, and the dependent variable, employee performance in the public service, a multiple correlation analysis was carried out. The Pearson product moment correlation coefficient (r) was utilized to find a correlation between the research variables of interest. The correlation coefficient shows the strength and direction of

the relationship between the variables under study. Table 4.20 lists the variables that were significant at the p 0.01 threshold of correlation significance.

Table 4.21: Correlations Table

		HRMIS design	HRMIS Integration	HRMIS operation	HRMIS planning	Employee Performance
HRMIS design	Pearson Correlation					
	Sig. (2-tailed)					
	N	421				
HRMIS Integration	Pearson Correlation	.645**				
	Sig. (2-tailed)	.000				
	N	421	421			
HRMIS operation	Pearson Correlation	.470**	.794**			
	Sig. (2-tailed)	.000	.000			
	N	421	421	421		
HRMIS planning	Pearson Correlation	.630**	.685**	.512**		
	Sig. (2-tailed)	.000	.000	.000		
	N	421	421	421	421	
Employee Performance	Pearson Correlation	.678**	.726**	.566**	.755**	
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	421	421	421	421	421

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Researcher, 2021

A Pearson correlation test was preferred as the variables were transformed from categorical to continuous data using natural logarithms. As such, they were linear and following a normal distribution, thus satisfying the conditions for a parametric correlation test. The study established that there was a strong, positive and statistically significant correlation between HRMIS design and employee performance (r = 0.678, p < 0.01). This, implied that an increase in HRMIS design would lead to an increase in the performance of employee in the civil service, Kenya. The study also revealed a strong, positive and significant relationship

between HRMIS integration and employee performance ($r = 0.726$, $p < 0.01$). Hence an increase in HRMIS integration improves employee's performance. The findings further showed that there was a strong, positive and significant relationship between HRMIS operations and employees' performance ($r = 0.566$, $p < 0.01$). There was also a strong, positive and significant relationship between HRMIS planning and employee performance ($r = .755$, $p < .01$). The results in table 4.20 imply that HRMIS practices are all positively related to employee performance.

4.7 Tests of Assumptions

A variety of diagnostic tests are carried out during regression analysis to assess the model based on presumptions. Tests for normality, multicollinearity, heteroscedasticity, and autocorrelation were performed as diagnostic procedures for this study. To make sure that the results were accurate, these tests were carried out.

4.7.1 Normality Test

For regression analysis to be conducted, the data must meet several assumptions. The dependent variable should be continuous or measured in interval or ratio. In this case, the dependent variable, employee performance in the civil service was categorical measured in a Likert Scale (ordinal). However, to meet this assumption, it was truncated to its natural logarithm($Ln_x where\ x\ is\ the\ dependent\ variable$), transforming the dependent variable to a continuous scale. As such, the first assumption was satisfied.
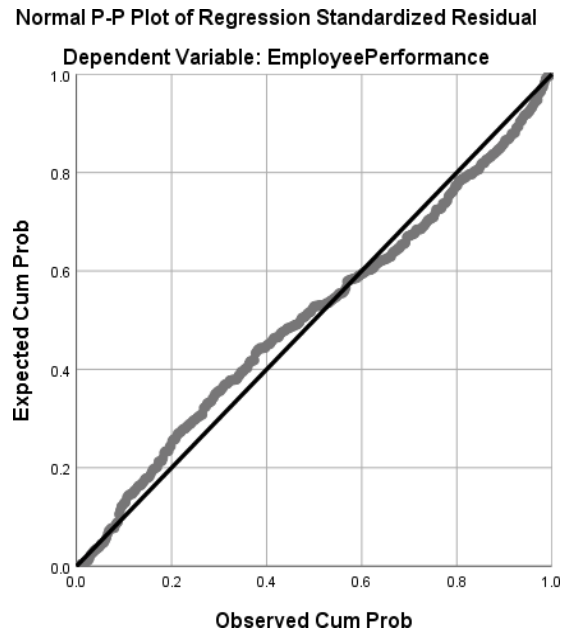
Figure 4.1: Normal p-p plot of regression standardized residual
Source: Researcher, 2021

4.7.2 Multicollinearity Test

The second assumption is that of multicollinearity measured using VIF statistic. If the VIF statistic is between 1 and 10, then the multicollinearity assumption has been met. Table 4.21 shows the multicollinearity test result. It is evident that the dependent and the independent variables had a VIF value of less than 10, and a tolerance > 0.1, which is an indication that the multicollinearity assumption was met.

Table 4.22: Multicollinearity Test Results

	Tolerance	VIF
HRMIS Design	.360	2.775
HRMIS Integration	.288	3.468
HRMIS Operations	.328	3.041
HRMIS Planning	.404	2.476

Source: Researcher, 2021

129

4.7.3 Heteroscedasticity Test

The third assumption is that of homoscedasticity that requires variances to remain similar along the distribution. The P-P plot in the figure below shows values without an even pattern. The points are evenly scattered below and above the line of best fit along the x-axis implying that the variances follow a similar pattern along the normal distribution, thus, satisfying the homoscedasticity assumption.
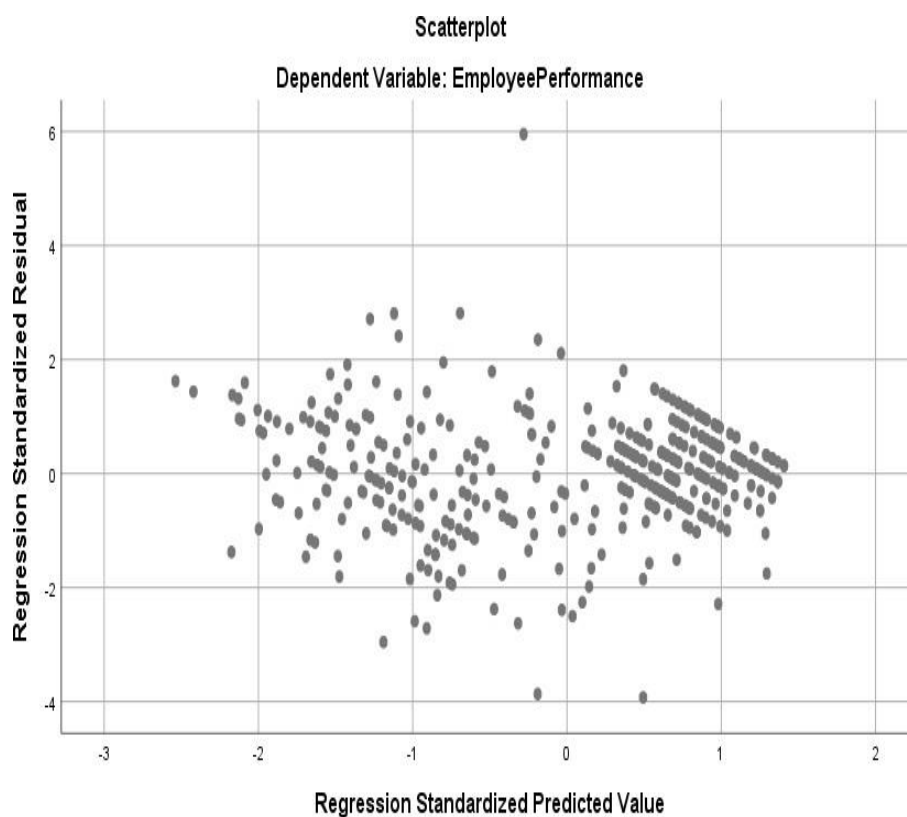
Figure 4.2: Scatter Plot of Dependent Variable Residuals
Source: Researcher, 2021

Second, regression, especially multiple regression, requires the presence of two or more independent variables. The independent variables can either be continuous or categorical. The present study satisfies this condition as it has four independent variables; HRIMS Design, HRMIS Integration, HRMIS Operations, and HRMIS Planning.

4.7.4 Independent Observations

The fourth assumption is that of independent observations, which was checked using the Durbin Watson statistic. Independent observation means that the dependent and independent variables should not be auto correlated. If the Durbin Watson statistic falls between 1.5 and 2.5, the independence of observation assumptions has been met. For this study, the Durbin Watson statistic was 2.051, implying that the data was not auto correlated.

Table 4.23: Durbin Watson Output

Model	Durbin-Watson
1	2.051

Source: Researcher, 2021

4. 8 Regression Analysis

Regression analysis was used to investigate an independent variable's capacity to predict the outcome of the dependent variable. In order to establish a statistically predicted link between two or more variables, regression analysis is crucial. It explains the relationship between the dependent and independent factors and makes predictions about the result based on the independent variables. We may determine how much of the variance in the dependent variable is explained by the independent variable using the regression coefficient. In order to ascertain if the independent variable can be trusted to explain the dependent variable, regression analysis is used.

4.8.1 Simple Linear Regression Analysis

To achieve research objectives, simple linear regression was employed.

4.8.1.1 HRMIS Planning at the Civil Service

The research attempted to determine the effect of HRMIS planning on employee performance at the civil service of Kenya. The hypothesis stated that;

H₀₁: HRMIS planning has no statistically significant effect on employee performance at the civil service of Kenya. The following model was used.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Table 4.24a: Model Summary on HRMIS Planning

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755	.570	.569	.44714

Source: Researcher, 2021

The findings in table 4.24a show the results of simple linear regression model summary of employee performance on HRMIS planning. In this model, R^2 value was 0.570 which implied that 57% of employee performance is determined by HRMIS planning. Hence, an increase in the use of HRMIS planning will lead to an increased performance of the employees in the civil service sector, Kenya.

Analysis of Variance was used to determine simple linear regression model fitness in modeling the collected data as compared to use of the mean. The results were presented in Table 4.24b.

Table 4.24b: ANOVA Table on HRMIS Planning

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.178	1	111.178	556.086	.000^b
	Residual	83.771	419	.200		
	Total	194.949	420			

Source: Researcher, 2021

Goodness of fit test results revealed F = 556.086 and is significant, p = 0.000 < 0.05 and, the model was fit to predict employee performance. The data relating to HRMIS planning was therefore appropriate to use for regression analysis. Hence, the null hypothesis which stated

that **H01:** HRMIS planning has no statistically significant effect on employee performance at the civil service of Kenya was rejected

Table 4.24c: Coefficient on HRMIS Planning

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.922	.138		6.680	.000
	HRMIS planning	.770	.033	.755	23.581	.000

Source: Researcher, 2021

The study findings revealed that HRMIS planning had $\beta= 0.755$; $p=0.000<0.05$), implying that a unit increase in HRMIS planning had a significant effect of 0.755 units in employee performance in the civil service sector, Kenya. The study results further indicated the effect of HRMIS planning was stated by the t-test value = 23.581 which implied that the standard error associated with the parameter was less than the effect of the parameter.

The simple linear regression model equation was developed as shown in equation 4.4;

$Y= 0.922 + 0.770X_1$

The findings also concurred with that of Eketu and Edeh (2017) which concluded that human resource planning measured in terms of competence, age and culture enhances organizational sustainability. Their findings further recommended that human resource professionals should consider the competence of each applicant very seriously for organization to be sustainable. Similar to this, Khera and Gulati (2012) state that succession planning, applicant monitoring in recruitment and selection, and manpower planning were the areas where HRMIS was most effective for strategic activities of the human resource management. Additionally, Mbiu and Nzulwa (2018) said that there is a substantial positive association between the performance of the Council of Governors in Kenya and the following factors: recruitment and deployment,

training and development, talent retention, succession planning, etc.

4.8.1.2 HRMIS Design at the Civil Service

Objective two of the study sought to evaluate the effect of HRMIS design on employee performance at the civil service of Kenya. The hypothesis stated;

H02: HRMIS design has no statistically significant effect on employee performance at the civil service of Kenya. The following model was used.

$$Y = \beta_0 + \beta_2X_2 + \varepsilon$$

Table 4.25a: Model Summary of Employee Performance on HRMIS Design

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678	.459	.458	.50158

Source: Researcher, 2021

The findings in table 4.24a show the results of simple linear regression model summary of employee performance on HRMIS design. In this model, R^2 value was 0.459 which can be interpreted as 45.9% of employee performance is determined by HRMIS design. This implies that an increase in the use of HRMIS design will lead to an increased performance of the employees in the civil service.

Analysis of Variance was used to determine simple linear regression model fitness in modeling the collected data as compared to use of the mean. The results were presented in Table 4.25b.

Table 4.25b: Goodness of fit Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.534	1	89.534	355.877	.000
	Residual	105.415	419	.252		
	Total	194.949	420			

Source: Researcher, 2021

Goodness of fit test results revealed F =355.877 and is significant, p = 0.000< 0.05 and therefore shows that the model was fit to predict employee performance. Hence the null hypothesis which stated that: H_{02}: HRMIS design has no statistically significant effect on employee performance at the civil service of Kenya was rejected.

The study sought to evaluate the effect of HRMIS design on employee performance at the civil service of Kenya.

Table 4.25c: Coefficient of Employee Performance on HRMIS Design

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.401	.147		9.536	.000
	HRMIS design	.654	.035	.678	18.865	.000

Source: Researcher, 2021

The study findings revealed that HRMIS design had β= 0.678; p=0.000<0.05, implying that a unit increase in HRMIS design effected a significant change of 0.678 units change in employee performance in the civil service sector, Kenya. The study results further indicated the effect of HRMIS design was stated by the t-test value = 18.865 which implied that the standard error associated with the parameter was less than the effect of the parameter. The simple linear regression model equation was developed as shown in equation 4.2;

Y= 1.401+ 0.654X₂

According to the study, Kumar and Parumasur (2013) came to the conclusion that the design of HRMIS has the ability to improve operational performance and the execution of the HR and business strategy, hence assuring organizational effectiveness. The results concur with those of Kemei, 2016, who found that the HRMIS system had provided them with important information that had enhanced their performance by enhancing their capacity to distribute

information. He said that a company using HRMIS benefits from increased data consistency and integrity as a result of the elimination of unnecessary data entry, which boosts productivity. HRMIS gives an organization room for data and information availability.

4.8.1.3 HRMIS Integration at the Civil Service

The third objective of the study sought to determine the influence of HRMIS integration on employee performance at the civil service of Kenya. The hypothesis stated;

H_{03}: HRMIS integration has no statistically significant influence on employee performance at the civil service of Kenya. The following model was used.

$Y = \beta_0 + \beta_3 X_3 + \varepsilon$

Table 4.26a: Model Summary on HRMIS Integration

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726	.527	.526	.46924

Source: Researcher, 2021

The findings in table 4.23a show the results of simple linear regression model summary of employee performance on HRMIS integration. In this model, R^2 value was 0.527 which can be interpreted as 52.7% of employee performance is determined by HRMIS Integration. This implies that an increase in the use of HRMIS Integration will lead to an increased performance of the employees in the civil service.

Analysis of Variance was used to determine simple linear regression model fitness in modeling the collected data as compared to use of the mean. The results were presented in Table 4.26b.

Table 4.26b: ANOVA Table on HRMIS Integration

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.692	1	102.692	466.394	.000
	Residual	92.257	419	.220		
	Total	194.949	420			

Source: Researcher, 2021

Goodness of fit test results revealed F = 466.394 and is significant, p = 0.000 < 0.05 and therefore, the model was fit to predict employee performance. The data relating to HRMIS integration was therefore appropriate to use for regression analysis. The null hypothesis stated that: **H₀₃:** HRMIS integration has no statistically significant influence on employee performance at the civil service sector, Kenya implying that the null hypothesis was rejected and therefore HRMIS integration had a statistically significant influence on employee performance at the civil service sector, Kenya.

The study also sought to determine the influence of HRMIS integration on employee performance at the civil service of Kenya.

Table 4.26c: Coefficient Table on HRMIS Integration

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.350	.131		10.315	.000
	HRMIS Integration	.671	.031	.726	21.596	.000

Source: Researcher, 2021

The study findings in table 4.23c revealed that HRMIS integration had β= 0.726; p=0.000<0.05), implying that a unit increase in HRMIS integration influenced a significant change of 0.726 units in employee performance in the civil service sector, Kenya. The study

results further indicated the effect of HRMIS integration was stated by the t-test value = 21.596 which implied that the standard error associated with the parameter was less than the effect of the parameter.

The simple linear regression model equation was developed as shown in equation 4.2;

Y= 1.350+ 0.671X2

These results were in line with those of Bhatia (2016), who said that the HRMIS system incorporates far more complicated processes including single point of data input, performance management, benefits management, reporting, workforce analysis, and scheduling. Similar to this, Kemei (2016) came to the conclusion that lessening HRMIS mistakes enhances employee performance by improving service quality. His research also revealed that employees performed better because they were always aware of the duties and responsibilities that were allocated to them.

4.8.1.4 HRMIS Operation at the Civil Service

The fourth objective of the study was to examine the effect of HRMIS operation on employee performance at the civil service of Kenya. The hypothesis stated;

H_{04}: HRMIS operation has no statistically significant effect on employee performance at the civil service of Kenya. The following model was used.

$Y = \beta_0 + \beta_4 X_4 + \varepsilon$

Table 4.27a: Model Summary on HRMIS Operation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.566	.320	.319	.56228

Source: Researcher, 2021

The results of a simple linear regression model summary of employee performance on HRMIS operation are shown in table 4.27a. According to this model's R2value of 0.320, HRMIS Operation is responsible for 32% of employee performance. Therefore, increased use of HRMIS Operation will result in improved performance from Kenya's civil service employees.

Analysis of Variance was used to compare the effectiveness of using the mean versus a simple linear regression model for modeling the collected data. The findings are shown in Table 4.27b.

Table 4.27b: ANOVA Table on HRMIS Operation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.476	1	62.476	197.606	.000[b]
	Residual	132.473	419	.316		
	Total	194.949	420			

Source: Researcher, 2021

Goodness of fit test results revealed F = 197.606 and is significant, p = 0.000 < 0.05 and therefore, the model was fit to predict employee performance. The data relating to HRMIS operation was therefore appropriate to use for regression analysis. The null hypothesis stated that: **H04:** HRMIS operation has no statistically significant effect on employee performance at the civil service sector, Kenya was rejected and therefore HRMIS operation had a statistically significant effect on employee performance at the civil service of Kenya

Table 4.27c: Coefficient Table on HRMIS Operation

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.626	.111		23.712	.000
	HRMIS operation	.357	.025	.566	14.057	.000

Source: Researcher, 2021

The study results in table 4.24c revealed that HRMIS operation had $\beta = 0.566$; p=0.000<0.05), implying that a unit increase in HRMIS operation had a significant effect of 0.566 units in employee performance in the civil service sector, Kenya. The study results further indicated the effect of HRMIS operation was stated by the t-test value = 14.057 which implied that the standard error associated with the parameter was less than the effect of the parameter.

The simple linear regression model equation was developed as shown in equation 4.3;

$Y= 2.626+ 0.357X_4$

The results are also consistent with those of Akoyo and Muathe (2017), who came to the conclusion that the Operation factor of HRMIS allows employees to access the portal to request time off, that a manager's portal enables management to view and approve workflows, that it allows management to continuously track employee performance through goals and evaluation, and that it eliminates duplication of effort through the integration of these functions. According to Kemei (2016), HRMIS operations improved planning by reducing repetitive work and by controlling each employee's contribution to allow for in-depth performance tracking. These claims are in line with the findings.

4.8.2 Human Resource Information System and Employee Performance

To determine the relationship between employee performance and the human resource information system, multiple linear regression analysis was used. Table 4.25a, b, and c contain the regression model's model summary.

Table 4.28a: Model summary for Human Resource Information System and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824[a]	.680	.677	.38747

Source: Researcher, 2021

The findings in table 4.25a show the results of multiple linear regression model summary of employee performance on HRMIS operation in this model, R^2 value was 0.680 which implies that 68 % of employee performance is determined by human resource information system. Therefore, if civil service sector in Kenya government use human resource information system, it will lead to an increased performance of the employees by 68%.

Analysis of Variance was used to determine simple linear regression model fitness in modeling the collected data as compared to use of the mean. The results were presented in Table 4.25b.

Table 4.28b: ANOVA for Human Resource Information System and Employee Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	132.494	4	33.124	220.631	.000[b]
	Residual	62.454	416	.150		
	Total	194.949	420			

Source: Researcher, 2021

Goodness of fit test results revealed F = 220.631 and is significant, p = 0.000 < 0.05 and therefore, the model was fit to predict employee performance. The data relating to human resource information system was therefore appropriate to use for regression analysis.

Table 4.28c: Coefficients for Human Resource Information System and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.343	.131		2.623	.009
	HRMIS Design	.222	.037	.230	5.960	.000
	HRMIS Integration	.251	.053	.271	4.762	.000
	HRMIS Operation	.022	.029	.034	.751	.453
	HRMIS Planning	.414	.041	.407	10.035	.000

Source: Researcher, 2021

The study findings for table 4.25c revealed that HRMIS design had (β= 0.230; p=0.000<0.05), HRMIS integration had (β= 0.271; p=0.000<0.05), HRMIS operations had (β= 0.34; p= 0.453 <0.05) and HRMIS planning had (β = 0.407; p=0.000<0.05), implying that a unit increase in human resource information system had a significant effect of 0.230, 0.271, 0.34 and 407 units in employee performance in the civil service sector, Kenya.

4.9 HRMIS, Top level management support and Employee Performance

The general objective of the study was designed to establish the effect of human resource information system on employee performance at the civil service of Kenya. A focus on the moderating role of top-level management support. The literature review and theoretical reasoning led to the belief that top-level management support has a moderating effect on the relationship between human resource information systems on employee performance at the civil service of Kenya. This resulted in four sub hypotheses under hypothesis. Hence, the following four sub hypotheses were tested:

H$_{05a}$: Top level management support has no statistically significant moderating effect on the relationship between HRMIS planning on employee performance at the civil service of Kenya.

H$_{05b}$: Top level management support has no statistically significant moderating effect on the relationship between HRMIS design on employee performance at the civil service of Kenya.

H$_{05c}$: Top level management support has no statistically significant moderating effect on the relationship between HRMIS integration on employee performance at the civil service of Kenya.

H$_{05d}$: Top level management support has no statistically significant moderating effect on the relationship between HRMIS operation on employee performance at the civil service of Kenya.

4.9.1 Top level management support, HRMIS planning and Employee Performance

Sub hypothesis one examined the moderating role of top level management support on the relationship between HRMIS planning on employee performance at the civil service of Kenya. Simple linear regression was used to present the findings in table 4.29 a, b, and c.

Table 4.29a: Model Summary for Top level management support, HRMIS planning and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.755^a	.570	.569	.44714	.570	556.086	1	419	.000
2	.886^b	.785	.784	.31680	.215	416.684	1	418	.000

Source: Researcher, 2021

The results in table 4.26a shows a change of R squared to be ($R^2\Delta$= .215) implying that top level management support moderated the relationship between HRMIS planning and employee performance by 21.5%. The ANOVA results were generated in table 4.29 b

Table 4.29b: ANOVA for Top level management support, HRMIS planning and Employee Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.178	1	111.178	556.086	.000[b]
	Residual	83.771	419	.200		
	Total	194.949	420			
2	Regression	152.997	2	76.499	764.228	.000[c]
	Residual	41.951	418	.100		
	Total	194.949	420			

Source: Researcher, 2021

H_{05d} predicted that top level management support has no statistical significance moderating effect on the relationship between HRMIS planning on employee performance at the civil service of Kenya. The ANOVA findings showed a significant moderating effect of top level management support on the relationship between HRMIS planning and employee performance ($F = 764.228$, $\rho < .05$). Hence, the null hypothesis H_{05a}; was rejected.

Table 4.29c: Coefficients for Top level management support, HRMIS planning and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.922	.138		6.680	.000
	HRMIS planning	.770	.033	.755	23.581	.000
2	(Constant)	2.275	.118		19.262	.000
	HRMIS planning	-.073	.047	-.072	-1.542	.124
	X_1M	.124	.006	.948	20.413	.000

Source: Researcher, 2021

The model in table 4.26c shows that an increase of HRMIS planning moderated by top level management support enhanced performance of the employees by 948 units. Based on the above results the study derived the following simple linear regression model as shown

$$Y = 2.275 + 0.124X_1M + \varepsilon$$

4.9.2 Top level management support, HRMIS design and Employee Performance

The second sub objective evaluated the effect of top level management support on the relationship between HRMIS design on employee performance at the civil service of Kenya.

The hypothesis stated;

H$_{05b}$: Top level management support has no statistically significant moderating effect on the relationship between HRMIS design on employee performance at the civil service of Kenya.

A simple linear regression was used

$$Y = \beta_0 + \beta_2 X_2 M + \varepsilon \text{.. v(a)}$$

The findings were presented in table 4.30 a, b, and c.

Table 4.230a: Model Summary for Top level management support, HRMIS Design and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.678[a]	.459	.458	.50158	.459	355.877	1	419	.000
2	.705[b]	.497	.495	.48437	.038	31.316	1	418	.000

Source: Researcher, 2021

The results in table 4.27a shows a change of R squared to be ($R^2\Delta= .038$) implying that top level management support moderated the relationship between HRMIS design and employee performance by 3.8%.

The ANOVA results were generated in table 4.30b.

Table 4.30b: ANOVA for Top level management support, HRMIS Design and Employee Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.534	1	89.534	355.877	.000[b]
	Residual	105.415	419	.252		
	Total	194.949	420			
2	Regression	96.881	2	48.441	206.471	.000[c]
	Residual	98.068	418	.235		
	Total	194.949	420			

Source: Researcher, 2021

H_{05a} predicted that top level management support has no statistically significant moderating effect on the relationship between HRMIS design on employee performance at the civil service of Kenya. The ANOVA findings showed a significant moderating effect of top level management support on the relationship between HRMIS design and employee performance ($F = 206.471$, $\rho < .05$). Hence, the null hypothesis **H_{05b};** was rejected

Table 4.30c: Coefficients for Top level management support, HRMIS Design and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.401	.147		9.536	.000
	HRMIS Design	.654	.035	.678	18.865	.000
2	(Constant)	1.340	.142		9.415	.000
	HRMIS Design	.557	.038	.577	14.765	.000
	X_2M	.028	.005	.219	5.596	.000

Source: Researcher, 2021

The model in table 4.27c shows that an increase of HRMIS design moderated by top level management support enhanced performance of the employees by 219 units. Based on the above results the study derived the following simple linear regression model as shown

Y = 1. 340 + 0. 028X₁M+ ε

4.9.3 Top level management support, HRMIS Integration and Employee Performance

The third sub hypothesis evaluated the effect of top level management support on the relationship between HRMIS integration on employee performance at the civil service of Kenya. A simple linear regression was used and the findings were presented in table 4.31 a, b, and c.

Table 4.31a: Model Summary for Top level management support, HRMIS Integration and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics F Change	df1	df2	Sig. F Change
1	.726[a]	.527	.526	.46924	.527	466.394	1	419	.000
2	.758[b]	.575	.572	.44546	.048	46.914	1	418	.000

Source: Researcher, 2021

The study results in table 4.31a showed a change of R squared to be ($R^2 \Delta = .048$). The findings indicated that top level management support moderate the relationship between HRMIS Integration and employee performance by 4.8%.

Table 4.31b: ANOVA for Top level management support, HRMIS Integration and Employee Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	102.692	1	102.692	466.394	.000[b]
	Residual	92.257	419	.220		
	Total	194.949	420			
2	Regression	112.002	2	56.001	282.208	.000[c]
	Residual	82.947	418	.198		
	Total	194.949	420			

Source: Researcher, 2021

H[05b] predicted that top level management support has no statistical significance moderating effect on the relationship between HRMIS integration on employee performance at the civil

service of Kenya. The ANOVA findings showed a significant moderating effect of top-level management support on the relationship between HRMIS integration and employee performance ($F = 282.208$, $\rho < .05$). Hence, the null hypothesis**H$_{05c}$;** was rejected

Table 4.31c: Coefficients for Top level management support, HRMIS Integration and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	1.350	.131		10.315	.000
	HRMIS Integration	.671	.031	.726	21.596	.000
2	(Constant)	1.287	.125		10.324	.000
	HRMIS Integration	.547	.035	.591	15.778	.000
	X2M	.036	.005	.257	6.849	.000

Source: Researcher, 2021

The Coefficients' table 4.28c shows that an increase of HRMIS integration moderated by top level management support enhanced performance of the employees at the civil service of Kenya by .257 units. The study derived the following simple linear regression model as shown

$$Y = 1.287 + 0.036X_3M + \varepsilon$$

4.9.4 Top level management support, HRMIS Operation and Employee Performance

Sub hypothesis four examined the moderating role of top-level management support on the relationship between HRMIS operation on employee performance at the civil service of Kenya. Simple linear regression was used to present the findings in table 4.29 a, b, and c.

Table 4.32a: Model Summary for Top level management support, HRMIS Operation and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
						Change Statistics			
1	.566[a]	.320	.319	.56228	.320	197.606	1	419	.000
2	.675[b]	.456	.453	.50393	.135	103.659	1	418	.000

Source: Researcher, 2021

The findings in table 4.32a showed a change of R squared to be ($R^2\Delta$= .135). The findings indicated that top level management support moderate the relationship between HRMIS operation and employee performance by 13.5%.

Table 4.32b: ANOVA for Top level management support, HRMIS Operation and Employee Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	62.476	1	62.476	197.606	.000[b]
	Residual	132.473	419	.316		
	Total	194.949	420			
2	Regression	88.799	2	44.400	174.840	.000[c]
	Residual	106.149	418	.254		
	Total	194.949	420			

Source: Researcher, 2021

H_{05c} predicted that top level management support has no statistical significance moderating effect on the relationship between HRMIS operation on employee performance at the civil service of Kenya. The ANOVA findings showed a significant moderating effect of top level management support on the relationship between HRMIS operation and employee performance (F = 174.840, ρ< .05). Hence, the null hypothesis**H_{05c};** was rejected

Table 4.33c: Coefficients for Top level management support, HRMIS Operation and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.626	.111		23.712	.000
	HRMIS operation	.357	.025	.566	14.057	.000
2	(Constant)	2.115	.111		19.020	.000
	HRMIS operation	.257	.025	.408	10.373	.000
	X3M	.061	.006	.400	10.181	.000

Source: Researcher, 2021

The Coefficients table 4.33c shows that an increase of HRMIS operation moderated by top level management support enhanced performance of the employees at the civil service of Kenya by 400 units. The study derived the following simple linear regression model as shown.

$$Y = 2.115 + 0.61X_4M + \varepsilon$$

4.9.5 Top level management support, HRMIS and Employee Performance

The study sought to establish the effect of human resource information system on employee performance at the civil service of Kenya, focusing on the moderating role of top level management support. Multiple regression analysis method was used to determine the magnitude at which top level management support moderated. The following model was used;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_1*M + \beta_6X_2*M + \beta_7X_3*M + \beta_8X_4*M + \varepsilon \dots (5)$$

Where: Y = Employee Performance,

β_o = Constant (coefficient of intercept),

$Q_1 \dots Q_4$ = the coefficients of the variables in the model; employee performance at the civil service of Kenya for each increment change in X_{1-4}

X_1= HRMIS Planning

X_2= HRMIS Design

X_3= HRMIS Integration

X_4= HRMIS operation

M = Moderator variable that affects the relationship of X and Y

X_{1-4}M = Interaction between top level management support and human resource information system

ε = the error term

Table 4.33a: Model Summary for Top level management support, HRMIS and Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
						Change Statistics			
1	.824[a]	.680	.677	.38747	.680	220.631	4	416	.000
2	.921[b]	.848	.845	.26841	.168	113.728	4	412	.000

Source: Researcher, 2021

The multiple regression model two in table 4.31a shows a moderating relationship between human resource information system, top level management support, and employee performance, implying that human resource information system and top level management support explained 84.8% of the changes in employee performance at the civil service of Kenya. Checking from combined effect results, you notice that model 1 without moderator posted an R^2 of 0.680 and with a moderator posted an R^2 0.848. The magnitude of top level management support was 16.8 % (84.8-68). This signifies that top level management support added value to the subject matter.

Table 4.33b: ANOVA for Model Summary for Top level management support,
HRMIS and Employee Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	132.494	4	33.124	220.631	.000[b]
	Residual	62.454	416	.150		
	Total	194.949	420			
2	Regression	165.267	8	20.658	286.754	.000[c]
	Residual	29.681	412	.072		
	Total	194.949	420			

Source: Researcher, 2021

ANOVA test was conducted to find out the level of significance of the effect of human resource information system and top-level management support on employee performance. The results of the ANOVA indicated that the moderation effect has a significant influence on employee performance at the civil service of Kenya (F= 286.754, p<.0.05)

Table 4.33c: Coefficients for Model Summary for Top level management support, HRMIS and Employee Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.343	.131		2.623	.009
	HRMIS Design	.222	.037	.230	5.960	.000
	HRMIS Integration	.251	.053	.271	4.762	.000
	HRMIS operation	.022	.029	.034	.751	.453
	HRMIS planning	.414	.041	.407	10.035	.000
2	(Constant)	3.744	.045		83.334	.000
	HRMIS Design	-.217	.041	-.225	-5.294	.000
	HRMIS Integration	-.315	.064	-.341	-4.894	.000
	HRMIS operation	.024	.045	.037	.521	.603
	HRMIS planning	-.395	.046	-.387	-8.599	.000
	X1M	.050	.010	.380	4.920	.000
	X2M	.088	.017	.689	5.149	.000
	X3M	-.012	.010	-.118	-1.171	.242
	X4M	.110	.012	.819	9.194	.000

Source: Researcher, 2021

Based on the results in table 4.31c, the moderator, (HRMIS planning* top level management support) has the highest moderating effect (X_4Z = .819, $p<0.05$) on the relationship between human resource information system on employee performance. (HRMIS Integration* top level management support) had (X_2Z=.689, $p<0.05$) .The moderating effect between (HRMIS design*top level management support) is negative and insignificant (X_1Z= .380, p-value< 0.05).The moderator, (HRMIS operation * top level management support) had (X_3Z= -.118, $p>0.05$.This is an indication that top level management support significantly moderated on the relationship between human resource information system on employee performance at the civil service of Kenya except (HRMIS operation * top level management support) which had a negative and insignificant effect.

Based on the above results the output model was

Y= 3.744 - 0.217X_1- 0.315X_2 + 0.024X_3 -0.395X_4+ 050X_1M + 0.088X_2M- 0.012X_3M + 0.110X_4M +ε

4.10 Summary of Hypotheses Test Results

Table 4.34 shows summary of hypotheses test results of the study.

Table 4.34: Summary of hypotheses test results

Null Hypothesis	Analytical Model	Probability (p) values	Decision Rule
H_{01}: HRMIS design has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_1 X_1 + \varepsilon \ldots i$	F=355.877, P<0.05	Reject null hypothesis
H_{02}: HRMIS integration has no statistically significant influence on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_2 X_2 + \varepsilon..ii$	F=466.394, P<0.05	Reject null hypothesis
H_{03}: HRMIS operation has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_3 X_3 + \varepsilon..ii$	F=197.606, P<0.05	Reject null hypothesis
H_{04}: HRMIS planning has no statistically significant effect on employee performance at the civil service of Kenya.	$Y = \beta_o + \beta_4 X_4 + \varepsilon..iv$	F=556.086, P<0.05	Reject null hypothesis
H_{05a}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS design on employee performance at the civil service of Kenya.	$Y = \beta o + \beta_1 X_1 M + \varepsilon \ldots. v(a)$	F=206.47, P <0.05	Reject null hypothesis
H_{05b}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS integration on employee performance at the civil service of Kenya	$Y = \beta o + \beta_2 X_2 M + \varepsilon \ldots. v(b)$	F=282.208, P<0.05	Reject null hypothesis
H_{05c}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS operation on employee performance at the civil service of Kenya	$Y = \beta o + \beta_3 X_3 M + \varepsilon \ldots. v(c)$	F=174.84, P<0.05	Reject null hypothesis
H_{05d}: Top level management support has no statistically significant moderating effect on the relationship between HRMIS planning on employee performance at the civil service of Kenya	$Y = \beta o + \beta_4 X_4 M + \varepsilon \ldots. v(c)$	F=764.228, P<0.05	Reject null hypothesis

Source: Researcher, 2021

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings.

The major goal of this study was to determine how top-level management support affected the impact of the human resource information system on employee performance in Kenya's public service. According to top level management support, the study assessed the impact of HRMIS planning, design, and integration operations on employee performance in Kenya's civil service. According to the study's findings, there is a strong moderating effect of top-level management support on the link between the Kenyan civil service's HRIS and staff performance.

5.1.1 HRMIS planning and Employee Performance

According to research on HRMIS planning and employee performance, HRMIS adoption has a huge potential to raise employee performance in the public service. Findings revealed that HRMIS has led to faster and effective planning, and that it is easy to appreciate and rightly acknowledge the employees based on the work they have done. However, some few respondents were neutral concerning the role of HRMIS in dissemination of information on recruitment of potential employees and its ability to secure employee commitment to the civil service.

According to the correlation findings, there is a considerable, positive association between HRMIS planning and employee performance. Additionally, the findings of the simple regression showed a substantial relationship between HRMIS planning and staff performance. This led to the rejection of the null hypothesis, which claimed that H01: HRMIS planning had no statistically significant influence on employee performance at the Kenyan public service.

Furthermore, the association between HRMIS planning and employee performance in Kenya's civil sector was mediated by top-level management support. The null hypothesis was therefore rejected.

5.1.2 HRMIS Design and Employee Performance

The study findings on HRMIS design revealed that adoption of the system improved coordination of functions in the civil service; enabled easier identification of roles among personnel and increased the eases of sending and receiving feedback. The system also promoted the generation, integration and administration of data on employees training needs. The findings however revealed that the design of HRMIS neither integrated different departments of the civil service, user friendly or increased the efficiency of operation in different departments.

The correlation showed significant relationship between HRMIS design and employee performance. Further analysis using simple regression analysis shows that the model was fit to predict employee performance. Therefore, the null hypothesis, H02, was rejected since it claimed that the design of HRMIS had no statistically significant impact on employee performance in Kenya's public service. The association between the design of the HRMIS and employee performance in Kenya's public service was mediated by top-level management support. The null hypothesis was therefore disproved.

5.1.3 HRMIS Integration and Employee Performance

Findings on HRMIS integration indicated that the use of HRMIS had improved time management by eliminating role duplication and increasing the efficiency of sorting out data. Further, they also agreed that HRMIS had facilitated compliance with the HR policies as well as in the keeping of records, which also led to enhanced performance of their roles as HR officers. Employees were informed of their responsibilities and actions inside the company. Additionally, because they were always aware of their given duties and responsibilities,

employee performance increased. However, there were a notable number of respondents who were indifferent on HRMIS integration in the reduction of errors in decision making as well as in cost reduction of the employee selection. This could be due to other challenges in the ministries such as resistance to adoption of the information system, lack of proper training on the use of the system, and administration issues like corruption and poor organizational culture in the ministries.

The findings of the correlation showed a significant and favorable association between HRMIS integration and employee performance. Additionally, the results of the straightforward regression analysis showed that HRMIS integration had a favorable and significant impact on employee performance. In light of this, the null hypothesis H03—which claimed that HRMIS integration has no statistically significant impact on worker performance in Kenya's civil service—was rejected. Additionally, top level management significantly and positively moderated the relationship between HRMIS integration and employee performance in Kenya's civil service, according to the results of the moderated regression analysis. The null hypothesis was thus disproved.

5.1.4 HRMIS Operation and Employee Performance

The study findings indicated that operation of HRMIS improves the efficiency of performing the day to day activities in office and eliminates the duplication of role among staff. The operation of the system also encourages completion of assignment among employees. However, findings in some few respondents indicated that the civil service was not able to achieve its set goals using HRMIS system. This is attributed perhaps to lack of appreciating the power of technology and belief in the old traditional way of doing things at the work place which limited their capacity in terms of effectiveness and efficiency.

The regression results showed a significant and positive relationship between HRMIS operation and employee performance. As a result, it was determined that HRMIS operation does not have a statistically significant impact on employee performance in Kenya's civil service. The results of the moderated regression analysis showed that the relationship between the use of the HRMIS and employee performance was positively moderated by top-level management. The null hypothesis was therefore disproved.

5.2 Conclusions

In conclusion, HRMIS planning is instrumental in enhancing employee performance in the civil service in Kenya. This means that if more focus is placed in HRMIS planning, there could be a resultant positive impact within the civil service and hence result in higher levels of performance. Despite the role of HRMIS planning in enhancing employee performance, the civil service is yet to fully explore on it. For instance, there are gaps in disseminating information, manpower forecasting and fair compensation. Consequently, the civil service is yet to optimally benefit from HRMIS planning.

The design of HRMIS is essential for enhancing employee performance. First off, there is a big and strong connection between employee performance and HRMIS design. Second, high level management has a bigger influence on how HRMIS design and employee performance are related. However, the employees feel that the civil service has not adequately implemented HRMIS design for them to improve their role and performance to their duties. In actual fact, there are gaps in the data assimilation, availability of information and operational efficiency. Consequently, the employees in the civil service are yet to fully benefit from HRMIS design implemented by the government.

The government has been able to improve employee performance in the civil service through

HRMIS integration. This is mainly attributed to the fact there is minimal error and cost reduction across the civil service. However, there are still gaps in policy compliance and employee innovativeness for the employees in the civil service to enhance performance.

The study's conclusions suggest that the generated reports may not be user-friendly, which may be keeping certain users from making the most of the system. Based on these results, the research came to the conclusion that HRMIS integration offers the company a competitive edge in the public service and is successful in assisting it in achieving its strategic objectives. It can be explained by the lack of encouragement for personnel to study the reports and base their tactical judgments on the information. In general, more has to be done to enhance the utilization of HRMIS integration.

The study also showed a strong correlation between top-level management support and HRMIS practices and employee performance in the public sector. The study's findings indicate that it is crucial for businesses to create plans that can promote better human resource performance since doing so will help them reach their goals. This is important because it shows a company's accomplished competitive advantage when it can recognize its business needs and workforce needs, especially for highly productive workforce.

5.3 Contribution to Knowledge

The findings of this study advance knowledge in three key areas related to top-level management, employee performance, and HRMIS in the Kenyan civil service: The planning, design, integration, and operation of the HRMIS were shown to be the four indicators that had the most impact on improving employee performance in the public service.

The top level management test on the connection between HRMIS practices and employee performance was the second contribution of this study. Although some studies had looked at the effect of top management (Gichuki,2014) none had introduced the constructs (provision of

resources, collective responsibility and information flow) in any study.

The third contribution is that it supports the theory of resource-based view in that for any organization to enhance growth, firm's success is related to the shared resources and capabilities that the ministries and state departments possesses. The study also supports theory of human capital which was anchored on education and training as the key component to increase success and productivity within the civil service. With regard to diffusion of innovation theory, it supports and enhances new ideas, creativity and knowledge in individual employees thus contributing to collective ownership to the progress and success of the ministries. Equally, contingency theory is significant to the study in that it natures culture and leadership potential among employees especially top level management who have key role in implementing policies and managing performance aspect in the ministry.

5.4 Recommendations

In line with the research study, the researcher made the following recommendations:

5.4.1 Recommendations for Policy and Practice

The research study suggests that a proactive strategy be used to improve performance in the Kenyan civil service. In order to improve service delivery to Kenyan residents, the report advises senior management in the civil service of Kenya to support implementation of the human resource management information system as intended. The study urges the creation of flexible career advancement policies that will ensure higher achievers move through the hierarchy more quickly.

According to the report, human resource information system operations should prioritize increasing training, integrating recruiting functions into HRMIS, planning, and coordinating employee data or work with both personal and corporate strategy. Additionally, the architecture of the information system for human resource management should be designed

to boost worker performance. According to the study, information obtained from a human resource management information system significantly aids in making better strategic decisions, which ultimately benefits employees more. In order to better equip managers to make strategic decisions, the research advises the business to invest more in improving record keeping, finishing paperwork, and managing personnel data.

According to the report, more innovation is crucial for employee success. The research suggests that workers should have access to the Human Resource Information System, allowing them to log in and make necessary changes or updates to the data. The study suggests that investing more in adopting a human resource management information system should be of utmost importance to an organization because doing so results in better system requirements being met, which encourages employee commitment to organizational objectives.

The research also suggests that the functioning of the human resource management information system should take use of new technologies, which would lessen and eliminate system cheating. This research also suggests upgrading the present system to one that can expand to provide more services and investigate additional operations related to the human resource management information system. The study's conclusions also suggest that supervisors utilize effective feedback to support the achievement of the employee goal. Effective performance feedback is necessary in order to increase employee performance. Feedback helps employees understand exactly what is expected of them. For increased efficiency, it is crucial to talk about and discuss staff performance.

5.4.2 Recommendation for Further Studies

The study determined the difficulties encountered when using the human resource information system. There are still other difficulties in using the human resource information system to track employee performance. Since most private institutions have not yet used a human resource management information system that is monitored by top-level management support, it is proposed that further research be done in this area. A research that focuses on several organizations in the same field is advised because this study only looked at one specific situation. The results of such a study would be more applicable to organizations.

REFERENCES

Abdelqader, A. A., Chao, S., Mohammad, B., & AL-kharabsheh, K. A. (2018). Explore the relationship between human resource management practices and the consequences for emotional labor of insurance agents in the Jordanian insurance industry. *Cogent Business and Management*, *5*(1), 1445407.

Abdullah, F., & Ward, R. (2016). Developing a General Extended Technology Acceptance Model for E-Learning (GETAMEL) by analyzing commonly used external factors. *Computers in Human Behavior*, *56*, 238-256.

Adejugbe, A. (2013). Foreign Direct Investment in Nigeria; Overcoming Legal and Regulatory Challenges to Foreign Direct Investments in Nigeria: *Is the Nigerian Government Doing Enough? SSRN Electronic Journal*. doi: 10.2139/ssrn.2354319.

Adli, M., &Saleki, R. (2014). A Review on the Effect of Employee Satisfaction on Human Resource Management Productivity and Cost Efficiency. *Report Opinion*, *6*(6), 73-79.

Adresi, A. A., &Darun, M. R. (January 02, 2017). Determining relationship between strategic human resource management practices and organizational commitment. *International Journal of Engineering Business Management, 9,* 23.)

Aeron, P., & Jain, S. (2015). The Extent of Adoption of HRMIS: An Empirical Investigation with Mediators and Moderators.

Ahmad, N. A., & Mohamed, R. (2018). Management Control System and Firm Performance-Resource Based View Perspective. *MAYFEB Journal of Business and Management*, *1*.

Akoyo, S. I., & Muathe, S. M. A. (2017). Towards a Theoretical Model for Human Resource Management Information Systems, Government Policy and Organizational Performance: A Research Agenda. *IOSR Journal of Business and Management (IOSR-JBM),19* (1), 43-53.

Aksom, H., & Tymchenko, I. (2020). How institutional theories explain and fail to explain

    organizations. *Journal of Organizational Change Management*, *33*(7), 1223-1252.

    doi:10.1108/jocm-05-2019-0130

Al Shobaki, M. M., Naser, S. S. A., Amuna, Y. M. A., & El Talla, S. A. (2017). The Efficiency

    of Information Technology and its Role of e-HRM in the Palestinian

    Universities. *International Journal of Engineering and Information Systems*, *1*(5), 36-

    55.

Alam, M. G., Masum, A. K., Beh, L., & Hong, C. S. (2016). Critical factors influencing

    decision to adopt human resource information system (HRIS) in hospitals. *PLOS*

    ONE, *11*(8), e0160366. https://doi.org/10.1371/journal.pone.0160366

Al-Dmour, R. H., Love, S., & Al-Debei, M. M. (2015). Measuring the effectiveness of HRMIS

    practice in business organisations: a study in the context of a developing

    country. *International Journal of Business Innovation and Research*, *9*(5), 507-525.

Al-Dmour, R. H., Love, S., & Al-Debei, M. M. (2015). Measuring the effectiveness of HRMIS

    practice in business organisations: a study in the context of a developing

    country. *International Journal of Business Innovation and Research*, *9*(5), 507-525.

Al-Dmour, R. H., Love, S., & Al-Debei, M. M. (2015). Measuring the effectiveness of HRMIS

    practice in business organisations: a study in the context of a developing

    country. *International Journal of Business Innovation and Research*, *9*(5), 507-525.

Al-Dmour, R. H., Love, S., & Al-Debei, M. M. (2015). Measuring the effectiveness of HRMIS

    practice in business organisations: a study in the context of a developing

    country. *International Journal of Business Innovation and Research*, *9*(5), 507-525.

Al-Harazneh, Y. M., & Sila, I. (2021). The impact of E-HRM usage on HRM

    effectiveness. *Journal of Global Information Management*, *29*(2), 118-

    147. https://doi.org/10.4018/jgim.2021030107

Alshibly, H. H. (2014). A free simulation experiment to examine the effects of social commerce website quality and customer psychological empowerment on customers' satisfaction. *Journal of Business Studies Quarterly,5*(4), 21-40.

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*, 32-38.

Al-zawahreh, A., & Madi, F. (2012). The Utility of Equity Theory in Enhancing Organizational Effectiveness. *European Journal of Economics, Finance and Administrative Sciences*, (46), 158-168.

Amarakoon, U., Weerawardena, J., & Verreynne, M. L. (2018). Learning capabilities, human resource management innovation and competitive advantage. *The International Journal of Human Resource Management*, *29*(10), 1736-1766.

Amendi, V. B. (2015). Influence of Human Resource Management Practices on Performance of Savings and Credit Cooperatives in Vihiga County, Kenya (Unpublished Masters Thesis). University of Nairobi.

Anitha, J., & Aruna, M. (2013). Adoption of Human Resource Information System in Organisations. *SDMIMD Journal of Management*, *4*(2), 5-16.

Armstrong, M. (2016). *Armstrong's handbook of management and leadership for HR: Developing effective people skills for better leadership and management*. Kogan Page Publishers.

Armstrong, M., & Taylor, S. (2014). *Armstrong's handbook of human resource management practice*. Kogan Page Publishers.

Arthur, J. B., Herdman, A. O., & Yang, J. (2016). How top management HR beliefs and values affect high-performance work system adoption and implementation effectiveness. *Human Resource Management*, *55*(3), 413-435.

Ashuri, T., & Bar-Ilan, Y. (2017). Collective Action Recruitment in a Digital Age: Applying Signaling Theory to Filtering Behaviors. *Communication Theory*, *27*(1), 70-91.

Babin, B. J., andZikmund, W. G. (2015). *Essentials of marketing research*. Nelson Education.

Balarabe Kura, S. (2012). Qualitative and Quantitative Approaches to the Study of Poverty: Taming the Tensions and Appreciating the Complementarities. *The Qualitative Report*, *17*(20), 1-19.

Bamel, N., Kumar Bamel, U., Sahay, V., & Thite, M. (2014). Usage, benefits and barriers of human resource information system in universities. *VINE: The journal of information and knowledge management systems*, *44*(4), 519-536.

Bannister, F., & Connolly, R. (2014). ICT, public values and transformative government: A framework and programme for research. *Government Information Quarterly*, *31*(1), 119-128.

Bartai, J. C. (2014). *Perceived Extent of Adoption of Human Resource Information Systems on Performance of Public Universities in Kenya* (Doctoral dissertation, University of Nairobi).

Bastida, R., Marimon, F., & Carreras, L. (2018). Human resource management practices and employee job satisfaction in nonprofit organizations. *Annals of Public and Cooperative Economics*, *89*(2), 323-338.

Batool, S. Q., Sajid, M. A., & Raza H. S. (2015). Barriers to the Implementation of Human Resource Information Systems. *International Journal of Humanities and Social Science*, *2*(3).

Begoña, P., (2010). Validity of DeLone & McLean's Model of Information Systems success at the web site level of analysis. *LSU Doctoral Dissertations*. 3531.

Bell, B. S., Lee, S. W., & Yeung, S. K. (2006). *The impact of e HR on professional competence in HRM: Implications for the development of HR professionals*. Human Resource Management, 45(3), 295-308.

Bell, B.S., Lee, S. & Yeung, S.K. (2013). The Impact of e-HR on professional competence in HRM: Implications of the development of HR professionals. *Human Resource Management, 55,* 395– 309.

Ben Moussa, N., & El Arbi, R. (2020). The impact of human resources information systems on individual innovation capability in tunisian companies: The moderating role of affective commitment. *European Research on Management and Business Economics*, *26*(1), 18-25. https://doi.org/10.1016/j.iedeen.2019.12.001

Ben Moussa, N., & El Arbi, R. (2020). The impact of human resources information systems on individual innovation capability in tunisian companies: The moderating role of affective commitment. *European Research on Management and Business Economics*, *26*(1), 18-25. doi: 10.1016/j.iedeen.2019.12.001

Bartlett, K. R. (2001). The relationship between training and organizational commitment: A study in the health care field. *Human resource development quarterly*, *12*(4), 335-352.

Bhuiyan, M. R. U., & Rahman, M. R. (2013, July). Application of Human Resource Information System in the firms of Bangladesh and its strategic importance. In *Proceedings of Annual Paris Business and Social Science Research Conference* (pp. 4-5).

Bidan, M. (2010). Information systems and sustainable development: theoretical models

and organizational practices. *Management & Avenir*, *39*(9), 304.

doi:10.3917/mav.039.0304

Bin, K., Ahmed, Z., Shafi, N., & Shaheen, W. A. (2011). Impact of

Employee Commitment on Organizational Performance. *Arabian*

Journal of Business and Management Review , Vol. 1,pp.87.

Birien F L (2014). *The need for success in organizational human resources management.*

International Edition: McGraw-Hill International, New York, USA

Birley, G., & Moreland, N. (2014). *A practical guide to academic research*. Routledge.

Biro, M. (2017). *The Impact of Technology on HR and What's Ahead.*. [Online] Available at:

http://www.huffingtonpost.com [Accessed 25 April 2017].

Blau, P. M. (1964). *Exchange and power in social life*. NY: John Wiley & Sons.

Bolin, J. H. (2014). Hayes, Andrew F. (2013). Introduction to Mediation, Moderation, and

Conditional Process Analysis: A Regression-Based Approach. New York, NY: The

Guilford Press. *Journal of Educational Measurement*, *51*(3), 335-337.

Bondarouk, T. V. (2014). *Orchestrating the e-HRM symphony*. Universiteit Twente.

Bondarouk, T., & Brewster, C. (2016). Conceptualizing the future of HRM and technology

research. *The International Journal of Human Resource Management*, *27*(21), 2652-

2671.

Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: four decades of research

on adoption and consequences. *The International Journal of Human Resource*

Management, *28*(1), 98-131.

Bondarouk, T., Schilling, D., & Ruël, H. (2016). eHRM adoption in emerging economies: The

case of subsidiaries of multinational corporations in Indonesia. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de administration*, *33*(2), 124-137.

Bondarouk,T., & Ruel, H. (2009). *Electronic Human Resource Management: challenges in the digital era*. The International Journal of Human Resource Management, 20(3), 505-514.

Bonoli, G. (2016). Adapting employment policies to postindustrial labor market risks. In *the Politics of Unemployment in Europe* (pp. 49-66). Rutledge.

Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal, 15(3), 67-94.*

Boxall and Macky. (2009). Research and Theory on High Performance Work Systems: Progressing the High-Involvement Stream. *Human Resource Journal*, Vol 6, pp. 3-23.

Broderick, R., & Boudreau, J. W. (1992). *HRM, IT & the competitive edge*. Academy of Management Executive, 6(2), 7-17.

Brown, S. (2002). Human Resource Information Systems. *CompareHRIS.com*

Brown, S., McHardy, J., McNabb, R., & Taylor, K. (2011). *Workplace Performance, Worker Commitment and Loyalty*. Bonn: Institute for Study of Labour(IZA).

Bryman, A. (2017). Quantitative and qualitative research: further reflections on their integration. In *Mixing methods: Qualitative and quantitative research* (pp. 57-78). Routledge.

Burbach, R., and Royle, T. (2014). Institutional determinants of e-HRM diffusion success. *Employee Relations*, *36*(4), 354-375.

Buzkan, H. (2016). The Role of Human Resource Information System (HRMIS) in

Organizations: A Review of Literature. *Academic Journal of Interdisciplinary Studies*, *5*(1), 133.

Chakraborty, A. R., & Mansor, N. N. (2013). Adoption of human resource information system: A theoretical analysis. *Procedia - Social and Behavioral Sciences*, *75*, 473-478. doi:10.1016/j.sbspro.2013.04.051

Chang, E., and Chin, H. (2018). Signaling or experiencing: Commitment HRM effects on recruitment and employees' online ratings. *Journal of Business Research*, *84*, 175-185.

Charkraborty A. & Mansor(2013). Adoption of Human Resource Information System: Theoretical Analysis, Elsevier.

Chatterjee, S., andHadi, A. S. (2015). *Regression analysis by example*. John Wiley and Sons.

Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2022). Does remote work flexibility enhance organization performance? Moderating role of organization policy and top level management support. *Journal of Business Research*, *139*, 1501-1512.

Chauhan, A., Sharma, S. K., &Tyagi, T. (2011). Role of HRMIS in Improving Modern HR Operations. *Review of Management*, 1(2), 58-70.

Chepkuto, P., Kipsang, S., &Kungu, M. (2015). Information Communication Technology and Human Resource Management in Modern Organisations: A Concept for 21st Century. *International Journal of Social Sciences and Management*, *2*(2), 102-107.

Chow, S. C., Shao, J., Wang, H., & Lokhnygina, Y. (2017). *Sample size calculations in clinical research*. Chapman and Hall/CRC.

Choy, J., McCormack, D., & Djurkovic, N. (2016). Leader-member exchange and job performance: The mediating roles of delegation and participation. *Journal of Management Development*, *35*(1), 104-119.

CHRMIS, A. (2014). *Human Resources Policies and Procedures Manual.* Bizmanualz Page. p. 906. ISBN 1931591105.

CIPD. (2016). Rapid evidence assessment of the research literature on the effect of goal setting on workplace performance. *Technical Report.*

Cohen, P., West, S. G., & Aiken, L. S. (2014). *Applied multiple regression/correlation analysis for the behavioral sciences*. Psychology Press.

Cooper, D. R., & Schindler, P. S. (2014). *Business Research Methods.* The McGraw− Hill Companies.

Coyle-Shapiro, M. A. (2008). Serving two organizations: Exploring the employment relationship of contracted employee. *Human Resource Management*, Vol.45,pp.561-583.

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

Da Motta Veiga, S. P., & Turban, D. B. (2018). 18 Who Is Searching for Whom? Integrating Recruitment and Job Search Research. *The Oxford Handbook of Job Loss and Job Search*, 311.

Damanpour, F. (2014). Footnotes to research on management innovation. *Organization Studies*, *35*(9), 1265-1285.

Datche, A. E., & Mukulu, E. (2015). The effects of transformational leadership on employee engagement: A survey of civil service in Kenya. *Journal Issues ISSN*, *2350*, 157X.

Davcik, N. S., & Sharma, P. (2016). Marketing resources, performance, and competitive advantage: A review and future research directions. *Journal of Business Research*, *69*(12), 5547-5552.

DeLone, W. & McLean, E. (2003). The DeLone and McLean model of information systems

success: A ten-year update. Journal of Management Information Systems, *19*(4), 9-30.

Dessler, G. (1999). *Human Resources Management*. London: Prentice Hall.

Dickter, D. N., & Jockin, V. (2018). E-SELECTION. *The Brave New World of eHRM 2.0*, 47.

Dilu, E., Gebreslassie, M., andKebede, M. (December 20, 2017). Human Resource Information System implementation readiness in the Ethiopian health sector: a cross-sectional study. *Human Resources for Health, 15*(1), 1-10.

Dilu, E., Gebreslassie, M., & Kebede, M. (2017). Human resource information system implementation readiness in the ethiopian health sector: A cross-sectional study. *Human Resources for Health*, *15*(1). https://doi.org/10.1186/s12960-017-0259-3

DiRomualdo, A., El-Khoury, D., & Girimonte, F. (2018). HR in the digital age: How digital technology will change HR's organization structure, processes and roles. *Strategic HR Review*, *17*(5), 234-242. https://doi.org/10.1108/shr-08-2018-0074

Dmour, D., Hani, R., Obeidat, D., Yousef, B., Masa'deh, R. E., Almajali, D., andAbdelkarim, D. (2015). The practice of HRMIS applications in business organizations in Jordan: an empirical study.

Doebeli, G., Fisher, R., Gapp, R. & Sanzogni, L. (2011). Using BPM governance to align systems and practice. *Business Process Management Journal,* 17 (No. 2), 184-202.Duc, N. N. (2016). Exploring SMEs perception and trust toward HRMIS for a sustainable HRM performance: Case study of SMEs in Vietnam. In *Looking Forward, Looking Back: Drawing on the Past to Shape the Future of Marketing* (pp. 171-174). Springer, Cham.

Dudovskiy, J. (2016). Positivism research philosophy. *Retrieved September*, *10*, 2016.

Durai, P. (2010). *Human resource management.* Chennai: Pearson.

El Shafeey, T., & Trott, P. (2014). Resource-based competition: three schools of thought and thirteen criticisms. *European Business Review*, *26*(2), 122-148.

Elia, G., & Margherita, A. (2015). Next-generation human resource management: a system for measuring and visualising professional competencies. *International Journal of Human Resources Development and Management*, *15*(1), 1-15.

Ellis, F. & Kuznia, K. (2014). Coporate E-training Impact on Employees, *Global Journal of Business Research,8*(4).

Eniola A.A & Entebang (2015). Government Policy and Performance of Small and Medium Business Management. *International Journal of Academic Research in Business and Social Sciences*

Eniola, A. A. (2014). The Role of SME Firm Performance in Nigeria. *Arabian Journal of Business and Management Review*, *3*(12), 33-47.

Eniola, A. A., & Entebang, H. (2015). Government policy and performance of small and medium business management. *International Journal of Academic Research in Business and Social Sciences*, *5*(2), 237.

Eniola, A., & Entebang, G. (2015). Government Policy and Performance of Small and Medium Business Management *International Journal of Academic Research in Business and Social Sciences, 3*(6), 46-58.

Erasmus, E., Rothmann, S., and Van Eeden, C. (2015). A structural model of technology acceptance. *SA Journal of Industrial Psychology*, *41*(1), 01-12.

Fagan, J., & Ployhart, R. E. (2015). The information processing foundations of human capital resources: Leveraging insights from information processing approaches to intelligence. *Human Resource Management Review*, *25*(1), 4-11.

Fayyazi, M., & Afshar, Z. (2013). E-recruitment in Iran. *New Marketing Research Journal*.

Ferdous, F., Chowdhury, M. M. & Bhuiyan, F. (2015). Barriers to implementation of HRMIS. *Asian Journal of Management Sciences and Education, 4*(1).

Ferdous, F., Chowdhury, M. M., & Bhuiyan, F. (2015). Barriers to the Implementation of Human Resource Information Systems. *Asian Journal of Management Sciences and Education, 4*(1).

Fitz, L., & Scheeg, J. (2021). Propositions towards the impact of moral values in information system design on information system success depicted by the DeLone & McLean information system success model. *Proceedings of the 18th International Conference on e-Business*. doi:10.5220/0010626101950206

Florkowski G. andOlivias-Lujan M. (2011). The diffusion of human resource information technology innovations in US and non-US firms. *Personnel Review*, *35*(6), 684- 710.

Galindo, M. G. (2017). Big Data within Service Organizations: Developing and Executing a Competitive Advantage-A Resource Based Perspective.

Gantasala, P. A. (2011). The role of employee engagement in work related outcomes. *Far East Journal of Psycology and Business.*

García de Soto, B., Agustí-Juan, I., Joss, S., & Hunhevicz, J. (2019). Implications of Construction 4.0 to the workforce and organizational structures. *International Journal of Construction Management*, 1-13.

García-Sánchez, E., García-Morales, V. J., & Bolívar-Ramos, M. T. (2017). The influence of top-level management support for ICTs on organisational performance through knowledge acquisition, transfer, and utilisation. *Review of Managerial Science*, *11*(1), 19-51.

Garg, E. (2013). *The role of HRMIS in effective workforce planning and found out that enhancement of HR.* (Masters Dissertation, University of Derby).

Gashgari, S. (2016). Equity Theory and Its Effect on Performance Outcome. *International Journal of Scientific and Engineering Research*, *7*(4), 517-520.

Ghorbanizader, V. (2013). Meta-Analysis of factors affecting adoption of information in Iran. *Management research in Iran, 17(2).*

Giacumo, L. A., Villachica, S. W., & Breman, J. (2018). Workplace Learning, Big Data, and Organizational Readiness: Where to Start? In *Digital Workplace Learning* (pp. 107-127). Springer, Cham.

GOK (2015). Government of Kenya Ministry of Industrialization. Retrieved from website: www.industrialization.go.ke

Hagan, T. L. (2014, July). Measurements in quantitative research: How to select and report on research instruments. In *Oncology Nursing Forum,* 41(4), 431-433.

Haji, V. M., & Ahmed, N. S. (2017). A Web-Based Management Information System for Human Resources in Selected Universities of Duhok Province. *Science Journal of University of Zakho*, *5*(2), 214-220.

Haque, A., & Anwar, S. (2012). Linking top level management support and IT infrastructure with organizational performance: mediating role of knowledge application. *Canadian Social Science*, *8*(1), 121-129.

Harris, D. M. & Desimone, R. L., (2005). *Human resource development*, Dryden Press, Forth Worth, TX.

Hassan K M (2011). *Banking sector effectiveness and labor issues in Africa: The Kenya scenario*. East African Publishers, Nairobi, Kenya.

Hassan, S., Mei, T. S., & Johari, H. (2017). Mediating Role of Operational Capabilities

Between Intellectual Capital and Organizational Performance: A Proposed Theoretical Framework. *Academy of Strategic Management Journal*, *16*(3).

Hatfield, E., Purvis, J., & Rapson, R. L. (2018). Equity Theory of Organizations. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, 1730-1740. doi:10.1007/978-3-319-20928-9_90

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-based nursing*, ebnurs-2015.

Heikkilä, J. P. (2013). An institutional theory perspective on e-HRM's strategic potential in MNC subsidiaries. *The Journal of Strategic Information Systems*, *22*(3), 238-251.

Heikkilä, J. P., Brewster, C., & Mattila, J. (2014). Micro-political conflicts and institutional issues during e-HRM implementation in MNCs: A vendor's view. In *Human Resource Management and Technological Challenges* (pp. 1-21). Springer, Cham.

Hendrickson, A. R. (2003). *Human resource information systems: Backbone technology of contemporary human resources*. Journal of Labor Research, *24*(3), 382-394.

Holt K L (2012). *Achieving overall organizational success through technology- the ICT effect.* Pearson International, Geneva, Switzerland.

Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63, 597- 606.

Huselid, M. A. (2015). Human resource department effectiveness. *Wiley Encyclopedia of Management*, 1-3.

Huselid, M., & Becker, B. (2011). Bridging micro and macro domains: Workforce differentiation and strategic human resource management. *Journal of Management*, 37 (2), 421-428.

Hussain, Z., Wallace, J., & Cornelius, N. E. (2007). *The use and impact of human resource information systems on human resource management professionals.* Information & Management, 44(1), 74-89.

Ilanloo, R. B. (2015). Future of human resource management and information technology. *SMAE, International Journal on Management and Applied Engineering*, *1*(1), 28-36.

Ilyes, B. (2017). The Relationship between using information technologies And Human resources management performance Case study: a set of Algerian east region business companies. *Revue des Sciences Humaines and Sociales*, *3*(47), 200-222.

Intindola, M., Weisinger, J. Y., Benson, P., & Pittz, T. (2017). The evolution of devolution in HR. *Personnel Review*, *46*(8), 1796-1815.

Ishijima, H., Mapunda, M, Mndeme, M., Sukums, F., & Mlay, V.S. (2015). Challenges and opportunities for effective adoption of HRH information systems in developing countries: national rollout of HRHIS and TIIS in Tanzania. *Hum Resour Health*. 13:48.

Islam, M. (2016). Evaluating the Practices of Electronic Human Resources Management (E-HRM) As a Key Tool of Technology Driven Human Resources Management Function in Organizations-A Comparative Study in Public Sector and Private Sector Enterprises of Bangladesh.

Islam, M. S., & Al Mamun, M. A. (2016). Perception of Management on Outcomes of Human Resource Information System (HRMIS). *International Journal of Business and Social Research*, *6*(2), 29-37.

Islam, M. S., & Al Mamun, M. A. (2016). Perception of Management on Outcomes of Human Resource Information System (HRMIS). *International Journal of Business and Social Research*, *6*(2), 29-37.

İsmail B, Tuba, B, and Burcu. (2011). *An Investigation of Organizational Commitment and*

Education Level among Employees. Research Gate.

Ismail, N. A., & King, M. (2014). Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms. *Journal of Information Systems and Small Business*, *1*(1-2), 1-20.

Ismail, A. I., Majid, A. H., Jibrin-Bida, M., & Joarder, M. H. (2019). Moderating effect of top level management support on the relationship between HR practices and employee performance in Nigeria. *Global Business Review*, *22*(1), 132-150. doi:10.1177/0972150918811487

Iverson, R. D. and Buttigieg, D. M. (2008), Affective, Normative and Continuance Commitment: Can the „Right Kind" of Commitment be Managed*? Journal of Management Studies*, 36 (3), p. 307-333.

Jafari, M., & Rezaee, F. (2014). The effect of resource-based view on sustainable capability advantage. *Management Science Letters*, *4*(12), 2537-2554.

Jahan, S. (2014). *Human Resource Information Systems:* A Theoretical Perspective, New Delhi: Scientific Research Publishing Inc.

Jan, M., & Nadir, K. (2013). Accountability of HR through Proper Supervision: A Case of Public Sector in Balochistan Province (Pakistan). *International Journal of Business and Social Science*, *4*(3), 102-108.

Jemine, G., & Guillaume, K. (2021). Lifting the veil on HRMIS adoption: the role of vendors and consultants in the diffusion of HR innovations. *Information Technology & People*.

Jilke, S., Van Ryzin, G. G., &Van de Walle, S. (2016). Responses to decline in marketized public services: An experimental evaluation of choice overload. *Journal of Public Administration Research and Theory*, *26*(3), 421-432.

Jirawuttinunt, S., andJanepuengporn, K. (2012). Effects of human resource development

activity effectiveness on business performance of jewelry and gem businesses in Thailand. *Journal of Academy of Business and Economics*, *12*(5), 181-197.

Jitpaiboon, T., Park, J. A., & Truong, D. (2006). The effects of employee autonomy, top level management support, and pride on performance of hotel employees. *Research Business Review*, *6*(3), 71-76.

John, P., & Elyse, R. a. (2010). Employee commitment and well-being: A critical review, theoretical. *Journal of Vocational Behavior*.

Johnson, R. D., Lukaszewski, K. M., & Stone, D. L. (2016). The Evolution of the Field of Human Resource Information Systems: Co-Evolution of Technology and HR Processes. *CAIS*, *38*, 28.

Johnson, R. D., Lukaszewski, K. M., & Stone, D. L. (2016). The Evolution of the Field of Human Resource Information Systems: Co-Evolution of Technology and HR Processes. *CAIS*, *38*, 28.

Juma, S. A. (2018). *INFLUENCE OF HUMAN RESOURCE INFORMATION SYSTEMS ON EMPLOYEE COMMITMENT IN ALUMINIUM AND STEEL MANUFACTURING INDUSTRIES IN NAIROBI* [Master's thesis].

Jung, S. (2013). Stratified Fisher's exact test and its sample size calculation. *Biometrical Journal*, *56*(1), 129-140. https://doi.org/10.1002/bimj.201300048

KAM (2015). Kenya association of manufacturers: Retrieved from KAM website: www.kam.co.ke

Kamal, K. B., Aghbari, M. A., & Atteia, M. (2016). E-training and employees' performance a practical study on the ministry of education in the Kingdom of Bahrain. *J. Resour. Dev. Manag*, *18*, 46-58.

Kanake, M. K. (2014). *An Assessment of Human Resource Information Systems on Service Delivery in Kenyan Universities: A Comparative Study of Public and Private Universities* (Doctoral dissertation, Moi University).

Karanja, D., Sang, A. K. A., & Ndirangu, M. (2018). Influence of Integration of ICT on Human Resource Management in Kenyan Public Universities. *International Journal of Sustainability Management and Information Technologies*, *3*(6), 73.

Karanja, J. G. (2017). Determinants of Human Resources Information System Implementation in County Governments in Kenya.

Katou (2012) studied the effect of human resource management training policies on organizational performance in manufacturing firms. *Public Personnel Management*, 28(2), 275-282

Kavanagh, M. J., & Johnson, R. D. (Eds.). (2017). *Human resource information systems: Basics, applications, and future directions*. Sage Publications.

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

Kavanagh, M. J., Thite, M., & Johnson, R. D. (2012). *Human resource information systems: basics, applications, and future directions (2nd ed.).* United States of America: Thousand Oaks: SAGE.

Kavanagh, M.J., Thite, M.,& Johnson, R.D. (2012). *Human resource information system* (2nd ed.) London: Sage Publication.

Kaygusuz, İ., Akgemci, T., & Yilmaz, A. (2016). The Impact of HRMIS Usage on Organizational Efficiency and Employee Performance: A Research in Industrial and Banking Sector in Ankara and Istanbul Cities. *International Journal of Business and Management*, *4*(4), 14-52.

Kaygusuz, İ., Akgemci, T., & Yilmaz, A. (2016). The Impact of HRMIS Usage On Organizational Efficiency And Employee Performance: A Research In Industrial And Banking Sector In Ankara And Istanbul Cities. *International Journal of Business and Management*, *4*(4), 14-52.

Kemei, E. (2016). *The Influence of Human Resource Information System Utilization on Employee Performance in Private Universities in Kenya: A Case of United States International University-Africa* (Doctoral dissertation, United States International University-Africa).

Kemei,E.K. (2016). The effects of Human Resource Information System utilization on Employee performance in private universities in Kenya – a case study of USIU Africa. USIU – Africa, Nairobi.

Kenya National Bureau of Statistics–KNBS (2017), *Economic Survey*. Nairobi: Government Printer.

KEPSA (2018). Kenya Private Sector Alliance: Retrieved from KEPSA website: www.kepsa.or.ke

Keter, M. N., & Mouni, G. (2017). The effect of Information System management on performance contracting results of Government Ministries in Kenya. *Journal of Public Policy and Administration*, *2*(1), 10-18.

Khan, H., Hussainy, S. K., Khan, K., & Khan, A. (2017). The applications, advantages and challenges in the implementation of HRMIS in Pakistani perspective. *VINE Journal of Information and Knowledge Management Systems*, *47*(1), 137-150.

Khan, H., Hussainy, S. K., Khan, K., & Khan, A. (2017). The applications, advantages and challenges in the implementation of HRMIS in Pakistani perspective. *VINE Journal of Information and Knowledge Management Systems*, *47*(1), 137-150.

Khandelwal, L. A. (2015). HR automated! (cover story). *Human Capital*, 19(5), 14-17.

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.

Khera, S. N. (2012). Human resource information system and its impact on human resource planning: A perceptual analysis of information technology companies. *IOSR Journal of Business and Management*, *3*(6), 6-13. doi:10.9790/487x-0360613

Kidombo, H. J., Obonyo, P. K. & Gakuu, C. M. (2012). Human Resource Strategic Orientation and Organizational Commitment in Kenyan Manufacturing Firms. *International Journal of Arts and Commerce*, *1*(7).

Kilelo, H. (2015). Public Sector Reforms in Africa: Focus, Challenges and Lessons Learnt. *International Journal of Humanities and Social Science Invention*, *4*(7), 19-27.

Kim, S., & Yoon, G. (2015). An Innovation-Driven Culture in Local Government: Do Senior Manager's Transformational Leadership and the Climate for Creativity Matter?. *Public Personnel Management*, *44*(2), 147-168.

Kimani. T, (2013). *Reasons behind the success of the banking sector in Kenya*. Government Printers, Nairobi, Kenya.

Kinyua, J. (2012). Challenges facing state corporations in Kenya in the implementation of human resource management information systems. Unpublished MBA research project

Kmieliak, R. (2012). Innovativeness, employment and IT capability evidence from SMES. *Industrial management and Data systems*, *112*(5) 707-728.

Konasani, V. R., & Kadre, S. (2015). Multiple regression analysis. In *Practical Business*

Analytics Using SAS (pp. 351-399). Apress, Berkeley, CA.

Koppes, L.L. (2014). *Historical Perspectives in Industrial and Organizational Psychology.*, New York: Taylor and Francis.

Kothari C. (2000), *Research Methodology: Methods and Techniques.* New Delhi, New Age International (P) Ltd.

Kumar, M. R. (2016). Cloud Technology and Human Resource Management. *Annual Research Journal of SCMS, Pune Volume 5, March 2017*, 82.

Kumar, R. (2012). Human Resource Information System: An Innovative Strategy for Human Resource Management. *GianJyoti E-Journal*, 1-12.

Kumar, N. A., & Parumasur, S. B. (2013). The impact of HRMIS on organizational efficiency: Random or integrated and holistic? *Corporate Ownership and Control*, *11*(1), 567-575. doi:10.22495/cocv11i1c6art4

Kwenin, D. O., Muathe, S., andNzulwa, R. (2013). The influence of employee rewards, human resource policies and job satisfaction on the retention of employees in Vodafone Ghana Limited. *European Journal of Business and Management*, *5*(12), 13-20.

Kwenin, D.O., Muathe, S. andNzulwa, R. (2013). The Influence of Employee Rewards, Human Resource Policies and Job Satisfaction on the Retention of Employees in Vodafone Ghana Limited. *European Journal of Business and Management*, 5(12), 1-8.

Kyambo, B. K., Nzuve, S., & Njihia, J. (2021). An integrated human resource information system framework for operational efficiency in Kenya. *IARJSET*, *8*(4). https://doi.org/10.17148/iarjset.2021.8419

Laosirihongthong, T., Prajogo, D. I., & Adebanjo, D. (2014). The relationships between firm's strategy, resources and innovation performance: resources-based view perspective. *Production Planning and Control*, *25*(15), 1231-1246.

Latorre, F., Guest, D., Ramos, J., & Gracia, F. J. (2016). High commitment HR practices, the employment relationship and job performance: A test of a mediation model. *European Management Journal*, *34*(4), 328-337.

Lee, W. (2018). Trickling Down: How the upper echelon effect diversity within an organization. *Choregia*, *14*(1).

Lee, Y. C., Chu, P. & Tseng, f. L. (2012). Cross-National and Cross-Industrial Comparison of ICT Enabled Business Process Management and Performance. *Journal of Global Information Management,* 20 (2), 44-66.

Lengnick-Hall, M. L., & Moritz, S. (2003). *The impact of e-HR on the human resource management function*. Journal of Labor Research, 24(3), 365-379.

Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health promotion practice*, *16*(4), 473-475.

Liechti, F., F. Fossati, G. Bonoli & D. Auer (2016). The signaling value of labor market programs.

Lippert, S. K., & Michael Swiercz, P. (2005). *Human resource information systems (HRIS) and technology trust*. Journal of information science, 31(5), 340-353.

Locke, E.A. & Latham, G.P. (2013). *New Developments in Goal Setting and Task Performance*, New York: Routledge.

Loewen, S., & Gonulal, T. (2015). Exploratory factor analysis and principal components analysis. *Advancing quantitative methods in second language research*, 182-212.

Loi, R, Foley, H.-Y. a., & S. (2008). Linking employee's justice perceptions to organizational commitment and intention to leave: the mediating role of perceived organizational support. *Journal of Occupational and Organizational Psychology*, Vol.79, pp.101-120.

Lund, D. J., Robicheaux, R., Hansen, J., & Cid, C. (2017). Brick Versus Click: A Resource-Based View of Retail Relationship Marketing Through Community Engagement, an Extended Abstract. In *Creating Marketing Magic and Innovative Future Marketing Trends* (pp. 363-367). Springer, Cham.

Luuk, H. M., Plaas, S., Raud, J., Innos, S., & Sutt, H. L. (2014). Wfs1-deficient mice display impaired behavioural adaptation in stressful environment. *Behav Brain Res.,* 198:334–345.

Maamari, B. E., & Osta, A. (2021). The effect of HRMIS implementation success on job involvement, job satisfaction and work engagement in SMEs. *International Journal of Organizational Analysis*, *29*(5), 1269-1286. doi:10.1108/ijoa-07-2020-2298

Madison, K., Daspit, J. J., Turner, K., andKellermanns, F. W. (2018). Family firm human resource practices: Investigating the effects of professionalization and bifurcation bias on performance. *Journal of Business Research*, *84*, 327-336.

Maditheti, N. N., and Gomes, A. M. (2017). Human Resource Information System: A Review of Previous Studies. *Journal of Management Research*, *9*(3), 92-120.

Maditheti, N. N., & Gomes, A. M. (July 13, 2017). Human Resource Information System: A Review of Previous Studies. *Journal of Management Research, 9,* 3, 92.

Maditheti, N. N., & Gomes, A. M. (2017). Human resource information system: A review of previous studies. *Journal of Management Research*, *9*(3), 92. https://doi.org/10.5296/jmr.v9i3.11488

Malindadi, K. (2016). The impact of human resources management information system (HRMIS) on the performance of government departments in Zimbabwe: A case study of three agencies in the Public Service Commission (2004-2014).

Manjunath, V.S. & Rajes, H.C.N. (2008). Competency Based Compensation System- As a Strategic Human Resource Technique. *International Journal of Manpower,* 38 (7), 780-810.

Marangunić, N., andGranić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal Access in the Information Society*, *14*(1), 81-95.

Mararo, R. K. (2017). *Effect of Adopting Human Resource Information Systems on Recruitment Process in Barclays Bank Nairobi County* (Doctoral dissertation, KCA University).

Marchington, M., & Chartered Institute of Personnel and Development. CIPD. (2016). *Human resource management at work*. London.

Marchington, M., Wilkinson, A., Donnelly, R., & Kynighou, A. (2016). *Human resource management at work*. Kogan Page Publishers.

Mardianah, L., & Hidayat, S. (2020). Empirical Study of the Impact of Work from Home (WFH) Policy and Top-level management support on Employee Performance. *Journal of Research in Business, Economics, and Education*, *2*(5), 1039-1045

Mark.P. & McDonald.A., (2011). The social organization: How to use social media to tap the collective genius of your customers and employees. Boston: Harvard Business Review.

Marler, J. H., & Fisher, S. L. (2013). An evidence-based review of e-HRM and strategic human resource management. *Human Resource Management Review*, *23*(1), 18-36.

Martin, G. & Reddington, B. (2010) '*Employer branding and corporate reputation management: a signalling model and case illustration'*, in Collings, D. and Scullion, H. (eds) Global Talent Management. London: Routledge. UK.

Martinsons, M. G. (2012). Benchmarking Human Resource Information Systems in Canada and Hong Kong. *Information and Management*.

Marufu, D. G. (2014). Human resource information system and decision making in the Ministry of Health.

Maruping, L. M., Bala, H., Venkatesh, V., and Brown, S. A. (2017). Going beyond intention: Integrating behavioral expectation into the unified theory of acceptance and use of technology. *Journal of the Association for Information Science and Technology*, *68*(3), 623-637.

Masum, A. K. M. (2015). Adoption Factors of Electronic Human Resource Management (e-HRM) in Banking Industry of Bangladesh. *Journal of Social Sciences*, *11*(1), 1.

Mathis, R.L. and Jackson, J.H. (2010) *Human Resource Management*. 13th Edition, South-Western College Publishing, Ohio.

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.

Mertens, D. M. (2014). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Sage publications.

Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation*. Sage publications.

Michael, J. K., Mohan, T., & Richard, D. J. (2012). *Human resource information system* (2nd

ed.). Sage Publication.

Midiwo, J. (2015). *Influence of Human Resource Information Systems on the Performance of Kenya Public Universities*.

Midiwo, J. (2016). *Influence of Human Resource Information Systems on the Performance in Kenyan Public Universities* (Doctoral dissertation, Jomo Kenyatta University of Agriculture and Technology).

Midiwo, J. J., Mukulu, E. & Waititu, G. (2015). Influence of Human Resource Information Systems' e–Recruitment on the Performance of Kenyan Public Universities. *International journal of Human Resource and Procurement (IJHRP)*, *1*(3), 295-317.

Miller, D. (2019). The Resource-Based View of the Firm. *Oxford Research Encyclopedia of Business and Management*. doi:10.1093/acrefore/9780190224851.013.4

Motwani, B. (2015). Perception of Professionals towards Effectiveness of Human Resource Information System. *Journal of Strategic Human Resource Management*, *4*(3).

Muchelule, H. W., Amuhaya, M., & Muchelule, Y. (2017). Effect of Human Resource Information System on Employee Performance in Vihiga County Government, Kenya. *International Journal of Management and Commerce Innovations*, *5*(2).

Mueller, D., Strohmeier, S., & Gasper, C. (2010, May). HRMIS Design Characteristics: Towards a General Research Frame-work. In Proceedings of the Third European Academic Workshop on electronic Human Resource Management, Bamberg, Germany (Vol. 570, pp. 250-267).

Mugenda O., & Mugenda, A. (1999). *Research Methods: Quantitative and qualitative approached*: Nairobi: Acts Press.

Mukherjee, A. N., Bhattacharyya, S., andBera, R. (2014). Role of information technology in human resource management of SME: A study on the use of applicant tracking system. *IBMRD's Journal of Management and Research*, *3*(1), 1-22.

Mulegi, W. (2014). *Assessment of Human Resource Information System on the Performance of Human Resource Functions and Practices: A Case of Tanzania Revenue Authority (TRA), Dar es Salaam* [Unpublished master's thesis]. Mzumbe University.

Muriithi, J. G., Gachunga, H., & Mburugu, C. K. (2014). Effects of Human Resource Information Systems on Human Resource Management practices and firm performance in listed commercial banks at Nairobi Securities Exchange. *European Journal of Business and Management*, *6*(29), 47-55.

Muriithi, J. G., Gachunga, H., & Mburugu, C. K. (2014). Effects of Human Resource Information Systems on Human Resource Management practices and firm performance in listed commercial banks at Nairobi Securities Exchange. *European Journal of Business and Management*, *6*(29), 47-55.

Muriithi, James Gitari, Gachunga, Hazel, & Mburugu, CHRMIS Kathoka. (2014). *Effects of Human Resource Information Systems on Human Resource Management Practices and Firm Performance in Listed Commercial Banks at Nairobi Securities Exchange*. The International Institute for Science, Technology and Education (IISTE.

Muriithi, J. G. (2014). Effects of Human Resource Information Systems on Human Resource Management Practices and Firm Performance in Listed Commercial Banks at Nairobi Securities Exchange. *European Journal of Business and Management*, *6*(29).

Musfiqur, R., Mordi, C., & Nwagbara, U. (2018). Factors influencing e-HRM implementation in government organisations: Case studies from Bangladesh.

Mutahi, N., & Busienei, J. R. (2015). Effect of human resource management practices on performance of public universities in kenya. *International Journal of Economics, Commerce and Management*, *3*(10), 696-735.

Mutisya, M. W. (2014). A framework for adoption of human resource management information system in small and medium enterprises in manufacturing sector in Kenya (Doctoral dissertation, University of Nairobi).

Mutua, M. J., Kinyili, J. & Arasa, R. (2017). Assessing the Influence of Human Resource Management Practices on Employee Performance in The Health Sector in Machakos County, Kenya. *International Journal of Economics, Commerce and Management*, 5(10).

Muturi, B., Kiflemariam, A., & Acosta, F. (2018). Towards a Robust Human Resource Information System's Success Measurement Model. *International Journal of Academic Research in Business and Social Sciences*, *8*(3), 1-14.

Muturi, B., Kiflemariam, A., & Acosta, F. (2018). Towards a Robust Human Resource Information System's Success Measurement Model. *International Journal of Academic Research in Business and Social Sciences*, *8*(3), 1-14.

Mwangi P N (2012). *The modern requirements in successful management of productivity and effectiveness concerns*. Uzima Publisher, Nairobi, Kenya

Nagendra, A., & Deshpande, M. (2014). Human resource information systems (HRMIS) in HR planning and development in mid to large sized organizations. *Procedia - Social and Behavioral Sciences*, *133*, 61-67. doi:10.1016/j.sbspro.2014.04.169

Nagendra, A., & Deshpande, M. (2014). Human resource information systems (HRMIS) in HR planning and development in mid to large sized organizations. *Procedia - Social and Behavioral Sciences*, *133*, 61-67. doi:10.1016/j.sbspro.2014.04.169

Nankervis, A., Rowley, C., & Salleh, N. M. (2016). Introduction: Human resource management and organisational effectiveness–an overview and synthesis. In *Asia Pacific Human Resource Management and Organisational Effectiveness* (pp. 1-13).

Nardi, P. M. (2018). *Doing survey research: A guide to quantitative methods*. Routledge.

Naser, S. S. A., Al Shobaki, M. J., Amuna, Y. M. A., & El Talla, S. A. (2017). The Reality of Electronic Human Resources Management in Palestinian Universities from the Perspective of the Staff in IT Centers. *International Journal of Engineering and Information Systems (IJEAIS)*, *1*(2), 74-96.

Nath, S., & Satardekar, K. (2015). HRMIS: The Convergence of Information Technology and Human Resource Management Functions in Modern Business Environment. *Journal of Exclusive Management Science*, *4*(12), 1-10.

Nath, S., & Satardekar, K. (2015). HRMIS: The Convergence of Information Technology and Human Resource Management Functions in Modern Business Environment. *Journal of Exclusive Management Science*, *4*(12), 1-10.

Neely, A. R., Cotton, J., & Neely, A. D. (2017). E-mentoring: A Model and Review of the Literature. *AIS Transactions on Human-Computer Interaction*, *9*(3), 220-242.

Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: a review and empirical analysis. *Personnel review*, *35*(3), 297-314.

Ngai, E., & Wat, F. (2006). H*uman resource information systems: a review and empirical analysis.* Personnel Review, 35(3), 297-314.

Ngaithe, L. N., K'Aol, G. O., Lewa, P., & Ndwiga, M. (2016). Effect of idealized influence and inspirational motivation on staff performance in state owned enterprises in Kenya. Ngwenyama, O., & Nielsen, P. A. (2014). Using organizational influence processes to overcome IS implementation barriers: lessons from a longitudinal case study of SPI implementation. *European Journal of Information Systems*, *23*(2), 205-

222.

Nizamani, S., Khoumbati, K., Ismaili, I. A., Nizamani, S., Nizamani, S., & Basir, N. (2017). Testing and validating the ERP success evaluation model for higher education institutes of Pakistan. *International Journal of Business Information Systems*, *25*(2), 165-191.

Njeje, D. A. (2018). *EFFECTS OF HUMAN RESOURCE INFORMATION SYSTEMS ON THE PERFORMANCE OF SACCOS IN KENYA A SURVEY OF SELECTED SACCOS* [Doctoraldissertation]. http://ir.kabarak.ac.ke/bitstream/handle/123456789 /216/DOREEN%20ATIENO%20NJEJE.pdf?sequence=1&isAllowed=y

Njoroge, J. W. (2014). *Human Resource Information Systems and Learning Organization in Chartered Universities in Kenya* (Doctoral dissertation, Nairobi University).

Normalini Md. Kassim, T. Ramayah, & SherahKurnia. (2012). Antecedents and outcomes of human resource information system (HRMIS) use. *International Journal of Productivity and Performance Management*, *61*(6), 603-623.

Noutsa, F. A., Kala Kamdjoug, J. R., & Fosso Wamba, S. (2017). Acceptance and use of HRMIS and influence on organizational performance of SMEs in a developing economy: The case of Cameroon. *Advances in Intelligent Systems and Computing*, 563-580. doi:10.1007/978-3-319-56535-4_57

Nuruzzaman, M. (2015). Strengthening human resource information system at the Ministry of Health and Family Welfare of Bangladesh. *Bangladesh Medical Journal*, *44*(1), 1-2.

Nyakoe, G. M. (2007). *The extent of use of information communication technology in Human resource management in large manufacturing firms*; Unpublished MBA project, School of Business, University of Nairobi.

O'Donohue, W. and Nelson, L. (2014). Alienation: An old concept with contemporary relevance for human resource management. *International Journal of Organizational Analysis*, *22*(3), 301-316.

Obama, M., Kein, D., Kyongo, J., Muriithi, S., & Amata, E. (2020). Effects of Electronic Human Resource Management Practices on Organizational Performance: A Case of University of Maryland Programs, Nairobi Kenya. *Journal of Human Resource & Leadership, 4*(4), 29-58. Retrieved from https://stratfordjournals.org/journals/index.php/journal-of-human-resource/article/view/556

Ochlin.G.I, & Roberts.K.H. L. A. (2011). The self-designing high reliability organization: Aircraft carrier flight operations at sea and airports. Chicago: Naval War College.

Odunga W (2012). *Kenyan banking sector management programs and reforms; managing through technology.*Rongo University Press, Rongo, Kenya

Okiro, C., & Kariuki, M. M. (2021). Effects of human resource development practices on employee job performance in state corporations in Nairobi, Kenya. *The International JournalofBusiness&Management*, *9*(6). https://doi.org/10.24940/theijbm/2021/v9/i6/bm2106-031

Oliveira, T., & Martins, M. F. (2010). Understanding e-business adoption across industries in European countries. *Industrial Management & Data Systems*, 110(9),

Ologunde, A. O., Monday, J. U., & James-Unam, F. C. (2015). The Impact of Strategic Human Resource Management on Competitiveness of Small and Medium-scale Enterprises in the Nigerian Hospitality Industry. *African Research Review*, *9*(4), 264-276.

Olughor, R.O. (2016). The Relationship Between Human Resource Information System and Human Resource Management. *International Journal of Economics, Commerce and*

Management United Kingdom, *4*(2)

Ombui, K. A. (2014). Influence of Human Resource Management Practices on ThePerformance of Employees in Research Institutes in Kenya (Unpublished Phd Thesis). Jomo Kenyatta University of Agriculture and Technology.

Opiyo, A. P. (2015). *Effects Of Human Resource Information System On Performance Of Commercial Banks In Kenya: A Case Of Kenya Commercial Bank. Journal of Business Management* Vol 1 Issue 1 June 2015 Paper 2.

Opiyo, P. A. (2015). *EFFECTSOF HUMAN RESOURCEINFORMATION SYSTEM ONPERFORMANCE OF COMMERCIAL BANKS IN KENYA: A CASE OFKENYA COMMERCIAL BANK* [Unpublished master's thesis]. Jomo Kenyatta University of Information Technology.

Ordóñez, L., Schweitzer, M., Galinsky, A., & Bazerman, M. (2009). *Goals Gone Wild: The systematic side effects of over-prescribing goal setting.* Working Paper.

Osei Nyame, P. K., & Boateng, R. (2015). The adoption and use of human resource information system (HRIS) in Ghana. *Proceedings of the 17th International Conference on Enterprise Information Systems*. https://doi.org/10.5220/0005458101300138

Otieno, L. G. (2016). *Influence of Human Resource Information Systems on Organization Performance: A Case of United States International University-Africa* (Doctoral dissertation, United States International University-Africa).

Patel, M., & Dhal, S. (2017). An Exploratory Study on Electronic Human Resource Management (E-HRM) Tools Implemented In Different Industry in Odisha. *Asian Journal of Management*.

Patel, M., & Dhal, S. (2017). An Exploratory Study on Electronic Human Resource Management (E-HRM) Tools Implemented in Different Industry in Odisha. *Asian Journal of Management*.

Peek, S. T., Wouters, E. J., van Hoof, J., Luijkx, K. G., Boeije, H. R., &Vrijhoef, H. J. (2014). Factors influencing acceptance of technology for aging in place: a systematic review. *International journal of medical informatics*, *83*(4), 235-248.

Perera, D., Thalgaspitiya, U., & Wijewardene, L. (2018). The Impact of Human Resource Information Systems on Human Resource Management Effectiveness: A Study in Selected Large Apparel Firms in the Western Province of Sri Lanka. *IJRDO-Journal of Applied Management Science*.

Pivac, S., Tadić, I., & Marasović, B. (2014). The level of the usage of the human resource information system and electronic recruitment in Croatian companies. *Croatian Operational Research Review*, *5*(2), 291-304.

Pivac, S., Tadić, I., & Marasović, B. (2014). The level of the usage of the human resource information system and electronic recruitment in Croatian companies. *Croatian Operational Research Review*, *5*(2), 291-304.

Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. (2014). Human capital is dead; long live human capital resources!. *Journal of management*, *40*(2), 371-398.

Ponduri, S. B. (2016). Quality of human resource information systems at commercial bank of Ethiopia (a case study of dessie district at dessie, Ethiopia). *Int. J. Res*, *4*, 31-41.

Pot, F., Totterdill, P., & Dhondt, S. (2016). Workplace innovation: European policy and theoretical foundation. *World Review of Entrepreneurship, Management and Sustainable Development*, *12*(1), 13-32.

Pule, S., Mwesigye, J., Kanyangabo, E & Mbago, R. 2014. Human resource policy and job satisfaction of employees in Knowledge-based enterprises: A comparative 162 study of the Indigenous and expatriate teaching staffs of Kampala International University, Uganda. *Global Journal of Human Resource Management*, (2)3: 13-27

Pule, S., Mwesigye, J., Kanyangabo, E., & Mbago, R. (2014). Human resource policy and job satisfaction of employees in Knowledge-based enterprises: A comparative study of the Indigenous and expatriate teaching staffs of Kampala International University, Uganda. *Global Journal of Human Resource Management*, 2(3), 13-27.

Puspitarini, W., Handayani, P. W., Pinem, A. A., & Azzahro, F. (2018). Success factors of human resource information system implementation: A case of ministry of state-owned enterprise. *Proceeding of the Electrical Engineering Computer Science and Informatics*, 5(1). https://doi.org/10.11591/eecsi.v5.1628

Qureshi, M. O., & Sajjad, S. R. (2013). A Comparative Study of the Software Packages Used as HRMIS by Organizations Operating in India: Human Resource Professionals' Perspective. *perspective*, 5(16).

Rahman, M. A., Qi, X., & Jinnah, M. S. (2016). Factors affecting the adoption of HRMIS by the Bangladeshi banking and financial sector. *Cogent Business and Management*, 3(1), 1262107.

Rana, N. P., Dwivedi, Y. K., Lal, B., Williams, M. D., & Clement, M. (2017). Citizens' adoption of an electronic government system: towards a unified view. *Information Systems Frontiers*, 19(3), 549-568.

Randall, S. S., Shaista, E. K., & Huub, R. (January 01, 2015). Role of human resource management in international mergers and acquisitions and international joint ventures in emerging markets.

Rangriz, H., Mehrabi, J., & Azadegan, A. (2011). The impact of human resource information system on strategic decisions in Iran. *Computer and Information Science*, *4*(2). doi:10.5539/cis.v4n2p81

Rangriz, H., Mehrabi, J., & Azadegan, A. (2011). The impact of human resource information system on strategic decisions in Iran. *Computer and Information Science*, *4*(2). doi:10.5539/cis.v4n2p81

Rao, M., & Dhillon, M. (2017). HRMIS: An evolution with HR functions. *International Journal of Research in Finance and Marketing*, *7*(6), 98-100.

Rao, M., & Dhillon, M. (2017). HRMIS: An evolution with HR functions. *International Journal of Research in Finance and Marketing*, *7*(6), 98-100.

Rauniar, R., Rawski, G., Yang, J., &Johnson, B. (2014). Technology acceptance model (TAM) and social media usage: an empirical study on Facebook. *Journal of Enterprise Information Management*, *27*(1), 6-30.

Ravitch, S. M., & Riggan, M. (2016). *Reason and rigor: How conceptual frameworks guide research*. Sage Publications.

Redmond, B. F. (2010). *Goal-Setting Theory: What am I trying to achieve in my work? Work Attitudes and Motivation*. The Pennsylvania State University World Campus.

Redzuan, N. I. N., Razali, N. A., Muslim, N. A., &Hanafi, W. N. W. (2016). Studying Perceived Usefulness and Perceived Ease of Use of Electronic Human Resource Management (e-HRM) with Behavior Intention. *International Journal of Business*, *1*(2).

Rietsema, D. (2015). 6 Ways HRMIS Helps with Employee Empowerment. *Employee Relations, HRMIS*.

Ritter, A. F. R. (2016). *The impact of technological era in human resource management* (Doctoral dissertation).

Rohde, S. (2016). 11. A resource-based view of cross-border clusters: conceptualizing locational resources. *Geography, Open Innovation and Entrepreneurship*, 285.

ROK. (2017). Human Resource Strategy Framework for the Public Service. Government Printer, Nairobi, Kenya.

Rostami, R., & Asharfi, A. M. (2016). Organizational Factors Affecting on Human Resources Information System in the Central Bank of Iran. *International Journal of Management Research and Reviews*, *6*(5), 732.

Rouse, W. B. (2014). Human interaction with policy flight simulators. *Applied ergonomics*, *45*(1), 72-77.

Ruël, H., & Bondarouk, T. (2014). E-HRM research and practice: facing the challenges ahead. In *Handbook of strategic e-Business management* (pp. 633-653). Springer, Berlin, Heidelberg.

Samkarpad, S. (2017). Effectiveness of Human Resource Information System on HR Functions With Reference to Manufacturing Units of Sangareddy District. *Splint International Journal of Professionals*, *4*(4), 29.

Sands, W. A., Kavanaugh, A. A., Murray, S. R., McNeal, J. R., & Jemni, M. (2017). Modern techniques and technologies applied to training and performance monitoring. *International journal of sports physiology and performance*, *12*(Suppl 2), S2-63.

Sanjeev, R., & Makkar, D. (2014). Determining employees' perception through effective HRMIS: An empirical study.

Sanjeev, R., & Natrajan, N. S. (2020). An empirical research on the role of cloud-based HRIS & HRM functions in organizational performance. *Asset Analytics*, 21-35. https://doi.org/10.1007/978-981-15-3643-4_3

Satav, M. (2016). Human Resources Management and Technology. *Journal of Computer Engineering*, 4(2), 55-57.

Schuler, R. S., Khilji, S. E., & Ruël, H. (2015). 6. Role of human resource management in international mergers and acquisitions and international joint ventures in emerging markets. *Handbook of Human Resource Management in Emerging Markets*, 122.

Seddon, P. B. A. (1997). Respecification and extension of the DeLone and McLean model of IS success. *Information Systems Research, 8*(3), 240–253.

Seif, J. K. (2015). *Challenges of Adopting Human Resource Information Systems in the Information Technology Industry in Kenya: A Survey Of Selected It Firms* (Doctoral dissertation, United States International University-Africa).

Shaheen, I., Ghazanfar, F., &Hussain, S. (2014). The role of HRMIS in achieving organizational excellence: a multifaceted discussion. *International Journal of Physical and Social Sciences*, *4*(12), 14.

Shahreki, J., Ganesan, J., Raman, K., Chin, A. L., & Chin, T. S. (2019). The effect of human resource information system application on employee satisfaction and turnover intention. *Entrepreneurship and Sustainability Issues*, *7*(2), 1462-1479. https://doi.org/10.9770/jesi.2019.7.2(47)

Sharma, S. (2009). *Handbook of HRM Practices Management policies and practices.* Delhi: Global India Publications,3(4), 105–106.

Shields, J., Brown, M., Kaine, S., Dolle-Samuel, C., North-Samardzic, A., McLean, P., &Plimmer, G. (2015). *Managing employee performance and reward: Concepts, practices, strategies*. Cambridge University Press.

Shiri, S. (2012). Effectiveness of Human Resource Information System on HR Functions of the Organization. A Cross Sectional Study US-China. *Education Review*, 830- 839.

Silva, M. S., & Lima, C. G. (2018). The role of information systems in human resource

management. *ManagementofInformationSystems*. https://doi.org/10.5772/intechopen.79294

Singh, S. K., Gupta, S., Busso, D., & Kamboj, S. (2021). Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. *Journal of Business Research*, *128*, 788-798

Smolcic, N., Thomas, B., &Contacos-Sawyer, J. (2014). The advantages and affordability of human resource information system's (HRMIS) implementation in the small business sector in Competition Forum. *American Society for Competitiveness, 12*(2),8.

Stone, D. L., & Dulebohn, J. H. (2013). *Emerging issues in theory and research on electronic human resource management* (eHRM). Human Resource Management Review, *23*(1), 1-5.

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human resource management review*, *25*(2), 216-231.

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human Resource Management Review*, *25*(2), 216-231.

Sulochana, K. A. B., & Sajeewanie, T. L. (2017). The Impact of HRMIS on HRM Effectiveness: A Study in Large Scale Group of Company in Sri Lanka. *Human Resource Management Journal*, *3*(1).

Taber, K. S. (2017). The use of cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 1-24.

Taj, S. A. (2016). Application of signaling theory in management research: Addressing major gaps in theory. *European Management Journal*, *34*(4), 338-348.

Tarhini, A., Arachchilage, N. A. G., & Abbasi, M. S. (2015). A critical review of theories and models of technology adoption and acceptance in information system research. *International Journal of Technology Diffusion (IJTD)*, *6*(4), 58-77.

Taylor-Hyde, D., & Ellen, M. (2017). Human Resource Strategies for Improving Organizational Performance to Reduce Medical Errors.

Teo, T. C., & Low, K. P. (2016). The Impact of Goal Setting on Employee Effectiveness to Improve Organisation Effectiveness: Empirical study of a High-Tech Company in Singapore. *Journal of Business and Economic Policy*, *3*(1), 82-97.

Terera, S. R., & Ngirande, H. (2014). The impact of rewards on job satisfaction and employee retention. *Mediterranean Journal of Social Sciences*, *5*(1), 481.

Terera, S. R., & Ngirande, H. (2014). The Impact of Training on Employee Job Satisfaction and Retention among Administrative Staff Members: A Case of a Selected Tertiary Institution. *Journal of Social Sciences, 39,* 1, 43-50.

Thite, M. & Kavanagh, M. (2011). Evolution of Human Resource Management and Human Resource Information Systems.

Tsuma, P. (2017). *Influence of e-recruitment practices on employee retention in multinational corporations in Nairobi County* (Doctoral dissertation, Strathmore University).

Tuan, N. (2015). The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons. *MERLOT Journal of Online Learning and Teaching,11*(2), 309-319.

Turner, M., Hulme, D., & McCourt, W. (2015). *Governance, management and development: Making the state work*. Macmillan International Higher Education.

Usman S., Khan A.F., Ikhlaq K., andMujtaba B.G., (2012). The Impact of Information Systems on the Performance of Human Resources Department. *Journal of Business Studies Quarterly*, 2012, *3*(4),77-91.

Venkatesh, V., Thong, J. Y., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead.

Wairimu, C. (2016). Influence Of Human Resource Information Systems On Performance Of The Banking Industry In Kenya. *Strategic Journal of Business and Change Management*, *3*(4).

Wallace, L. G.,&Sheetz, S. D. (2014). The adoption of software measures: A technology acceptance model (TAM) perspective. *Information and Management*, *51*(2), 249-259.

Wandhe, P. (2020). A role of effectiveness of human resource information system (HRIS) in 21st century. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3718247

Warui, C., Mukulu, E., & Karanja, K. (2015). The Influence of Management Participation on Adoption of HRMIS IN Teachers Service Commission (TSC) Operations in Kenya. *International Journal of Academic Research in Business and Social Sciences*, *5*(2), 46.

Warui, C. K. (2018). *DETERMINANTS OF HUMAN RESOURCE INFORMATION SYSTEMS USAGE IN THE TEACHERS SERVICE COMMISSION'S OPERATIONS INKENYA* [Doctoraldissertation]. http://ir.jkuat.ac.ke/bitstream/handle/123456789/2388/Catherine%20Warui%20PhD%20Human%20Resource%202016.pdf?sequence=1&isAllowed=y

Weissgerber, T. L., Milic, N. M., Winham, S. J., &Garovic, V. D. (2015). Beyond bar and line graphs: time for a new data presentation paradigm. *PLoS biology*, *13*(4), e1002128.

Weru, J. M., Gachunga, H., Odhiambo, R., & Arasa, R. (2017). Influence of competence management in adoption of qms in Kenya's ISO certified state corporations. *Human Resource and Leadership Journal*, *2*(2), 82-107. doi:10.47941/hrlj.162

Wilson, J. P. (2014). International human resource development: Learning, education and training for individuals and organisations. *Development and Learning in Organizations*, *28*(2).

Wingo, N. P., Ivankova, N. V., & Moss, J. A. (2017). Faculty Perceptions about Teaching Online: Exploring the Literature Using the Technology Acceptance Model as an Organizing Framework. *Online Learning*, *21*(1), 15-35.

Wirtky, T., Laumer, S., Eckhardt, A., &Weitzel, T. (2016). On the Untapped Value of e-HRM: A Literature.

Wirtky, T., Laumer, S., Eckhardt, A., & Weitzel, T. (January 01, 2016). On the Untapped Value of e-HRM – a Literature Review. *Communications of the Association for Information Systems, 38,* 20-83.

Xu, Y., Ribeiro-Soriano, D. E., & Gonzalez-Garcia, J. (2015). Crowdsourcing, innovation and firm performance. *Management Decision*, *53*(6), 1158-1169.

Yang, C. S., & Lirn, T. C. (2017). Revisiting the resource-based view on integration performance in the shipping industry. *International Journal of Physical Distribution and Integration Management*, *47*(9), 884-905.

Yogi, M. K., & Jain, A. (2017). Application of Intelligent Reinforcement Theory for Efficient Affective Computing on Cloud. *Journal of Network Communications and Emerging Technologies (JNCET) www. jncet. org*, *7*(4).

Yusuf, Taslim, W. A. Wan Adnan & S. K. Baharudin, "Usability evaluation of Human Resource Management Information System (HRMIS)," *2014 3rd International Conference on User Science and Engineering (i-USEr)*,

Yuzhakov, V., Dobrolyubova, E., Ludmila, T., & Schukina, T. (2015). *Methods of Material Incentives in the Civil Service: The Review, Analysis and Proposals* (No. madd4).

Zahari, A. S. M., Harun, M. A., Hamzah, S. F. M., & Salleh, S. M. (2018). The influence of Human Resource Management Information System (HRMIS) Application towards Employees Efficiency and Satisfaction. *Journal of Physics: Conference Series,* 1019, 12077.

Zahari, A. S., Harun, M. A., Hamzah, S. F., & Salleh, S. M. (2018). The influence of human resource management information system (HRMIS) application towards employee's efficiency and satisfaction. *Journal of Physics: Conference Series*, *1019*, 012077. https://doi.org/10.1088/1742-6596/1019/1/012077

Zhao, Y., & Xu, J. (2016). Construction of Human Resource Management Information System of Large Corporations.

Zin, M. L. M., Ibrahim, H., & Hassan, Z. (2016). The Determinants of Human Resource Information System Success in Japanese Manufacturing Companies. *The East Asian Journal of Business Management*, *6*(4), 27-34.

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory and practice in language studies*, *3*(2).

APPENDICES

Appendix I: Letter of Introduction

Dear respondent,

I am a postgraduate student pursuing PhD in Business Administration at Kisii University. I am carrying out a study entitled 'Effect of Human Resource Information System on Employee Performance in the Civil Service of Kenya. The Moderating role of Top-Level Management Support'. I kindly request you to fill your response in the space provided in the questionnaire. This questionnaire is purely academic and all responses shall be accorded high level of confidentiality. Your participation is most welcome.

Yours Faithfully,

Amudavi Enock Luseno,

PhD Student.

Kisii University.

Appendix II: Questionnaire

The questionnaire is intended to gather information on Effect of Human Resource Information System on Employee Performance in the National Government Ministries of Kenya: Moderating role of Top-level management support.

Instructions:

The questionnaire has six (7) sections. Do not write your name or employee number anywhere in your questionnaire. Tick where applicable or provide further information in writing if need be.

SECTION A: BACKGROUND INFORMATION

1. What is your age;

   ☐ Below 25 years

   ☐ 25 - 35 years

   ☐ 36 - 50years

   ☐ 51 - 60years

   ☐ 61 years and above

2. What is your gender:

   ☐ Male

   ☐ Female

3. What is your level of education?

   ☐ O-Level

   ☐ College Diploma

   ☐ Bachelor's Degree

   ☐ Post Graduate Degree

   ☐ Others

   (Specify)…………………………………………

4. For how long have you been a civil servant?

☐ Less than 1 year

☐ 1-2 years

☐ 3-5 years

☐ 6-10 years

☐ More than 10 years

5. Indicate your position in the organization:

☐ Top level Management

☐ Middle management/ Supervisor

☐ General Staff

6. How long have you been in the organization?

☐ Less than 1 year

☐ 1-5 Years

☐ 6-10 years

☐ 11-15 years

☐ 16years and above

SECTION B: HRMIS PLANNING

The following are statements relating to HRMIS planning. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	The HRMIS aids in quick planning and timely dissemination of information on recruitment of potential employees for the organization.					
b.	Through HRMIS planning, it is easy to appreciate every employee based on the work they have done.					
c.	HRMIS has been an effective change agent for positive planning and shaping the employees' attitudes towards the use of technology.					
d.	The HRMIS planning has increased employee commitment with the organization by boosting their motivation and communication confidence levels.					
e.	Compensation of employees has been made easy and quick through the HRMIS planning					

SECTION C: HRMIS Design

The following are statements relating to HRMIS design. Please indicate the extent of agreement or disagreement with each statement by marking against appropriate answer.

Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the

keys provided to tick

	Statement	5	4	3	2	1
a.	HRMIS design has made integration of different organization parts easy and efficient.					
b.	HRMIS design has improved the ability to coordinate different functions in the organization.					
c.	With HRMIS design, it is easy to identify roles and goals to achieve.					
d.	It is easy to send and receive feedback using an effectively designed HRMIS					
e.	HRMIS design enhances effectiveness of generation of data on employee's training needs					
f.	HRMIS design enhances user-friendly infrastructure for working and career development process.					
g.	An effective HRMIS design increases efficiency of operation in different departments in the organization through the availability of ready data, which leads to an enhanced performance in the Department.					
h.	HRMIS design that is done through data integration improves use of data to plan and administer all types of training interventions					
i.	Overall, HRMIS is effective with the generated information in benefiting employees and improve the strategic decision making.					
j.	Through an effective design of HRMIS, it is easy to access and use organization data for the purposes of training employees and improving services.					

SECTION D: HRMIS INTEGRATION

10. The following are statements relating to HRMIS integration. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	Through electronic record keeping of employees and product profiles and other data, there are minimal errors in the process of decision making.					
b.	HRMIS integration ensures minimal wastage of time in sorting data.					
c.	The integration of HRMIS in the selection process assures cost reduction in HR functions.					
d.	The integration of HRMIS technology has helped in reducing the time and effort spent in preparing and recruiting new employees.					
e.	The HRMIS integration makes employees more creative and innovative.					
f.	The integration of HRMIS in organizational processes ensures compliance with policy and organizational procedures.					
g.	Challenges like corruption among the organizational staff have been overcome by effective HRMIS integration.					
h.	Effective integration of HRMIS has made it easy for managers to track the performance of the organization and in making decisions.					
i.	Management has become more efficient with the integration of HRMIS.					

SECTION E: HRMIS OPERATIONS

11. The following are statements relating to HRMIS operation. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	The organization is able to achieve its goals through the application of HRMIS.					
b.	HRMIS improves the efficiency of performing the day to day activities in office.					
c.	HRMIS ensures an elimination of duplicate roles in the office					
d.	HRMIS operations ensure that employees meet their work targets.					

**SECTION F: EMPLOYEE PERFORMANCE**

12. The following are statements relating to civil service performance. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	HRMIS increases competitive advantage of the civil service.					
b.	HRMIS seeks to achieve alignment of HR strategies with civil service strategy to enhance performance					
c.	The HRMIS system is critical in doing career reviews in the Civil Service in Kenya geared towards better performance					

		5	4	3	2	1
d.	Citizens are satisfied with how the Civil Service delivers in terms of its performance.					
e.	HRMIS provides timely and quick access to information for decision-making in-service delivery					
f.	The HRMIS system is user friendly in tracking employee performance					
g.	The HRMIS system provides quick and timely employee performance results					
h.	The HRMIS process has enabled to identify and nurture individual talents and help to raise their performance.					

SECTION G: TOP LEVEL MANAGEMENT SUPPORT

1. The following are statements relating to civil service performance. Please indicate the extent of agreement or disagreement with each statement. Key: 1=Strongly Disagree, 2= Disagree; 3=Neutral; 4= Agree; 5= Strongly Agree. Use the keys provided to tick.

	Statement	5	4	3	2	1
a.	Are staffs provided with instruments to support them doing their work?					
b.	Does the management provide needed support for members?					
c.	Is there coordination of effort by management?					
d.	Is there deliberate flow of knowledge amongst the staff?					
e.	Is there sense of involvement amongst the employees in decision making?					
f.	Are contributions by staff encouraged by management?					
g.	Are inspiring creative ideas encouraged by management?					

THANK YOU

Appendix III: HRMIS Planning

Scree Plot
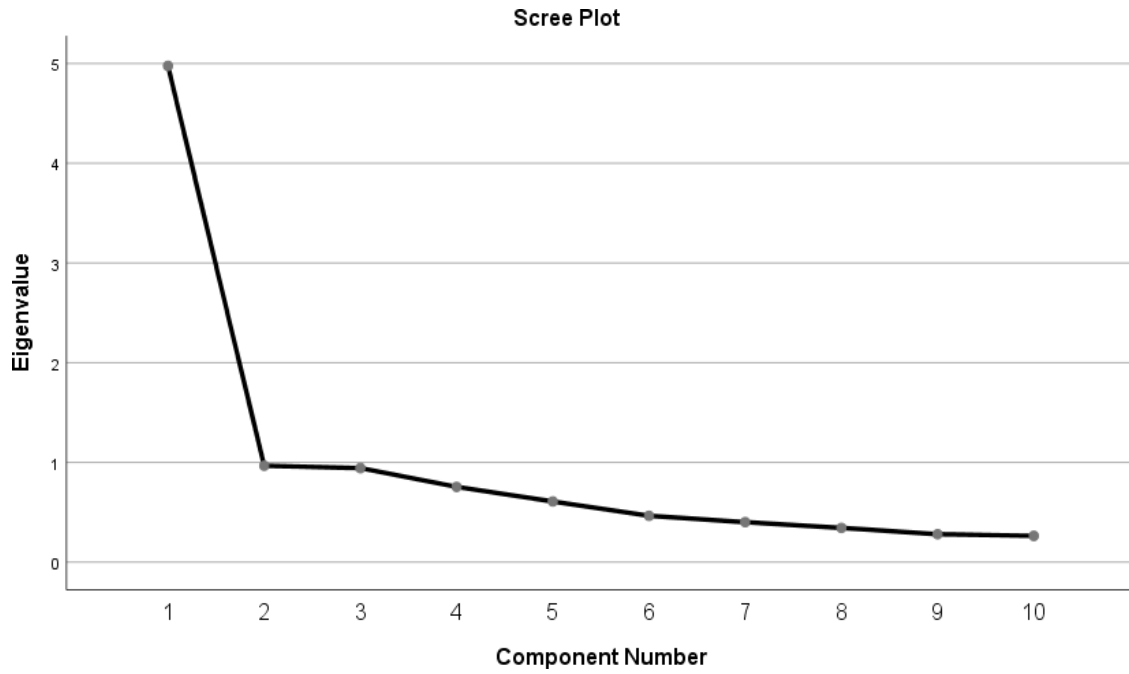
Appendix IV: HRMIS Design

Scree Plot
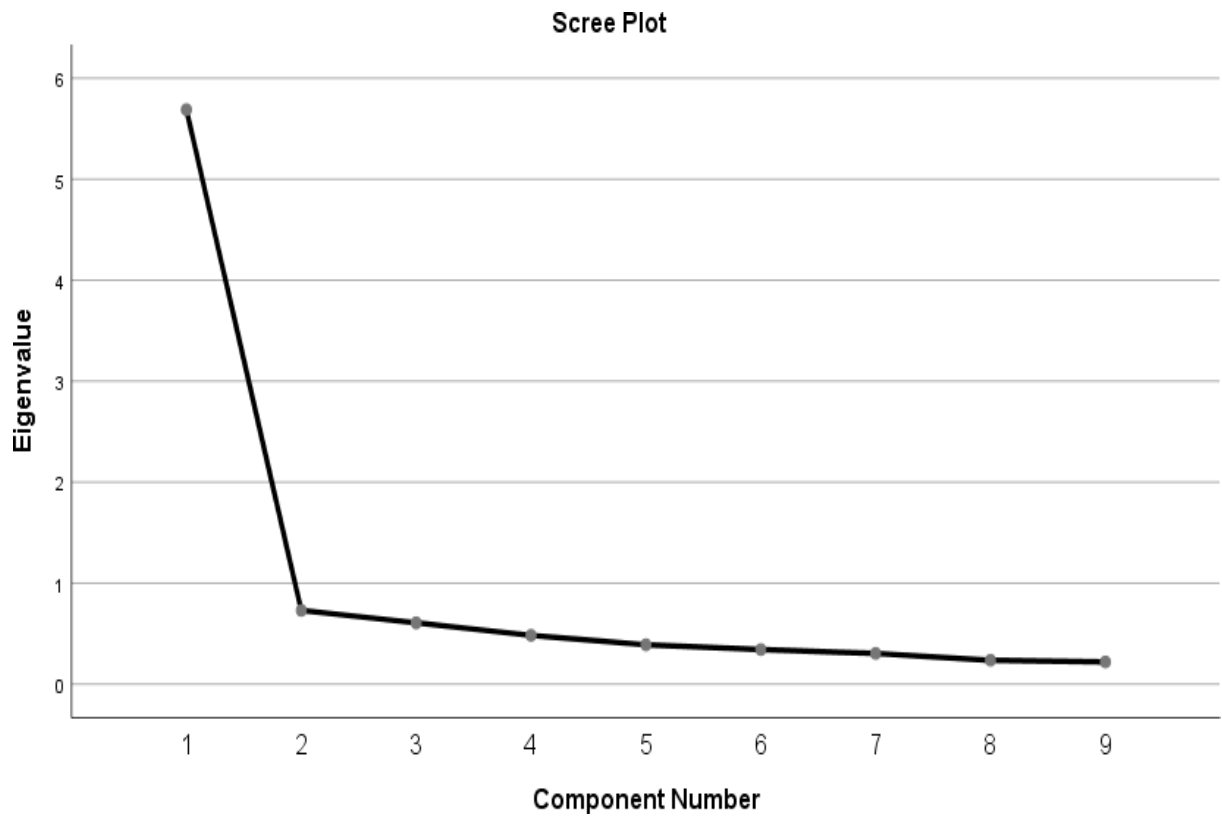
Appendix V: HRMIS Integration

Scree Plot
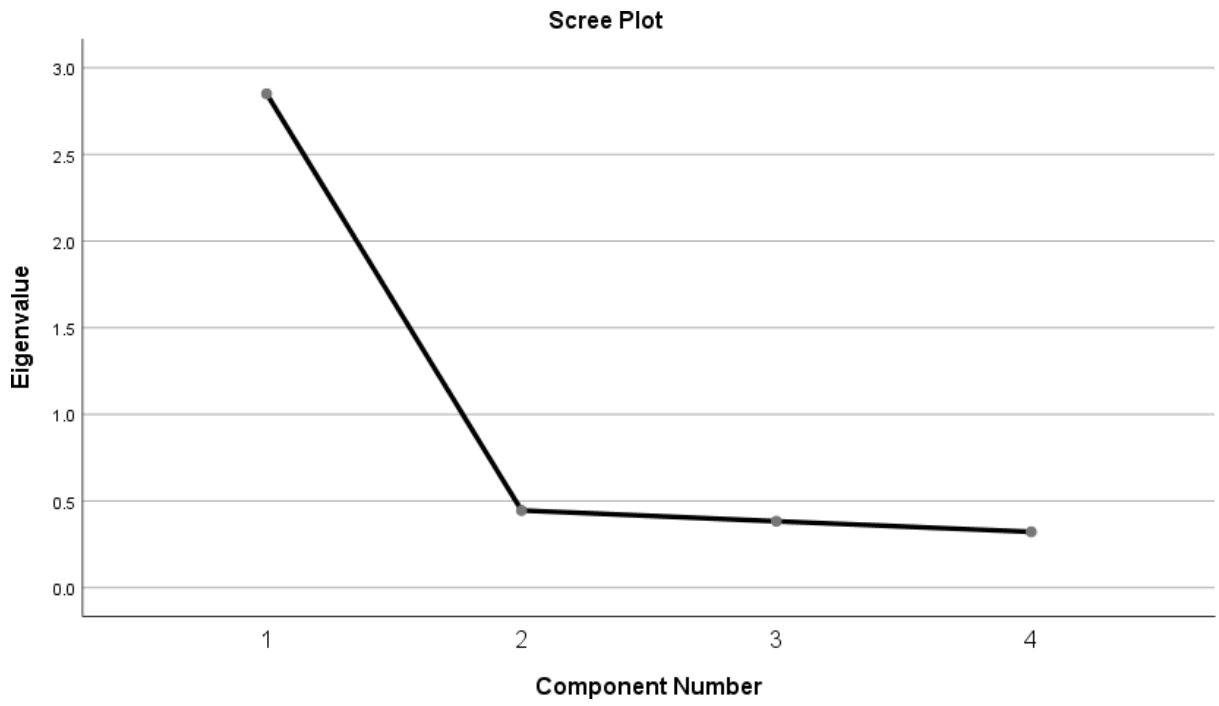
Appendix VI: HRMIS Operations

Scree Plot
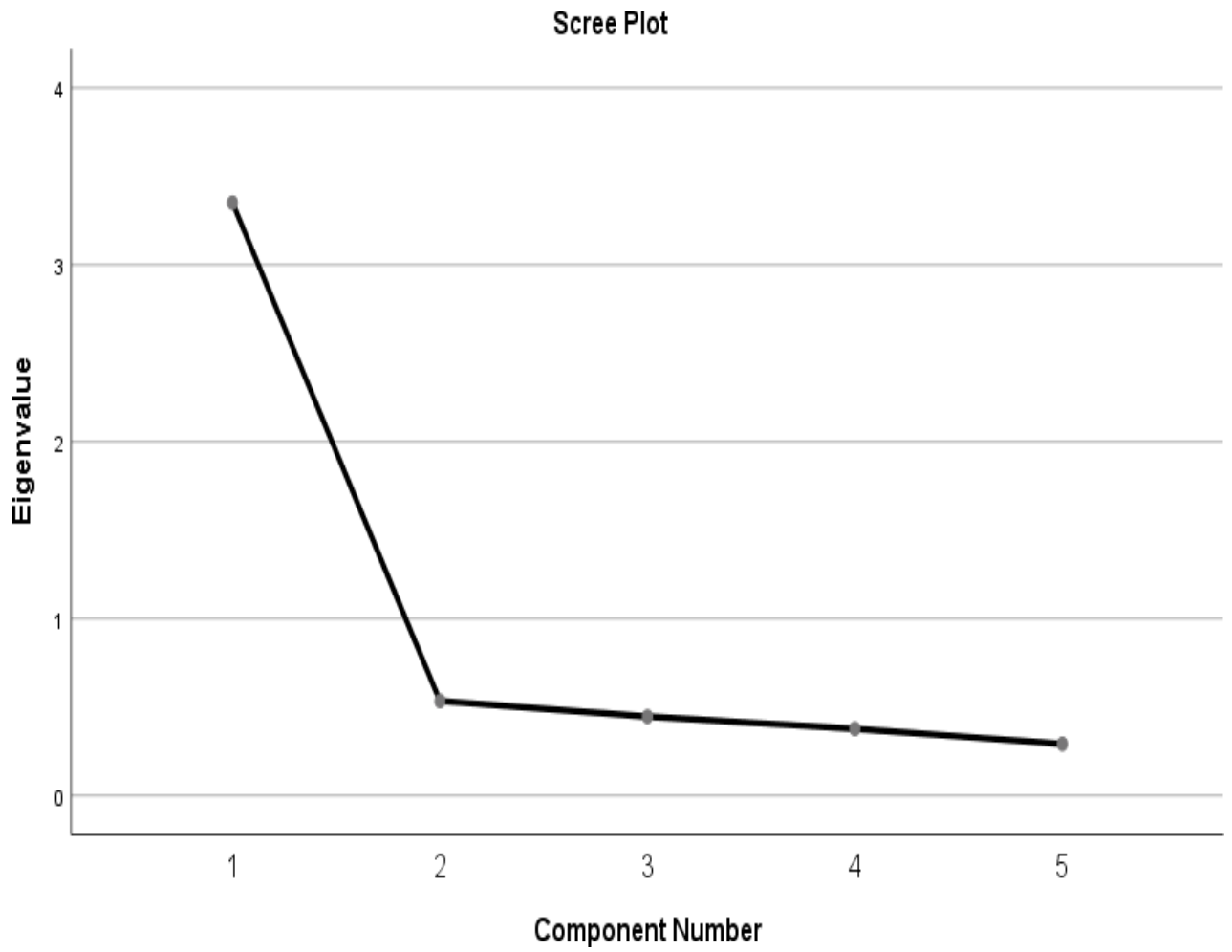
Appendix VII: List of Government Ministries in Kenya

1. Ministry of finance

2. Ministry of Tourism

3. Ministry of Transport and Infrastructure

4. Interior Security

5. Ministry of ICT

6. Ministry of Energy

7. Ministry of Lands

8. Sports and Heritage

9. Ministry of Education

10. Ministry of Petroleum and Mining

11. Ministry Health

12. Ministry of Youth

13. Ministry of Foreign Affairs and International Trade

14. Ministry of Water and Sanitation

15. Ministry of Environment

16. Ministry of Industrialization

17. ministry of Devolution

18. Ministry of Defence

19. Ministry of Agriculture

20. ministry of EAC and Northern Corridor Development

21. Attorney General's office

Source: http://www.president.go.ke/the-presidency/the-executive-cabinet/

Appendix VIII: Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **308469**

Date of Issue: **16/March/2020**

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Appendix IX: Plagiarism Report