

**HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS
AND PERFORMANCE OF SELECTED NATIONAL GOVERNMENT
MINISTRIES IN NAIROBI CITY COUNTY, KENYA**

BY

**KIPCHOGE JANET CHAVUYA
D58/CTY/PT/21847/2012**

**A THESIS SUBMITTED TO THE SCHOOL OF BUSINESS IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
AWARD OF DEGREE IN MASTER OF SCIENCE (HUMAN
RESOURCE MANAGEMENT OPTION) OF KENYATTA UNIVERSITY**

NOVEMBER 2021

DECLARATION

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Signature: _____

Date____/____/ 2021

Kipchoge, Janet Chavuya

Reg. No. D58/CTY/PT/21847/2012

We, as the appointed supervisors of Kenyatta University, confirm that the thesis report has been produced by this candidate under our supervision.

Signature: _____

Date____/____/ 2021

Dr. Hannah Bula

Senior Lecturer

Department of Human Resource Management

School of Business - Kenyatta University

Signature: _____

Date____/____/ 2021

Dr. Linda Kimencu

Lecturer,

Department of Business Administration

School of Business - Kenyatta University

DEDICATION

This thesis report is expressly devoted to my beloved parents Mr. Lawrence M. Kipchoge and Mrs. Agnes K. Kipchoge. I will forever be grateful for their moral and spiritual support. I also dedicate this work to my nieces and nephews, may this body of knowledge be an inspiration to each one of you as you aspire to realize your academic goals.

ACKNOWLEDGEMENT

Foremost, I would like to thank the almighty God for his wisdom, guidance, strength and help during the entire academic journey.

To my Supervisors Dr. Hannah Bula and Dr. Linda Kimencu of Kenyatta University, I give my sincere gratitude for the continuous support during my Thesis research writing. Your expertise, commitment and guidance were commendable. Besides, appreciate members of the faculty namely Dr. Kinyua, Dr. Makhamara, Dr. Wainaina, Dr. Wanyoike, Dr. Nderi, Dr. Kiiru, Dr. Wambua, Dr. Waithaka, Dr. Muchemi, Dr. Kavindah and Dr. Obere for your valuable input and insightful comments, which helped improve the Thesis.

To the Ministry of Public Service Youth and Gender and the Ministry of Interior and Co-ordination of National Government, I am grateful for your financial support, which aided in completion of the Master's Degree and achievement of my academic and career aspirations.

To the management of the selected National Government Ministries in Nairobi City County, thank you for allowing me to conduct my thesis research. To each respondent in the HRM, ICT and Finance Departments, I appreciate your input, cooperation and commitment during the data collection period. Without you, it would have been difficult to research my topic successfully.

To the librarians working in Resource Centres at the Public Service Commission, Nairobi, Directorate of Public Service Management, Kenyatta University, Kenya School of Government and Institute of Human Resource Management, thanks for your assistance.

Lastly, to my parents, family, friends and colleagues at the Commission, may God bless you all for your great support during the time I was working on the research.

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OPERATIONAL DEFINITION OF TERMS

National Government Ministry	A government department headed by a Minister and established by legislation or executive powers to manage a sector of public administration for socio-economic development of a country
Performance	is yardstick used to determine whether a job is done well or not
Organizational Performance	Refers to the actual results of an organization's activities as measured against its pre-determined objectives
Effectiveness	Is the prudent or maximum utilization of available resources (funds, human capital, innovations), to achieve pre-determined organizational goals
Human Resource Management Information System	An electronic human management resource practice that is utilized to sustain operational efficiency in recruitment, training, performance management, payroll management or organizational communication to achieve pre-determined goals
E-Recruitment	An electronic human management resource practice that is used to track applicants, reduce recruitment costs and maintain records of e-resumes in organizations
E-Training	An electronic human management resource practice that is used to maintain an HR skills inventory and records of training costs and staffs trained per given time
E-Appraisal	An electronic human management resource practice that is utilized to keep records of appraisal reports, HR scorecards, staff turnover and exit interview reports
E-Payroll	An electronic human management resource practice that is used to keep monthly payroll records, generation of e-payslips and records of attendance
E-Communication	An electronic human management resource practice that is used to keep records of newsletters, web notices, policies and communication costs per specified time
Government	A government is a body that sets and administers policy. It uses laws and institutions to exercise sovereign power with the intent of managing a state of wellbeing that benefits all aspects of the community or organization
Policy	A policy is a principle or course of action proposed or implemented by a governing body to guide and support a community or organization
Service Delivery	the ability of an organization to provide a promised service to meet clients' expectations of reliability, responsiveness, assurance, tangibility and empathy
Electronic	Automated task accessed or transmitted by means of a computer especially over the internet or a network

ABBREVIATIONS AND ACRONYMS

CARPS	Capacity Assessment and Rationalization of the Public Service
DPSM	Directorate of Public Service Management
e-	Electronic
GoK	Government of Kenya
GHRIS	Government Human Resource Information System
HRMIS	Human Resource Management Information Systems
HRM	Human Resource Management
IPPD	Integrated Payroll and Personnel Database
ICT	Information and Communication Technology
IFMIS	Integrated Financial Management Information System
IS	Information Systems
IT	Information Technology
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organization for Economic Co-operation and Development
ROI	Return on Investment
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences

ABSTRACT

Over the years, most public organizations in Kenya have been registering poor performance and this includes National Government Ministries. Studies conducted by different scholars on organizational performance have revealed that this situation is attributable to weak institutional capacities, lack of ICT infrastructure, scarcity of resources and inapt use of public funds among other factors. With the rapid changes in the global business environment, National Government Ministries must uptake use of human resource management information systems to enhance employee productivity, job satisfaction, service quality and organizational performance. This research sought to analyze the influence of human resource management information systems on performance of selected National Government Ministries in Nairobi City County, Kenya. The specific objectives were to establish the relationship between e-Recruitment and performance of selected Ministries; to determine the relationship between e-Training and performance of selected Ministries; to explore the relationship between e-Appraisal and performance of selected Ministries; to evaluate the relationship between e-Payroll and performance of selected Ministries; to analyze the relationship between e-Communication and performance of selected Ministries; to examine whether Government policy has a moderating effect on the relationship between human resource management information systems and performance of selected Ministries; and finally, to establish whether service delivery has a mediating effect on the relationship between human resource management information systems and performance of selected Ministries. The philosophical foundation of the study was positivism. The study used a quantitative research design using a cross-sectional survey. The target population comprised of 271 employees working in 6 selected Ministries. The unit of analysis was one National Government Ministry while the unit of observation were 162 employees who included 49 top managers, 90 mid-level managers and 132 operational staff drawn from HR, ICT and Finance departments. The study used proportionate stratified random sampling where employees were grouped and then randomly picked to participate in the study. The sample size was 162 employees selected 6 Ministries. Primary data were collected using self-administered questionnaires while secondary data were obtained through books, journals and empirical works of other scholars. Descriptive and inferential statistics were computed to describe characteristics of each study variable. Multiple regression analysis and correlation coefficient were used to establish causal relationships between hypothesized variables and performance of selected Ministries. Content analysis was used to analyze qualitative data. It was found that there is a significant relationship between independent variables and performance of the selected Ministries. Government policy and service delivery have a strong moderating and mediating effect on the relationship between human resource management information systems and performance of selected Ministries. The findings supported the resource based-view theorists that a firm's internal resources are a source of competitive advantage. The study recommends that National Government Ministries should uptake use of human resource management information systems to improve organizational performance in terms of productivity, job satisfaction and service quality.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

1.1.1 Organizational Performance

An organization is the voluntary association of productive resources (human, capital, innovations), for the sole purpose of achieving shared goals or objectives (Carton, 2005; Cho & Dansereau, 2010; Jones, 2015). Organizational performance incorporates the actual outcomes or results emanating from an organization's activities as measured against its intended goals such as increase in efficiency, better productivity, return on investment, client satisfaction and quality improvement (Doval, 2020).

Organizational performance can be determined by how well it is managed and how well available resources (funds, employees, innovations) are utilized to achieve strategic goals (Ssekakubo, Lwanga & Ndiwalana, 2014; Macleod & Clarke, 2011; Agha, Alrubaiee & Jamhour, 2012). Organizational performance also depends on its employees who form the team that works towards achieving set goals (Almatrooshi, Singh & Farouk, 2016; Mastrangelo, Eddy & Lorenzet, 2014; Ganguly, 2010; Clarke, Seng & Whiting, 2011).

Different researchers and theorists have provided different measures for organizational performance (Ashraf & Kadir, 2012). Organizational performance (whether public or private sector) can be measured in many forms and is dependent on purpose of measurement, provided goods or services, type of clientele or available data (Mahadevan, 2007). According to Richard, Devinney, Yip and Johnson (2009), organizational performance can be measured using three specific firm outcomes namely financial performance (quality, return on investment, resource utilization and innovation); product market performance (sales, market share and profits); and total shareholder return. Al-Damoe (2012) opined that organization performance is indicated by the organizations' productivity, employees' efficiency, job satisfaction, service quality and innovativeness.

Globally, most management researchers have studied the concept of organizational performance as the independent or predictor variable (Van Scotter, Motowidlo, & Cross, 2000). Equally, there has been rapid growth for research keen on measuring the output of organizational performance (Carton, 2005; Almatrooshi, Singh & Farouk, 2016). In developed economies, extant research has revealed that finance ministries have made repeated efforts to measure government efficiency and use of best practices to improve it. However, Grice (2007) opined that no one measure can ever summarize performance of the complex government services provided to the public. In the UK and USA, measuring of public sector productivity and performance has been receiving great attention.

In the Organization for Economic Co-operation and Development (OECD) countries such as Netherlands, Ireland, France, Belgium and Canada, various bodies like the parliaments, audit bodies, finance ministries and departments within government have been playing the role of measuring government output to meet policy demands as well as enhance public sector productivity and performance (Grice, 2007; Carrera & Dunleavy, 2013).

In sub-Saharan Africa, public sector organizations have received increasing attention due to poor performance. Majority are faced with a myriad of challenges such as lack of efficiency, accountability, ineffective HR management practices and blatant corruption, which are a hindrance to realization of better productivity and organizational performance (Kyama, 2010). During the last two decades, most African countries have embarked on implementation of public sector reforms, whose progress remains scant due to scarcity of resources. However, public sector organizations must embrace restructuring of business operations to improve productivity and organizational performance (Oghojafor, Muo, Aduloju, 2012; Robbins, 2003).

According to Naidoo (2015), most public sector organizations have adopted use of technology as well as implemented public sector reforms to maximize productivity and

performance in government organizations. Moreover, public sector organizations employ and manage huge workforces hence receive significant amounts of funding from the government to facilitate their operations and achieve organizational goals. Further, most are restructuring and embracing public sector reforms to improve productivity and organizational performance (Carrera & Dunleavy, 2013).

In Kenya, public organizations have been experiencing a downward growth, which could be attributed to lack of adequate ICT infrastructure and comprehensive policies, slow recruitment processes, weak institutional capacities, poor performance evaluation mechanisms and weak financial controls (GoK, 2015; KIPPRA, 2014). Extant research has shown that even where projects, strategic plans or innovations existed, there was lack of effective systems for monitoring and evaluation (Kiiru, 2015). Lack of accountability had resulted to negative ethical values amongst staff. Moreover, low morale, poor remuneration, rampant corrupt vices (bribery, dishonesty) and poor governance was causing misuse of public funds (Hope, 2014).

Public organizations are subject to accountability on how they spend public money on their behalf (Korir, Rotich & Bengat (2015). Consequently, it is prudent that they refocus and redesign their business processes to enhance productivity, service delivery and organizational performance (Kananu, 2015; Midiwo, 2016; Bartai, 2014; Kiiru, 2015). According to Korir, Rotich & Bengat (2015), there is need to intensify efforts to enhance attitudinal change in public organizations through customer satisfaction surveys, skills inventory assessments, performance management evaluations and employee training, which have a direct impact on organizational performance and the country's economic growth at large.

1.1.2 Human Resource Management Information Systems

Human Resource Management Information Systems (HRMIS) is an electronic human resource practice for collecting, storing and managing data on recruitment, training, appraisals and payroll to increase operational efficiency and effectiveness (Karasek, 2015). HRMIS have a significant impact on organizational performance and they have considerably reshaped human practices across the world (Khashman, 2016).

There are several HRMIS practices. However, this research will only consider e-Recruitment, e-Training, e-Appraisal, e- Payroll management and e-Communication. When automated, these HRMIS practices have a significant impact on organizational performance in terms of efficiency and effectiveness (Khashman, 2016).

E-recruitment helps to identify and attract potential job applicants to fill vacant positions, at the planned time (Nabi, Ghous & Rahimiaghdam, 2017). It supports management of recruitment information for management decision-making (Wairimu & Karanja, 2016). HR managers are able to gather, update and store electronic resumes for future staffing needs. With e-Recruitment, prospective employers can spend less on generation and disseminate of recruitment data thereby increasing effectiveness of the hiring process (Ekwoaba, Ikeije & Ufoma, 2015; Bogatova, 2017).

E-training helps organizations to keep HR skills inventory to manage employees' training needs and career progression (Taskar, Raghuwanshi & Antony, 2018). It enables HR managers to generate timely data on training costs incurred by the organization for different training programs over a given period of time (Mathis & Jackson, 2010; Ahmer, 2013). With e-Training, HR managers can generate reliable data to establish Return On Investment (ROI). However, despite its importance in improving employee productivity, training programs are not accorded sufficient support by organizations (Noe, 2010)

E-Appraisal assists managers to generate appraisal reports for informed decision-making on promotions, training, pay rise, termination, transfers or career progression (Al-Raisi, Amin & Tahir, 2011). It enables them to assess performance of employees and gauge impact of policy implementation in the organization (Doorgapersad, 2011). With e-Appraisal, HR managers can keep track of HR scorecards, employee retention and turnover rates, and exit interview reports to identify problem areas.

E-Payroll enhances speed and accuracy of processing monthly payrolls, pay cheques and salary reports for timely decision-making (Mahajan, Shukla & Soni, 2015). Moreover, individual employees can access and print their electronic payslips whenever necessary, from any location and time (Abdulah, Wahab, Shamsuddin & Hamid, 2013). This aids to reduce paper work. With e-Payroll, managers can record and manage employees' attendance and hence minimize existence of ghost-workers and erroneous payments.

E-Communication facilitates exchange and distribution of information in organizations. The practice has heralded a tremendous change and speed in the flow of information and communication between managers and employees (via in-house networks). Besides, it allows collaborative interactions with external clients (via HR portals) thus enhancing operational efficiency, information quality and organizational performance (Ahmed & Shaju, 2017; Banihashemi, 2011; Gupta, 2004).

E-Communication facilitates easy access to HR publications (policies, reports, circulars, manuals, among others) thereby increasing regulatory compliance (Ukamaka, Jyoti & Neil, 2016). Specifically, e-Communication provides organizations with a centralized repository of information that managers can use to support personnel actions (Ankrah & Sokro, 2016). Due to e-Communication, workplaces are changing making people to interact more conveniently without any physical movement. With E-Communication, can be assessed through satisfaction surveys and online engagement rates (Obeidat, 2012).

Globally, HRMIS are considered an integral part of every function in the organization (Reddick, 2009). Extant research has confirmed that many organizations across the globe are using HRMIS to influence effectiveness in organizational communication (Ukamaka, Jyoti & Neil, 2016). Moreover, owing to growing workforces in remote and international sites, organizations are using HRMIS to reduce costs and generate reliable data for timely decision-making (Teryima, Victor & Kwanum, 2014; Drucker & Geva, 2013).

In Asia, Shukla, Verma, Narayanan and Potenziani (2014) revealed that Indian Government adopted an HRMIS to reduce paperwork and provide accurate and timely data about the health workforce. HRMIS also enabled HR managers to identify vacancies and ensure efficiency and transparency in the hiring process. In Turkey, Kaygusuz, Akgemci and Yilmaz (2016) confirmed that HRMIS enables storage, processing and sharing of information between employees and managers. This enhances productivity, job satisfaction and commitment to the organization. In Jordan, Khashman (2016) opined that HRMIS provides the management with quality information to enable them make informed decisions on recruitment, performance appraisals, remuneration and regulatory communications to enhance organizational performance.

In the sub-Saharan African region, HRMIS are widely in use. According to Kyama (2010), HRMIS improves service delivery and provides information for strategic decisions. Ankrah and Sokro (2016) opined that the system assists HR managers to report on regulatory compliance, prepare analysis on HR skill inventory and manage payrolls. Ngwenya, Aigbavboa and Thwala (2019) found that HRMIS generates employee information for quick decision-making. It reduces errors and increases staff productivity and performance. However, in the sub-Saharan African most organizations most organizations have budgets and scarce resources, which deters achievement of set goals (Kyama, 2010; Bunse & Fritz, 2012; Robinson, 2015).

In Kenya, HRMIS has witnessed special attention and close consideration from both private and public sector organizations. Njeje, Chepkilot and Ochieng (2018) opined that HRMIS supports employee recruitment, training, payroll administration, appraisals, pensions, and benefits management. Gichoya (2006) revealed that emergence of ICT has made it possible to improve efficiency and effectiveness of internal business operations within government and has re-located public services from government offices to locations closer to the citizens. Mbugua (2016) stated that adoption of HRMIS has resulted in improved efficiency, better communication/feedback mechanisms and high levels of job satisfaction.

However, existing research revealed that very few public organizations have developed reliable ICT infrastructures that can effectively coordinate online operations, hence, leading to delays in services delivery (Midiwo, 2016). Further, lack of comprehensive ICT policies, poor infrastructure and ineffective policy implementation seem to be affecting performance of most public organizations in Kenya (Thuku & Mwangi, 2015).

1.1.3 Government Policy

A government is a body that sets and administers policy. It uses laws and institutions to exercise sovereign power with the intent of managing a state of wellbeing that benefits all aspects of an organization. A policy is a principle or course of action proposed or implemented by a governing body to guide and support organizational activities (Deb, 2009). According to Akinyemi and Adejumo (2018), a policy helps to determine the scope of operations in an organization. Government policy influences ways to perform actions and sometimes by whom (GoK, 2016). It is an authoritative declaration and hence can be used as a basis for making decisions. According to Smith and Morton (2006), a policy helps to clarify institutional roles and rule formation. However, there are challenges experienced in relation to resourcing, co-ordination and monitoring coercion.

Organizations are guided by government policy, which contains the reasons why specific actions are conducted in a certain way and why (GoK, 2016). A policy is promoted by a person or governing body and therefore should be reviewed from time to time to reflect changes necessitated by technological advances or restructurings as they have an influence on organizational performance (Lucio & Stuart, 2011).

Government policy plays a significant role as a potential moderator. It exerts a big influence on range of activities in organizations (Obaji, Adekanbi & Obiekwe, 2015; Shariff, Peou & Ali, 2010; Harash, Al-Timimi, Alsaad, Al-Badran & Ahmed, 2014). However, according to Mwai (2019), policies have a great influence on business environment. Therefore, governments need to create an enabling environment to enable organizations to conduct their businesses effectively.

Government policy can be either favourable or unfavourable. Some policies are favourable than others. A favourable government policy can boost or hinder the growth of organizations. A constructive policy greatly influences the environment in which the organizations operate and this affects the country's economy (Bryan, 2013; Eniola & Entebang, 2015).

Government policy in a politically stable country is not the same as that of an unstable country (Ibrahim & Muritala, 2015). In politically stable economies, governments can make sustained business friendly decisions, which in turn boost performance organizations. In unstable economies however, government policy may be unpromising thereby affecting performance of organizations and making incur loses or even closure.

Hence, from time to time, policy makers and relevant stakeholders in government need to take cognisance of the inherent disparities in the effects of implemented policies to boost organizational activities and the country's economy performance (Akinyemi & Adejumo,

2018). Further, effective communication and involvement of employees translates to successful policy implementation (McKenna & Beech, 2014).

Globally, the effects of government policies in the developed countries such as the United Kingdom, United State of America, Canada and the Netherlands have been significant in empirical literature. Studies have revealed that public organizations are continuously implementing change through transforming government policy into actions to support growth of innovations and organizational. According to Pier (2006), many organizations have increasingly recognized that to create a competitive advantage through people requires compliance to government policies and practices that best influences staff productivity and performance of the organization.

In the sub-Sahara Africa, there is evidence on research on different government policies related to human resource management practices. According to Obaji, Adekanbi & Obiekwe (2015). A constructive government policy are vital for the survival and growth of every organization. The manner in which management and regulation of human capital evolves in organizations is greatly influenced by both internal and external factors. Development of frameworks for managing HR practices has become increasingly important to determine organizational performance in most African countries. Mwakalobo (2009) opined that a critical analysis is vital before implementation of any government policy to help shed light on the extent and direction of its effects and possible mitigation measures.

In Kenya, there are various government policies, which guide both public and private sector organizations (Mwai, 2019). Some policies are specific to public organizations while others affect the private sector directly. Policies aimed at improving education and training have great positive effects on employees' skills development and labour productivity and better work environment, which translates to rise in economic growth.

In National Government Ministries in Kenya have established and implemented policies to influence and enhance personnel decisions and actions (GoK, 2016). Government policies forms the basis from which employees are recruited, trained, appraised, remunerated and informed about matters that concern them. Efficiency and effectiveness of managing these resources in the organization is dependent on the policies in place (Chelimo & Ouma, 2017).

Government policies are many and varied. For this research, focus was on government policies related to Human Resource Management (HRM). They include policies such as recruitment, training, appraisals, payroll and communication. The policies were considered because they promote professionalism and equality. They guide and regulate personnel actions, which translates to improved productivity (efficiency, effectiveness), job satisfaction and service quality (Guest, 2007; Lucio & Stuart, 2011).

A recruitment policy plays a crucial role in hiring of potential candidates. It provides a clear outline on the organization's recruitment practices (McKenna & Beech, 2014; Chelimo & Ouma, 2017). According to Hamza et al (2021), an appropriately managed recruitment policy is a source of competitive advantage that can lead to better productivity and improved organization performance. However, hiring the wrong person for the job can have serious consequences on productivity and organizational performance.

A training policy is vital for the benefit of both the employee and organization (Obeidat, 2012). It ensures employees are trained about best practices, new skills, roles and responsibilities that can improve their productivity (Noe, 2010). An appropriate policy contains clear guidelines for the organization and employees to follow in order to achieve individual and career goals (Alkalha, Alzu'bi, Aldmour, Alshurideh & Masa'deh, 2012).

An Appraisal policy provides clear guidelines on target setting, work planning and reporting (Al-Raisi, Amin &Tahir, 2011). It provides clarity of roles, responsibilities and hierarchical levels in the organization. The policy should be adapted to ensure it inculcates the culture of performance, learning, professionalism and innovation.

Payroll policy provides a framework on salary administration and budgeting. It also guides on how to control and monitor financial activities in organizations (Palladan & Palladan, 2018; Abdulah, Wahab, Shamsuddin & Hamid, 2013). This policy makes employees aware of what salaries and wages they should expect to be paid. It enables payroll staff to manage salary payment, leave, and allowances, among others

Communication policy outlines how an organization manages the flow of its information with employees and clients alike (Babatunde, 2015). It provides the organization's core values, mission, vision, mandates, strategic plans and reports on performance (Femi, 2014). The frequency of communication between managers and employees has a significant effect on employees' performance and job satisfaction (Ebrahimi, 2014). However, the attitude of managers and employees can affect the achievement of an organization's to pre-specified goals.

1.1.4 Service Delivery

Service delivery is the ability of an organization to provide a promised service at the promised time to meet or exceed the expectations and perceptions of its clients (Parasuraman, Berry & Zeithmal, 1985; Lovelock &Wright, 2002). The quality of a service is realizable when the organization delivers a promised service right the first time, every time (Munhurrun, Bhiwajee & Naidoo, 2010; Maphephe, 2013; Al-alak & EL-refae, 2012). According to Parasuraman, Zeithmal, Valerie, Berry & Leonard (1994), the quality of a service is measured using the SERVQUAL instrument, which has five (5) dimensions namely: reliability, responsiveness, assurance, tangibility and empathy.

A study by Danjuma and Rasli (2012) interpreted reliability to mean the capability of organizations to consistently or regularly deliver a promised service at the guaranteed time and appropriately from the first visit onwards (Zeithaml, Bitner & Gremler, 2006). A suitable approach to ensure reliability is to understand the needs and expectations of the clients and deliver the promised service at the promised time. This is achievable by standardizing systems and processes to improve efficiency and service quality.

According to Juga, Juntunen and Grant (2010), responsiveness was termed as the willingness of the service provider to assist customers and promptly deliver the promised service to them. Appropriate tactics to increase responsiveness includes giving rational and individual attention to respective customer when dealing with their requests service, enquiries or complaints (Parasuraman, Berry & Zeithmal, 1985). Other responsiveness constructs include appropriate training of employees so that they can respond to clients with respect and regularly and clearly remind them on the duration of the service.

A study by Parasuraman, Berry and Zeithmal (1985), defined assurance as the ability of contact employees to possess requisite knowledge, skills and competences that enable them to respond and answer to clients' complaints courteously and with respect. The assurance that a service will be delivered promptly as promised instils much trust and confidence in clients. According to many researchers, a display of trustworthiness by the employees enhances satisfaction levels of clients significantly. It encourages them to visit the organization regularly. Assurance of delivering a service is demonstrated through the dressing and/or attitude of the contact employees who reflect the image and values of their organization (Zeithaml, Bitner & Gremler, 2006).

Danjuma and Rasli (2012) described empathy as the care and individualized attention or treatment that the organization provides its clients. Empathy is similarly the knowledge, skill and competence of contact employees or the organization's representatives to

address each client by name and to understand their specific service need, preference or concern. Likewise, empathy is the ability to be approachable and a good listener in order to handle complaints with expertise. Well-served clients feel valued, respected and commit to the organization (Juga, Juntunen & Grant, 2010).

According to Harr (2008) tangibility refers to the physical evidence that can be seen or touched by clients such as the visually attractive interior and exterior furnishings, well-lit and ventilated reception area, presence of work equipment (computers, telephones, furniture, internet connectivity) to support efficient and effective service delivery. Other tangible elements that play a vital role in client satisfaction include clean facilities (spacious offices, cafeterias, washrooms, lifts), which are influential in shaping the attitude of clients towards the organization (Danjuma & Rasli, 2012). It could also make the clients to recommend the organization to others.

1.1.5 National Government Ministries in Kenya

Kenya attained her Independence in 1963. Thus, like many other developing African countries, the Government of Kenya took up the responsibility of providing essential goods and public services in response to the needs and aspirations of citizens, the private sector and people living within its jurisdiction. This is the most important reason or purpose for their existence (*raison d'être*) in the country (GoK, 2010).

In Kenya, National Government Ministries are key players of the country's economy. The organizations coordinate and control management of the public sector, which include education, foreign affairs, finance, information and communications technology, public service et cetera. At present, National Government Ministries in Kenya derive their operational mandates, visions and missions from the Constitution of Kenya, Executive Orders, Kenya Gazette Notices, Acts of Parliament and other legal statutes (GoK, 2016).

Kenyan National Government Ministries undertake formulation, implementation, monitoring and evaluation of different strategic and innovative policies for the country's economic growth, organizational success and comparative advantage. Further, the Ministries are responsible for review and harmonization of the existing policies to reflect provisions of the Constitution, adoption of public sector reforms, re-organization of Government, rapid technological advances or emerging trends in HRM practice.

Currently, there are 21 National Government Ministries as outlined in the Executive Order No. 1 of 2018 on Organization of the Government of the Republic of Kenya (GoK, 2018). This research only considered the six selected National Government Ministries in Nairobi City County, Kenya. They include Ministry of Interior Co-ordination of National Government, the National Treasury and Planning, Ministry of Foreign Affairs, Ministry of Public Service and Gender, Ministry of Information and Communication Technology, and Ministry of Education.

The Ministry of Interior Co-ordination of National Government was established by the Executive Order No. 1/2018 of June 2018 with an exclusive mandate to provide strategic direction and co-ordinate delivery of national priorities and flagship programmes to promote economic transformation for shared growth and progress of the country (GoK, 2018). The other Mandate of the Ministry is to collaborate with other National Government Ministries to collect and manage relevant primary data registers for Kenyan and foreign nationals for sustainable economic planning and development.

The National Treasury and Planning was established by the Executive Order No. 1/2018 of June 2018. The Ministry's mandate includes among others management and control of public financial operations, management systems and accounting standards (GoK, 2018). The National Treasury and Planning also manages formulation and implementation of the national budget and Kenya's macro-economic policies. Further, it facilitates planning,

coordination and mobilization of internal and external resources for funding budgetary requirements of National Government Ministries.

The Ministry of Foreign Affairs was created via Executive Order No. 1/2018 of June 2018 with a responsibility to advise, implement and steer Kenya's foreign policy on behalf of the Government. The Ministry coordinates regional peace initiatives to facilitate Kenyan's economic growth (GoK, 2018). Further, the Ministry oversees promotion and protection of Kenya's interest and image globally as well as support bi-lateral and multi-lateral relations. Additionally, the Ministry manages international protocol matters and provide consular services in Kenyan missions and embassies abroad. Moreover, the Ministry manages global issues affecting Kenyan citizens living in the diaspora.

The Ministry of Public Service and Gender was created through the Executive Order No. 1/2018 of June 2018 with a constitutional mandate to provide strategic policy direction on human resource management practices in National Government Ministries (GoK, 2018). The Ministry is responsible for career planning and development, internship and performance management. The Ministry is also responsible for implementation of Government payroll policy, payroll management standards and various public service delivery innovations. The Ministry oversees implementation and evaluation of public sector reforms and transformation including operational standards and process re-engineering. The Ministry is also undertakes HRMIS training and sensitization of employees across National Government Ministries in Kenya.

The Ministry of Information and Communication Technology was also created through the Executive Order No. 1/2018 of June 2018 with a functional mandate to develop and manage the information and communications sector, implement the national ICT policy and innovations, manage e-Government services and provide ICT technical-support to employees in National Government Ministries (GoK, 2016). The Ministry also has a

responsibility to promote the software development industry, manage the national communication capacity and ICT infrastructure as well as implement and monitor ICT-related projects in Kenya (GoK, 2018; GoK, 2019).

The Ministry of Education came to existence through the Executive Order No. 1/2018 of June 2018 with a responsibility to manage national policies and programmes in education. The Ministry has a mandate to facilitate access to quality, efficient, reliable, and affordable school education for sustainable economic growth and development. The Ministry oversees management of higher, technical and vocational education and academic research development in Kenya. Further, it provides an institutional framework that research and learning institutions can use to devise and implement workplace strategies for growth and improvement of skills of the Kenyan workforce (GoK, 2018).

Overall, National Government Ministries in Kenya are vital fundamental pillars for strengthening the country's economic development. The Ministries are the machinery through which the Government translates its macro-economic policies into effective innovative solutions for achievement of sustainable socio-economic and national development (GoK, 2007; AAPAM, 2005).

1.2 Statement of the Problem

In 2014/15, the Ministry of Devolution and Planning conducted a preliminary audit of Public Service payrolls under the auspices of Capacity Assessment and Rationalization of Public Service (CARPS). Findings of the report revealed massive irregularities in HR practices, which had serious implications on service delivery in National Government Ministries. The existence of ghost-workers workers and fraudulent or unaccountable payments were occasioning the bloated wage and pension bills (GoK, 2015).

Further, the CARPS report found that despite HRMIS implementation in National Government Ministries, there is lack of adequate ICT infrastructure, lack of

comprehensive ICT policies, slow recruitment processes, weak institutional capacities, poor performance evaluation mechanisms and weak financial controls, which could be hampering increase in productivity and organizational performance (GoK, 2017). The report also found that lack of implementation of HR audit findings and weak monitoring and evaluation of HR practices was contributing to the poor performance results (GoK, 2015). Moreover, while HR audits were predominant, they were infrequent.

A report by Salaries and Remuneration Commission on payroll management in National Government Ministries in Kenya revealed that even though they had an integrated HRMIS in place, there was widespread use of manual systems, a practise that should be discouraged to facilitate better performance outputs (SRC, 2019). The CARPS findings further confirmed that the existing staff establishment in the Ministries is not considered to inform decisions on recruitment of staff hence, exposing the malpractice in National Government Ministries.

HRMIS implementation was supposed to reduce usage of manual processes in information collection, retrieval, storage and dissemination. Further, HRMIS was supposed to help minimize irregular payments, reduce delays in updating employees' records and enable production of timely reports for informed decision-making. Additionally, HRMIS was supposed to amalgamate with other existing management information systems in Government like the Integrated Financial Management Information System (IFMIS), to enhance coordination and collaboration internally between departments and externally with clients (GoK, 2016).

However, the findings of the CARPS report have confirmed that HRMIS has not achieved its intended purpose despite its increasing functionality and affordability (GoK, 2015). Attempts to streamline core HRM processes appear to be achieving inadequate results despite the heavy investment by Government on internet connectivity infrastructure. The

uptake of HRMIS by most Ministries is minimal as majority continue to depend on traditional and manual HR practices.

Further, public trust has increasingly continued to diminish due to poor service quality. Incessant vices like corruption (blatant bribery, dishonesty) are regrettably routine and this has greatly deterred performance improvement in most public organizations (Hope, 2014). Additionally, poor institutional management and impunity to the rule of law have contributed immensely to an environment that has permitted these vices to increase to devastating levels. The ultimate consequence has been a compromise of the employees' integrity and professionalism while service quality has resulted in very low scores.

Extant empirical literature indicates that earlier researchers focused the direct relationship between HRMIS and organizational performance. Most studies were theoretical and largely based on specified backgrounds, sites, samples or subjects in the developed nations (Ngai & Wat, 2006). Majority were restricted to hospitals, universities or banks in different parts of the world. While some studies may appear to be comparable to the current study in terms of methodology, there is need for more research for generalizability of findings. Few studies have operationalized and measured the moderator and mediator variables and highlighted their significant influence on performance of organizations (Midiwo, 2016). However, there is need to undertake a study in the context of National Government Ministries in Kenya to fill this apparent research gap.

1.3 Research Objectives

1.3.1 General Objective

The main objective of this study was to analyze the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County, Kenya.

1.3.2 Specific Objectives

- (i) To establish the relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County.
- (ii) To determine the relationship between e-Training and performance of selected National Government Ministries in Nairobi City County.
- (iii) To explore the relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County.
- (iv) To evaluate the relationship between e-Payroll and performance of selected National Government Ministries in Nairobi City County.
- (v) To analyze the relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County.
- (vi) To examine the moderating effect of Government policy on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.
- (vii) To establish the mediating effect of service delivery on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.

1.4 Research Hypotheses

- (i) H₀₁: There is no relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County.
- (ii) H₀₂: There is no relationship between e-Training and performance of selected National Government Ministries in Nairobi City County.
- (iii) H₀₃: There is no relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County.
- (iv) H₀₄: There is no relationship between e-Payroll and performance of selected National Government Ministries in Nairobi City County.

- (v) H₀₅: There is no relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County.
- (vi) H₀₆: Government policy has no moderating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.
- (vii) H₀₇: Service delivery has no mediating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.

1.5 Significance of the Study

The significance of the study are summarized as follows:

1.5.1 Policy Significance

The findings shall assist HRM managers in developing and implementing policies that are geared towards enhancing sustained use of human resource management information systems (HRMIS) to improve automation of government services through information technology (IT). This will reduce the possibility of inefficiencies arising from low HRMIS usages, as it will assist employees in National Government Ministries to provide efficient and reliable services.

1.5.2 Practical Significance

The study findings shall help senior management to identify their manpower requirements so as to enable National Government Ministries achieve their long term strategic plans and organizational goals. The study will also guide HRMIS designers and programmers to develop sustainable and dependable information systems that will support various HRM practices such as human resource planning, staffing, compensation programs, performance management and organizational communication. This will help enhance operational efficiency, staff productivity and organizational performance

1.5.3 Theoretical Significance

The theoretical and empirical findings of this study shall be useful to other scholars who shall be interested to develop new knowledge or better understanding on human resource management information systems and organizational performance. This shall be achievable through incorporation of other research methodologies to provide broader insight on topic.

Further, the human capita theory shall help policymakers and researchers to understand the quality of education and training that is vital for achieving desired outcomes such as greater productivity and increased levels economic growth. It shall also be useful for answering questions about costs and benefits for investments in education and the types of policy interventions that can reduce individual costs associated with educational investments.

1.6 Scope of this Study

The study was conducted at the headquarters of 6 selected National Government Ministries situated in Nairobi City County, Kenya. The study focus was on National Government Ministries because they are key players in the public sector and control government businesses in Kenya. Therefore, poor implementation of national government programs or lack of adherence to any government policy can appropriately be traced to the personnel actions or inactions in the selected Ministries.

The philosophical foundation of the study was positivism. The main theory anchoring the study is the resource based view theory. Other theories included the technology acceptance model, human capital theory and Goal Model Approach. The study used a quantitative research design using a cross-sectional survey. Target population was 162 employees (49 top managers, 90 mid-level managers and 132 operational staff) drawn from HRM, ICT and Finance departments. These employees manage HR matters in the selected

Ministries. Proportionate stratified random sampling was used where the employees were slotted into groups and then randomly picked in order to equally participate in the study. Yamane's formula for sample size determination was used to select a sample of 162 out of 271 employees from selected Ministries in Nairobi City County.

Primary data were collected using self-administered questionnaires. Reliability of the research tool was verified by a test re-test method while supervisors conducted validity. Data collection process took two and a half months. The study also the moderating (government policy) and mediating (service delivery) variables and underscored their positive influence on organizational Performance of Selected Ministries. Descriptive and inferential statistics were computed to describe the characteristics of each study variable. Multiple regression analysis and correlation coefficient were used to establish causal relationships between the hypothesized variables and performance of selected Ministries. Content analysis was used to obtain views on the topic from different respondents.

1.7 Limitations of the Study

Firstly, the current research was restricted to six selected National Government Ministries located in Nairobi City County. The respondents of the study live in Nairobi County, which makes it difficult to generalize the research findings to other Counties Kenya. Moreover, the findings are specific to six-selected National Government and therefore cannot be used for generalizability. However, these limitations should not be assumed to have compromised the final study findings.

Secondly, there exist few studies on HRMIS and performance of public organizations, including National Government Ministries in Nairobi City County, Kenya. The main limitation was obtaining relevant secondary data in this area of study. Besides, accessing relevant publications and online materials on National Government Ministries in Kenya was complicated, as most publications contain limited and confidential information.

Furthermore, some official websites contained sparse information on the topic. To mitigate this challenge, the researcher used comparable studies conducted in developed and developing nations on HRMIS and organizational performance to try to infer the study results.

Thirdly, this was a descriptive cross-sectional study, which adopted the positivism philosophy. Primary data were picked from a sample to draw inferences about that population. Besides, questionnaires were used only once to assess the views of respondents on HRMIS and performance of selected National Government Ministries. However, this approach may not have been sufficient to obtain adequate information on topic. Therefore, future researchers should undertake a longitudinal study using different methodology (research design, models, tools), to establish the causal link more explicitly.

Lastly, some respondents were reluctant to participate in the study for fear that the information divulged would be used against them. To mitigate this challenge, the researcher guaranteed the respondents that the study was strictly for educational purposes. Others felt that filling the questionnaire would take a lot of their time hence may not have tackled it comprehensively. To mitigate this challenge, unclear parts of the tool were clarified and respondents given enough time (up to two weeks) to fill the instrument, which yielded in collection of adequate and reliable information for the study.

1.8 Organization of the Study

This thesis is divided into five chapters. Chapter one outlines the background of the study on organizational performance, human resource management information systems (HRMIS), Government policy, service delivery and National Government Ministries in Kenya. The chapter further discusses the statement of the problem, research questions, hypotheses, significance, scope and limitations of the study. The chapter ends with the organization of the study.

Chapter two covers the theoretical foundation upon which the current research is based on by reviewing the relevant empirical literature on HRMIS and organizational performance. The empirical review and identified research gaps are presented in a table for ease of interpretation. Further, the key variables used in this study, which include e-Recruitment, e-Training, e-Appraisal, e-Payroll, e-Communication, Government policy and service delivery are discussed and summarized using a conceptual framework.

Chapter three presents the methodology used in the study, that is the research design, philosophy, operationalization and measurement of variables, target population, sampling design and procedure, validity and reliability of the research instruments, data collection procedures and instruments, data analysis and presentation, diagnostic tests, empirical models, hypotheses testing, and finally the ethical consideration in the research.

Chapter four outlines the research findings and along with the discussions on response rates and respondents demographic characteristics, descriptive statistics, inferential, regression and content analysis, which are presented in form of tables and narratives.

Chapter five presents the summary of the main findings of the study and conclusions. It also outlines its contribution to body the of knowledge, policy recommendations of the study as well as suggestions for further study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews the theoretical and empirical literature on human resource management information systems (HRMIS) and organizational performance. It begins with a review of two (2) theories and two (2) models popular in information systems and organizational performance. It is followed by an empirical literature review on the main variables used in the study namely: dependent (organizational performance of National Government Ministries in Kenya), independent (e-Recruitment, E-Training, e-Appraisal, e-Payroll, e-Communication), moderator (Government policy) and the mediator (service delivery). Finally, a summary of empirical review and subsequent identified research gaps that were linked to the research problem. The chapter ends with the conceptual framework of the study.

2.2 Theoretical Review

The study was founded on two (2) theories and two (2) models namely: the Resource Based View (RBV), Human Capital Theory (HCT), Technology Acceptance Model (TAM) and Goal Model Approach. The above theories were preferred in the study since they are essentially associated with business management research. The main theory anchoring the study is the Resource Based View (RBV) theory. The theoretical review of the study is summarized as follows.

2.2.1 Resource Based View Theory

Penrose (1959) espoused the resource based view (RBV) theory of the firm. In her seminal work, the author adopted the RBV approach as a strategic managerial framework to determine that internal resources of a firm can be exploited to achieve a sustainable competitive advantage. Additionally, Penrose (1959) stressed that RBV should be used to analyze and understand the internal resources of the organisation to enhance a firm's

performance and optimal growth. The Penrosian approach heavily influenced Wernerfelt (1984) and Teece (1982) in their earlier seminal papers.

According to Wernerfelt (1984), the optimal growth of a firm involves a balance between use of existing internal resources and development of new ones. Teece (1982) in his influential insights on RBV mentioned that the internal resources of a firm could be re-deployed to allow the firm's diversification into new products and services.

Barney (1991) in his pivotal work on RBV alluded that firm's internal resources (assets, capabilities, processes, structures, systems, information, knowledge and firm attributes) can be exploited to achieve sustained superior returns, relative to that of competitors. Further, he pointed out that for the available internal resources to hold potential as sources of sustainable competitive advantage, they must be valuable, rare, unique and not substitutable as compared to potential competitors. According to the RBV theorist, a firm must develop inimitable and specific internal resources (assets, competencies, capabilities) that can allow it to outperform possible rivals by doing things differently. These resources are the strengths that a firm can use to develop and implement value-creating strategies to enhance firm performance.

According to Barney, Della Corte, Sciarelli and Arikan (2012), for an organization's resource to create an advantage, it must be rare (not easily copied by any other firm); valuable (vital to enable performance improvement in the firm); unique (not easy to imitate due to its complexity) and non-substitutable (not easily replaceable by other substitutes). HRMIS is an internal resource that helps a firm to improve performance in order gain a competitive advantage against its competitors (Wernerfelt, 1984).

It is important therefore that HRMIS should possess the qualities that RBV puts forward as increasing organization competitiveness. HRMIS is valuable when it has the right kind of equipment, which includes high-rated power back-ups, sophisticated servers and

storage devices. Further HRMIS should have a redundant link to control the system's downtime in order to serve the growing demand of end-users, without compromising on speed and information security (Zafar & Clark, 2009; Wong & Thite, 2009).

HRMIS should also be rare and difficult for competitors to imitate in order to guarantee a competitive advantage (Porter, 2012; Sarwar, Awan & Nazir, 2013). Similarly, HRMIS needs to be secure from computer threats such as hackers and viruses. Given the confidential nature of data in organizations, HRMIS access must be restricted to authentic users to prevent unauthorized access to information (Kavanagh & Thite, 2009; Hussein, 2012). Moreover, organizations should ensure that data captured on HRMIS is accurate and relevant to enhance consistency and confidentiality.

However, one limitation of RBV theory is that what is considered as rare, valuable, unique and non-substitutable internal resource may not always remain so in the business scenario. Besides, the RBV theory only applies to certain specific environmental conditions, which if they are not fully met, the competitive advantage is not sustained and it fades in a relatively short term (Caldas, 2010).

The RBV theory is vital in this study will help to analyze the value of HRMIS and its role in improving performance of the selected National Government Ministries. If HRMIS were utilized appropriately, can help improve staff productivity, job satisfaction and overall organizational performance. Further, the RBV theory was used to support HRMIS, which needs to be valuable, inimitable and non-substitutable to add to firm performance and competitive advantage. The theory is applicable since it highlights the direct relationship between HRMIS and organizational performance.

2.2.2 Human Capital Theory

Becker (1994) championed the Human Capital Theory (HCT). The theory suggests that when organizations training employees to acquire the prerequisite competences, this helps to raise their productivity which in turn translates into greater economic returns such as higher incomes and increased lifetime earnings Becker (1994). Mincer (1974) posits that an employee's formal education or training determines their earning power and helps them develop certain skills to help enhance their productivity levels and growth.

Olaniyan & Okemakinde (2008) added that education is vital to a nation's economic gains as citizens can benefit from a highly educated workforce. Organizations on the other hand, can yield to returns on investments (Psacharopoulos, 1994; Cohn & Addison, 1998). Education enables organizations to manage challenges posed by dynamic technological advancements (Noe, 2010; Obeidat, 2012; Rajasekar & Khan, 2013).

Forman education and training are very instrumental and necessary to improve the productive capacity of a workforce. Organizations therefore, need to educate or train their employees to enable them attain requisite knowledge, skills and competences to perform the assigned tasks efficiently (Karikari, Boateng & Ocansey, 2015; Wild, Chambers, King & Harris, 2012). A workforce's skills, life experiences and higher levels of education are expected to yield to greater productivity, which ultimately translates to increased economic gains in terms of higher wages and Gross Domestic Product (GDP) growth hence promoting both individuals and society as a whole (Hatch & Dyer, 2004).

However, a major limitation of the human capital theory is that it assumes that education and training determine productivity, but it provides little insight into the processes through which formal education is translated into higher individual wages and earnings in the workplace (Eide, & Showalter, 2010).

Therefore, it is instrumental for policymakers to consider alternative frameworks in conjunction with human capital theory to adequately understand the link between education and economic returns such as higher wages. Higher levels of educational attainment and skills provide an economic value because a knowledgeable workforce can lead to improved productivity and higher wages across the board (Hanushek & Wosmann, 2010).

The human capital theory was used in this study to help show how National Government can improve performance equipping employees with requisite knowledge, skills and competences. Consequently, there is need to invest considerably on educating and training their employee to earn Return On Investment (ROI) and in the long run, enhance productivity and organizational performance.

2.2.3 Technology Acceptance Model

Earlier scholars have confirmed a number of factors that influence user acceptance and intentions to use new information technologies in organizations. Davis (1989) first developed the Technology Acceptance Model (TAM). The model is the most extensively used in management research to explain behaviours, intentions and attitudes behind acceptance and use of information technology/information systems (IT/IS).

Extant research has revealed that TAM is a modification of Fishbein and Ajzen's Model of Reasoned Action, which concentrated on consumer intentions and behaviours and hence received considerable attention in the 1980's (Sheppard, Hartwick & Warshaw, 1988). In particular, the model by Fishbein and Ajzen (1975), not only predicted consumer intentions and behaviours appropriately but also provided a relatively simple basis for identifying where and how to target consumers' behavioural change attempts. Over time, the Reasoned Action Model though had some limitations due to its generality and context, has been recognized by subsequent researchers (Sheppard, Hartwick & Warshaw, 1988).

The consumer intentions and behaviours in the Reasoned Action Mode were substituted with perceived usefulness and perceived ease of use as advocated by the TAM. The Technology Acceptance Model is designed to measure the adoption of new technology based on customer behaviours, intentions and attitudes. The model tries to predict and explain system use for both vendors and IT managers (Suh and Han, 2003).

A study by Venkatesh and Bala (2008) set forth three major determinants of adoption and utilization of information systems, which included accessibility (user-friendliness), usefulness (suitability, convenience) and acceptance (ease of use). According to Davis, Bagozzi & Warshaw (1989), accessibility (user-friendliness) is the extent an end-user believes that using a new information system would increase their productivity. The more a user finds an information system easier to use, the more they will operate it with ease.

A research by Abdulah, Wahab, Shamsuddin and Hamid (2013) interpreted usefulness (suitability, convenience) as the point that an end-user perceives that using the information system is useful to their job and would enable them to accomplish assigned tasks more quickly and efficiently. According to Zhu and Kraemer (2005), usefulness depends on perceived benefits that the end-user derives from using the new information system. When they perceive that using the information system would enhance their efficacy on the job, then they become eager to adopt and use it.

Venkatesh and Bala (2008) understood acceptance or ease of use to denote the point that an end-user recognizes that using the new information system would be easy, fast, and free from any effort. Acceptance also denotes the ability by a user to use the information system to perform the assigned tasks efficiently and effectively. Ease of use can lead to employee satisfaction and improved productivity. However, an individual's attitude is can affect the acceptance or rejection of a new information system hence influencing performance positively or negatively.

Many organizations across the world have invested in information systems implementations to support management of HR processes. It is worth noting that the end-users determine use of the existing IS in organizations (Davis, Bagozzi & Warshaw, 1989). Thus, information systems if appropriately utilized can enhance performance gains in organizations. However, these information systems do not improve performance of organizations if users fail to use them optimally. Besides, organizations need to evaluate intentions or motives behind user acceptance or rejection.

However, the Technological Acceptance Model (TAM) has some limitations. While TAM helps to understand users' behaviours, intentions and acceptance of new technology in organizations, it does not explain the change in attitude and behaviour especially in the context of HRMIS (Chandio, Burfat, Abro & Naqvi, 2017). To address its shortcoming in the study, the model was enhanced to incorporate earlier studies for a broader view.

The TAM theory was adopted in the study to show how HRMIS acceptance by managers and employees in National Government Ministries can improve organizational performance. However, the level of user-acceptance may not result in equally good results in all Ministries since different employees have different behaviours and attitudes, which can affect performance of the organizations.

2.2.4 Unified Theory of Acceptance and Use of Technology Model

Venkatesh, Morris, Davis and Davis (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT) Model. The model has over the years been used extensively by different researchers to expound on behaviour and intent to accept use of information technology/information systems (IT/IS). Venkatesh, Morris, Davis and Davis (2003) combined eight theoretical models to explain the individual acceptance and usage intention of IT. They include the Theory of Reasoned Action, TAM, Personal Computer Usage Model, Motivational Model, Innovation Diffusion Theory, Social Cognitive

Theory, Planned Behaviour Theory, and Combined TAM and Planned Behaviour Theory (Ayaz & Yanartas, 2020).

The model consist of four determinants that directly affect behaviour and intention to use IT/IS namely Performance Expectancy (PE), Social Influence (SI), Effort Expectancy (EE) and Facilitating Conditions (FC). In addition, the model includes four intermediate individual variation variables such as age, gender, experience and voluntariness of use, which predict the intentions to use IT/IS (Venkatesh, Morris, Davis, & Davis, 2003). According to the existing empirical research, the Facilitating Conditions (FC) are identified as the key determinants of adopting user acceptance and usage behaviour IT/IS.

The UTAUT model has evolved over the years and many researchers have tested it to explain behavioural intention to use IT/IS. Extensive research has revealed that employees can show a positive attitude towards a system only if it satisfies their Performance Expectations (PE) and Effort Expectations (EE). Further, the Facilitating Conditions (FC) helps to create an increasing Social Influence (SI), among users hence affecting the intent to use the IT/IS (Chao, 2019; Thomas, Singh & Gaffar 2013; Dwivedi, Rana, Tamilmani & Raman, 2020; Li & Zhao, 2020; Ayaz & Yanartas, 2020).

In this study, the model was used to explain the factors affecting the behaviour and intent to use information systems and information technology (IT/IS) in National Government Ministries in Nairobi City County. The research aimed to verify the factors affecting the users' behaviour and intent to accept use of HRMIS to improve organizational performance. However, the slow and sometimes inaccessible system due to poor internet connectivity, lack of ICT infrastructure, equipment (computers), regular training and office space were other factors affecting intent to use the HRMIS. Therefore, management should allocate sufficient funds on HRMIS to improve its usage for realization of better organizational performance.

2.2.5 Goal Model Approach

A number of authors have attempted to highlight the inherent complexity in the effectiveness theory (such as Price, 1968; Perrow, 1970; Quinn and Rohrbaugh, 1983; Weese, 1997). These theorists have postulated five approaches to measuring organizational effectiveness. They include the Goal Model, System Resources Model, Process model, Multiple-Constituency Model and the Competing Values Approach (Chelladurai 1987, Shillbry & Moore, 2006).

For purposes of this study, the researcher adopted the Goal Model Approach, which is considered an ideal theory for identification of goals to measure organizational performance. According to Weese (1997), the Goal Model Approach is the most widely used assesses the effectiveness of an organization in terms of its success in realizing its intended goals (Price, 1968). The goal model approach defines effectiveness as the degree to which an organization has achieved its goals (Rojas, 2000).

As revealed by existing research, the goal approach has its weaknesses. The most common limitation is the reality that an organization may have numerous goals that may conflict with one another (Weese, 1997). Unclear, unstable and conflicting goals makes it very difficult to measure organizational effectiveness. Another drawback is that an organization's goals (mainly the short-term operative goals) may shift over time due to competition or external pressures (Steers, 1975).

However, despite limitations, the Goal Model Approach has evolved following extensive research by different scholars. Herman and Renz (2004) opined organizations should, continually set known goals to achieve organizational effectiveness and a sustainable. Empirical literature has shown that to remain viable and get a competitive advantage, organizations should set clear goals to increase productivity and organizational effectiveness (Sowa, Selden & Sandfort, 2004). When employees work without clear

communication on the set goals, they may not know the value they are adding to the organization. According to Herman and Renz (2004), clear communication and feedback on goals is vital for performance improvement and organizational effectiveness. Clarifying goals, expectations and individual roles have a greater impact on the achievement of those goals (Xavier, 2002).

However, the Goal Model Approach's main limitation is goal displacement, which may ensue owing to numerous goals that may conflict with one another hence hampering realization of the envisioned organizational goals (Steers, 1975). Further, short-term goals may shift over time due to restructuring, external competitive pressures, unclear goals or lack of consensus amongst line managers, thereby making it very difficult for the organization to achieve intended goals.

Another limitation of the Goal Model Approach is that some goals are way above an employee's knowledge, skills and competencies hence affecting their performance and motivation to complete them in a timely manner (Ashraf & Kadir, 2012). Another limitation is that there should be a general agreement on the specific goals and the people involved should feel committed to fulfilling them. Additionally, achieving them requires certain indispensable resources. Therefore, the goal model is seemingly appropriate only when certain conditions are met (Robbins, 2003).

The Goal Model Approach was used in this study to show that National Government Ministries can achieve expected organizational performance if they use available resources prudently (funds, human capital, HRMIS). Moreover, they should help individual employees acquire required skills to improve productivity and overall organizational performance.

2.3 Empirical Review

2.3.1 Recruitment and Organizational Performance

Ogohi (2019) conducted a survey to examine the impact of e-recruitment on organizational performance. The qualitative research targeted two Commercial Banks in Nigeria (Zenith and Fidelity Banks). Sample size was 137 employees. Data were collected using a questionnaire and analyzed using regression analysis and Pearson correlation. It was found that e-Recruitment process is efficient and cost-effective. It is a key determinant to achievement of organizational goals. Thus, HR officers must obtain the right employees for the right jobs. However, the findings focused on only two commercial banks in Nigeria, hence there is a need for more studies in a Kenyan context.

Adam, Ogolla and Maore (2017) conducted a research to analyze effect of recruitment on six registered organizations in Mogadishu, Somalia. The descriptive survey targeted staffs in agencies for the United Nations. The research used simple random sampling to pick the subjects. It was found that effective recruitment processes are important to any organization desiring to attract and appoint qualified employees. Moreover, screening applications and resumes were important in shaping an organization's performance. However, the study findings were limited to six United Nations organizations in Somalia.

Okeke-Uzodike and Subban (2015) conducted a research on the influence of recruitment process and organizational productivity in nine Federal Government Ministries and a Public Service Commission in Abuja, Nigeria. The study combined both quantitative and qualitative research methods. Data were collected from seventy-eight participants (lower, middle and top management levels), who conduct recruitment processes in Nigerian ministries. The study found that recruitment processes are key for organizational performance and competitiveness. However, the focus of the study was in a Nigerian context, hence lacks generalizability.

Abomeh and Iheabunike (2013) considered assessment of recruitment practice on organization performance. The descriptive survey was conducted in twelve hospitality organizational units in Abuja, Nigeria. The study targeted directors, managers and supervisors. Data were collected using a questionnaire. It was found that organizations should adopt appropriate recruitment processes that will attract the right quantity and quality manpower with the right knowledge, skills and altitude to steer the day to day operation of the business to achieve organizational goals. Conversely, the study narrowed its scope to hotels in Nigeria, thus its results may not be applicable to the current study. Further investigation is needed using Kenyan situation to obtain broad interpretation.

2.3.2 Training and Organizational Performance

Khan, Khan and Khan (2011) studied the impact of training and development on organizational performance. The descriptive survey sampled one hundred employees from different organizations in Islamabad, Pakistan. The study focused on job training, training design and delivery style. Secondary data comprised of comprehensive literature review. It was found that organizations need to allocate adequate resources for training while managers should develop apt programs to help identify staff with trained needs. Further, it was found that training improves productivity and organizational performance. However, the study focus was Pakistan, hence the results are not relevant in Kenya.

Rajasekar and Khan (2013) conducted a critical evaluation on training and development function in public sector organizations. The case study covered eleven public sector organizations in Omani, Saudi Arabia. Primary data were collected using interviews. The study found that e-Training decreases travel costs and is more flexible and convenient. However, only challenge was in implementing the changes. The study also found that e-Training was enabling organizations realize returns on investment. However, the findings of the research were narrowed to government organizations in Omani.

Hassan (2011) used a case study to survey the impact of employee training on performance of public sector organizations in Zanzibar. The research used purposive and stratified sampling techniques to pick twenty-five administrative staffs working in the Second Vice President's office. Data were collected using questionnaires, interviews and documentaries. Data were analyzed using content analysis. It was found that training should be planned and implemented effectively to enhance staff productivity and performance. However, the findings of the research were restricted to public sector organizations in Zanzibar.

2.3.3 Performance Appraisal and Organizational Performance

Mollel, Mulongo and Razia (2017) conducted an empirical research on perception of public service employees on performance management in Muheza District, Tanga Region, Tanzania. The study targeted 2232 employees and a sample of 339 was randomly selected. The study used questionnaires and interview to collect data. It was found that managers and supervisors should strive to maintain appraisal reports to assist in decisions on promotions or demotions. Such understanding whether employees are satisfied or dissatisfied with their work can help to retain potential employees, lower absenteeism and turnover rates. It was also found that there is need to keep the HR scorecard to help measure, manage and improve the strategic role of HR department and account its influence on organizational performance. However, the study was restricted to the public service Ministries in Tanzania.

Njeje, Chepkilot and Ochieng (2018) explored the effect of e-Appraisal and organization performance of eighteen Sacco's in Kenya. The descriptive survey was cross-sectional and used purposive sampling to select 54 employees in the HR department. Questionnaires were used to collect data. The study was anchored on TAM theory. Data was analyzed using correlation, descriptive and inferential statistics.

It found that organizations should improve on management of data on appraisals to identify high-performers, under-performers and categorize individuals with development and training needs. Further, organizations should develop appropriate framework on performance management to obtain accurate analysis on productivity levels. Nonetheless, the study's focus was on Sacco's and hence findings may not be relevant in a Kenyan context.

Al-Raisi, Amin and Tahir (2011) conducted a research on evaluation of e-performance analysis and assessment in the United Arab Emirates (UAE) organizations. The descriptive survey was conducted in the United Arab Emirates. The research used questionnaires and interviews to collect data. The study was founded on TAM theory. Data were analyzed using descriptive and inferential statistics. It was found that supervisors should regularly record appraisal reports on staff performance to boost productivity and improve organizational performances. Further, it was found that performance appraisal reports contain personnel actions that affect the status of individual employees regarding salary review, promotion, demotion, retention, termination or even identification for training programs. Conversely, the research was restricted to federal organizations in UAE and hence decreases generalizability of the findings.

2.3.4 Payroll and Organizational Performance

Palladan and Palladan (2018) conducted a qualitative research on employees' views on payroll computerization and its impact on their productivity. The descriptive study adopted a grounded theory approach. The research targeted eleven bursary staff selected from three different institutions in Gombe, Nigeria. A purposeful sampling was adopted. Four payroll staffs and seven non-payroll staffs were interviewed. The study found that use of e-Payroll has simplified salary calculations and expedited payroll processing in Nigerian tertiary institutions.

Besides managers are enabled payroll managers to maintain attendance data and salary payment information for future reference. However, the research was restricted to Nigeria. Therefore, there is need for a longitudinal research using quantitative methods to allow higher levels of expression of the participant's views.

Sam, Hoshino and Tahir (2012) surveyed the e-payroll system in Small and Medium Enterprises in Melaka, Malaysia. The descriptive study sampled one hundred and thirty-four Chief Executive Officers from selected districts of Melaka Tengah, Alor Gajah and Jasin. Data were collected using questionnaires. Data were analyzed using descriptive statistics, Anova, correlation and regressions. The study found that e-payroll provides accurate and comprehensive information to help managers make informed decisions. However, the study was restricted to the manufacturing sector in Malaysia hence the findings cannot be generalized to suit a Kenyan perspective.

Abdulah, Wahab, Shamsuddin, and Hamid (2013) conducted a study on acceptance of computerized payroll system among small and medium enterprises managers. The study was founded on the TAM theory. The research was descriptive. Forty managers were targeted for the study. Data were collected using questionnaires and analyzed using descriptive statistics, Spearman correlation coefficient and chi square. It was found that e-Payroll reduces errors associated with traditional and manual systems. It decreases payroll-processing time and can generate timely payslips. Moreover, it generates and stores information on salary payments, employee personal details and attendance data. The monthly payroll records (such as salary increments, effecting promotions, allowances, arrears payments, bank loans and Sacco loans earnings and deductions, among other payroll aspects) can be saved, stored and retrieved to facilitate quick decisions on personnel actions.

The outstanding feature is that the study was limited to a Malaysian environment. A similar study is essential in a Kenyan context due to variant factors such as organizational size, environment and participants characteristics.

2.3.5 Communication and Organizational Performance

Femi (2014) surveyed the impact of communication on workers' performance in four selected private organizations in Lagos State, Nigeria. The research design was a descriptive survey. Data were collected using a questionnaire. Sample size was 120 respondents who were picked using stratified random sampling technique. Data were analyzed using both descriptive and inferential statistics. It was found that effective communication succeeds when employees are engaged and willingly involved on issues of importance, which increases their job satisfaction and commitment. When employees are informed about organizational goals and their involvement in achieving them is recognized, this feedback plays a vital role in increasing workers performance and organizational productivity. However, the study was restricted to Nigerian private organizations, which limits its generality.

Hansma and Elving (2008) assessed the role of top managers and supervisors in communicating organizational change in government and non-governmental organizations in Netherlands. The research targeted 2 organizations. The survey was qualitative. It was conducted through online communication to facilitate data collection. Sample size was thirty-seven participants. The study found that to communicate organizational change successfully, top managers and supervisors should seek the engagement of others to achieve organizational goals. Engagement implies a need for employee involvement in participative decision-making on the change program. When managers discuss about organizational changes with the employees, this makes them feel secure about their future in the organization.

Unlike the current study, the research was qualitative and limited to structures and systems in Netherlands. More research is necessary in Kenya.

Babatunde (2015) explored the importance of effective communication in public and private organizations in Lagos, Nigeria. This was a qualitative research. Data were gathered using textbooks and journals. Data were analyzed using content analysis. It was found that HR managers need to engage employees to obtain necessary information for decision-making. They should also communicate the management decisions to employees to encourage commitment to organizational goals. However, this research was limited to work groups in both private and public sector organizations in Lagos, Nigeria. Due to these limitations, it may decrease the ability to generalize its results to suit other organizational settings including that of National Government Ministries in Kenya.

2.3.6 Government Policy and Organizational Performance

Chelimo and Ouma (2017) analyzed the effect of human resource policies on employees' performance in the banking sector, a case study of the Co-operative Bank of Kenya. The study focused on recruitment, appraisal and compensation policies. The study used a descriptive research design. Target population was three thousand employees in the management and non-management levels. Stratified random sampling was adopted to select a sample size of one hundred and twenty-three respondents. The study used an electronic questionnaire to collect data, which were analyzed using descriptive statistics. It was found that organizations should conduct regular compliance surveys to create awareness to new recruits and sensitize existing employees on government policy to ensure totality in compliance, consistency and application. Further, management should take disciplinary action on managers found to be unfair in their assessments to enhance ethical conduct and professionalism. However, the findings of the study were specific to the bank and hence may be relevant in the context of a government Ministry.

Kumar, Mehra¹, Inder and Khan (2014) conducted a study on human resource policies and practices for primary healthcare system in New Delhi, India. The descriptive research examined recruitment, training, performance, compensation and transfer policies. Target population comprised of health care providers, middle and top-level health managers. Data were collected using interviews. The study found that organizations should develop comprehensive government policy on HR to increase equity and compliance in recruitment, salaries, training and other privileges in organization. The study was restricted to facilities in New Delhi. There is need for a comprehensive research in a Kenyan context to enhance generalizability of the findings to other sectors and countries.

Harash, Al-Timimi, Alsaad, Al-Badran and Ahmed (2014) examined the dimensions of Government policy as a moderator on the relationship between contingency factors and performance of research & development activities in Universities. It was found that government policies have a direct impact on research & development activities as they contribute to superior performance. However, the study's findings were restricted to employees in the Ministry of Education in Iraq. More research is necessary in a Kenyan context to obtain relevant results.

2.3.7 Service Delivery and Organizational Performance

Masrurul (2019) undertook a survey on the impact of service quality and client satisfaction on the organization's performance. The study focused on the tourism industry in Chittagong, Bangladesh. Questionnaire were used for data collection. Convenience sampling technique helped sample one hundred respondents. Data were analyzed using descriptive, correlation and regression analysis. It was found that service delivery enhances client satisfaction, which translates to organizational success. However, the research focused only on the tourism industry. There is need for another study to obtain results that are relevant to a Kenyan National Government Ministry.

Swar and Sahoo (2012) explored the determinants of quality services in the banking industry in Odisha, India. The research used questionnaires to collect data from six hundred bank customers and one hundred and twenty-five employees were selected on judgmental basis. The study found that it is necessary for management to interaction with employees regularly to evaluate their experiences for effective service delivery. However, further research is necessary in Kenyan environment.

Munhurrun, Bhiwajee and Naidoo (2010) investigated the extent of service delivery in road transport department, Mauritius. It was revealed that organizations should regularly sensitize their front-office employees to enhance their customer-service skills and enable them provide reliable services that meets or exceeds clients' expectations. Moreover, managers in organizations should ensure that when they promise to deliver a service within a promised time, they must fulfil the promise. However, the study was limited to the Mauritian public service and hence the result limits its relevance in Kenya.

Ali and Bisht (2018) conducted a comparative study to measure customers' satisfaction level in public and private banks in different parts of Uttar Pradesh, Northern India. The study used questionnaires to collect data from 200 customers who were drawn from the rural areas. The study adopted the SERVQUAL dimensions. It was found that tangibility and empathy are the other factors that enhance satisfaction among clients. However, the study was restricted to India and hence the results are specific to the banking institutions.

2.3.8 HRMIS and Performance of Organizations

Kyama (2010) assessed the status of Human Resource Management Information Systems (HRMIS) implementation in the Ministry of Gender and Community Development in Lilongwe, Malawi. The study adopted a descriptive survey. Data were collected in twenty-eight districts using interviews and discussions. The study focused on recruitment, payroll, performance management and pension, among others HR practices.

The study found that there is need to adopt HRMIS to facilitate proper HR planning and improved service delivery. However, the study was qualitative and focused on one Ministry. Hence, the different background makes the findings cited specific to the Ministry.

DeVries, Kiarie and Wakibi (2016) evaluated the influence of HRMIS in the Ministry of Health and Social Work in Swaziland. The study used interviews to collect data. The study findings revealed that while HRMIS enhances accessibility, accuracy and transparency of data, use of the system was minimal in the Ministry due to lack of an integrated HR data storage and unlinked information systems. The study was qualitative and focused on a single Ministry. Further research is necessary in a Kenyan context to obtain a broader analysis.

Khashman (2016) empirically investigated the link between HRMIS and performance of organizations. This study was conducted in 39 private hospitals in Amman, Jordan. The study adopted a descriptive approach. It was found that HRMIS enhances business operations and provides timely information for quick decision-making. However, the study was not undertaken in Kenya. Hence, the conclusions may only be relevant to the thirty-nine private hospitals in Amman, Jordan.

Midiwo (2016) assessed the influence of HRMIS on performance of three Kenyan public universities. The research was descriptive. The study used qualitative and quantitative data. Stratified and simple random sampling techniques were used to identify staff for interviews. The study was founded on TAM, Servqual Theory and De Lone and McLean information systems success model. It was found that HRMIS generates timely data for quick decision-making. Although the study used some comparable variables, the findings cannot be assumed to suit National Government Ministries in Nairobi City County.

Further, the study did not examine the moderating effect and mediating effect on the causal link between independent and dependent variables hence the need to for further research to improve its statistical significance.

2.4 Summary of Empirical Review and Identified Research Gaps

Previous empirical studies on HRMIS and organizational performance were theoretical and mainly concentrated on European, American, Asian, and some African countries. Few studies have measured the moderator and mediator variables and addressed their effects on organizational performance. However, there is little or no empirical literature on HRMIS and performance of selected National Government Ministries in Nairobi City County, Kenya, hence the need to conduct this research to fill the knowledge gap.

Table 2.1: Summary of Empirical Review and Identified Research Gaps

Thematic Area	Author(s)	Purpose of the Research	Key Findings	Identified Knowledge Gaps
Recruitment	Ogohi (2019)	Survey on impact of e-recruitment on organizational performance of two Commercial Banks in Nigeria	E-recruitment process is cost-effective. It is reliable for identifying & retaining talented individuals in organizations	<ul style="list-style-type: none"> • Focused only on qualitative research • No mediator or moderator variables
	Adam, Ogolla & Maore (2017)	Analyzed the effect of recruitment on performance of 6 listed UN Agencies in Somalia	Use of effective hiring tools helps to recruit staffs with requires skills & competences	<ul style="list-style-type: none"> • Focused only on simple random sampling • No mediator or moderator variables
	Abomeh & Iheabunike (2013)	Appraised the impact of recruitment on performance of 12 hotels in Abuja, Nigeria	Type employees hired by an organization influences achievement of organizational goals	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on directors, managers & supervisors • No mediator or moderator variables

Thematic Area	Author(s)	Purpose of the Research	Key Findings	Identified Knowledge Gaps
Training	Khan, Khan & Khan (2011)	Understanding the effect of training and development, on the job training, training design and delivery style on organizational performance in Islamabad, Pakistan	Training helps equip employee with required skills to perform assigned tasks efficiently	<ul style="list-style-type: none"> • Focused only on job training, training design & delivery style • No mediator or moderator variables • Focused only on secondary data
Performance Management	Mollel, Mulongo & Razia (2017)	To explore the influences of performance appraisals on organizational performance of government employees in Muheza, Tanzania	Appraisal recognition increases job satisfaction & employee commitment to organizations	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on simple random sampling • No mediator or moderator variables
	Njeje, Chepkilot & Ochieng (2018)	Examine the effect of e-performance management systems on organization performance of eighteen Sacco's in Kenya	<ul style="list-style-type: none"> • Manage appraisals data to identify individuals with training needs • Develop appropriate framework to obtain accurate analysis on productivity levels 	<ul style="list-style-type: none"> • Focused only on quantitative research • Used only purposive sampling • Focused only on Sacco's & HRM Department • Focused only on TAM theory • No mediator or moderator variables
Payroll Management	Palladan & Palladan (2018)	Assess the views of employees on e-Payroll on productivity in 2 Universities in Gombe, Nigeria	Job satisfaction helps improve productivity & performance of employees	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on grounded theory approach • No mediator or moderator variables
	Sam, Hoshino & Tahir (2012)	Surveyed adoption of e-payroll system in SMEs in the manufacturing	Use of e-Payroll helps managers to make timely & informed decisions	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on

Thematic Area	Author(s)	Purpose of the Research	Key Findings	Identified Knowledge Gaps
		sector in Melaka, Malaysia		<ul style="list-style-type: none"> chief executive officers in three selected districts • No mediator or moderator variables
Organizational Communication	Femi (2014)	Surveyed the influence of communication on organizational performance of 4 private organizations in Lagos, Nigeria	<ul style="list-style-type: none"> • Effective communication creates mutual understanding between managers & employees • Poor communication affects employee performance due to confusion, unclear roles & duties 	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on stratified random sampling • No mediator or moderator variables
	Hansma & Elving (2008)	Assessed the influence of organizational communication on performance of government and non-governmental organizations in Netherlands	Successful organizational communication helps improve employees' performance & organizational productivity	<ul style="list-style-type: none"> • Focused only on thirty-seven participants • Focused only on quantitative research • Focused only on stratified random sampling • No mediator or moderator variables • Data were collected using online communication
Human Resource Management Information Systems (HRMIS)	Kyama (2010)	Assessed the status of HRMIS implementation in the Ministry of Gender and Community Development in Lilongwe, Malawi.	HRMIS facilitates proper HR planning & improved service delivery	<ul style="list-style-type: none"> • Focused only on quantitative research in one Ministry • Focused only on interviews & discussions • No mediator or moderator variables
	Khashman (2016)	Investigated the impact of HRMIS on performance of 39 private hospitals in	HRMIS enhances business operations & provides timely information for quick decision-making	<ul style="list-style-type: none"> • Focused only on quantitative research • Focused only on simple random

Thematic Area	Author(s)	Purpose of the Research	Key Findings	Identified Knowledge Gaps
		Amman, Jordan		<ul style="list-style-type: none"> sampling No mediator or moderator variables
	Midiwo, J. (2016)	To measure influence of HRMIS on performance of 3 Kenya public universities	HRMIS offers quality, accurate and reliable data to support quick decision-making	<ul style="list-style-type: none"> Focused only on TAM, Servqual theory & De Lone & McLean information systems model No mediator or moderator variables
Government Policy	Harash, Al-Timimi, Alsaad, Al-Badran & Ahmed (2014)	Examined the dimensions of government policy as a moderator on the relationship between contingency factors & performance of research & development activities in Universities, Iraq	Government policy has a direct impact on research & development activities, which contribute to the Universities' superior performance	<ul style="list-style-type: none"> Focused only on quantitative research Focused only on simple random sampling No mediator or moderator variables Focused only on research & development activities in one Ministry
Service Delivery	Masrurul (2019)	Surveyed the impact of service quality & client satisfaction on organization's performance	Provision of quality service enhances client satisfaction, which translates to organizational success	<ul style="list-style-type: none"> Focused only on qualitative data Focused only on the tourism industry in Chittagong, Bangladesh quantitative research No mediator or moderator variables
	Swar & Sahoo (2012)	Explored the determinants of quality services in the banking industry in Odisha, India	Management to interaction with employees regularly to evaluate their experiences for effective service delivery	<ul style="list-style-type: none"> Focused only on qualitative data No mediator or moderator variables Respondents were selected using judgement basis

Source: (Survey data, 2021)

2.5 Conceptual Framework

Figure 2.1 below presents a model depicting the relationship between the study variables.

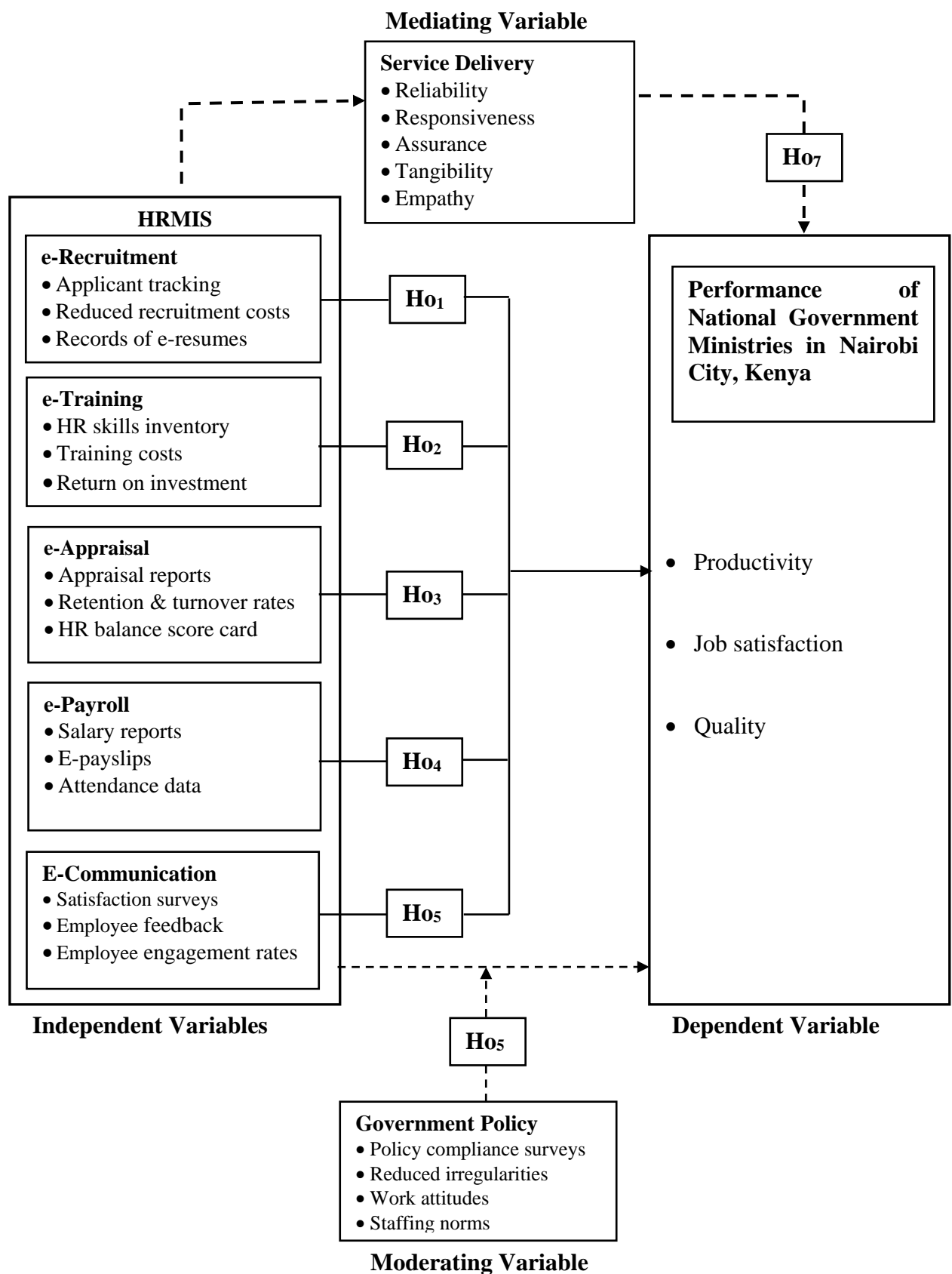


Figure 2.1: Conceptual Framework
Source: (Researcher, 2021)

The conceptual model shown in Figure 2.1 was founded on the arguments discussed in the empirical review section 2.3. The model is based on the research objectives and hypothesis outlined in section 1.3 and 1.4 of this report.

Secondly, the model evidently displays the different study variables and their influence on organizational performance. The framework shows that HRMIS (e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication) are the independent variables proposed to influence the dependent variable (performance of selected National Government Ministries in Nairobi City County) which were measured using efficiency, effectiveness, productivity and employee satisfaction. The hypotheses of the study were also developed and tested based on this model.

Thirdly, each study variable in the conceptual model has been discussed comprehensively in the empirical review section. Government policy was the moderating variable while service delivery was the mediating variable. The conceptual model is based on the integration of a number of theories that points out the relationship that may exist between HRMIS and organizational performance.

The theories that have been adopted to guide this study included the Resource-Based View (RBV) theory, Human Capital Theory (HCT), Technology Acceptance Model (TAM), Goal Model Approach, and the Unified Theory of Acceptance and Use of Technology (UTAUT) Model. The five theories have been explained broadly in the theoretical review section 2.2 of the current study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research method that was adopted in the study. The section provides the research design, philosophical foundation, operationalization and measurement of variables, target population, sampling design and procedure, sample size data collection instrument, validity and reliability of the research instruments, data collection procedure, data analysis and presentation, diagnostic tests, empirical model, hypotheses test and finally the ethical considerations.

3.2 Research Design

The study adopted a quantitative design using a cross-sectional survey. The design was preferred because it enabled the researcher to collect data from a large population and at a specified time (Dawson, 2002; Orodho, 2008). This yielded both qualitative and quantitative data. The approach also allowed the researcher to come up with answers to the questions of who, what, when, where, why and how of the population as recommended by Kothari (2008). Further, the researcher was able to report the way things are in the selected National Government Ministries. As suggested by Mugenda & Mugenda, (2013), none of the variables influenced the situation in any way, which helped to reduce on bias and increase reliability of the gathered information.

3.2.1 Research Philosophy

Research philosophy is the belief or assumption about the techniques in which data about a social phenomenon should be collected, analyzed and utilized to solve a problem. Research philosophy has many branches, which are linked to a wide-range of disciplines. The most commonly applied approach in social and management studies is the positivism philosophy. The choice of a philosophical approach enables the researcher to decide

which research methodology should be adopted and why, which is derived from the research questions (Saunders, Lewis & Thornhill, 2012).

The current study adopted the positivism philosophy. Under this philosophical approach, the positivist researcher follows a highly structured methodology to collect from large samples. The researcher can collect quantitative and qualitative data using surveys, direct observations or people's perceptions and experiences. However, the positivist researcher cannot manipulate respondents during the data collection process, as they are independent to the subject of the research.

Knowledge in this approach is deduced from developing theoretical models and hypotheses testing to provide data, which can be used for statistical analysis and further research. Further, the positivism philosophy assumes that efficiency or effectiveness or vice versa of an organization can only be discovered by evaluating the internal business processes and assessing employee behaviours or perceptions on a given social phenomenon to draw inferences (Hatch and Cunliffe, 2006).

In this study, employee behaviours and perceptions were assessed, theoretical models developed, and hypotheses tested to determine the causal relationship between HRMIS and performance of selected National Government Ministries. The study showed a positive relationship between HRMIS and organizational performance.

3.3 Operationalization and Measurement of the Study Variables

This research used organizational performance as the dependent variable, HRMIS as the independent variable, Government policy as moderating variable and service delivery as mediating variable. The variables were operationalized and measured as illustrated in Table 3.1

Table3.1: Operationalization and Measurement of the Study Variables

Variable	Nature	Operationalization	Measurement/Key Performance Indicators	Dimension/ Part in the Questionnaire
e-Recruitment	Independent variable	Attract, identify and appointing suitable personnel to support achievement of organizational goal	<ul style="list-style-type: none"> • Applicant tracking • Less recruitment costs • Database of e-resumes • Cost per hire 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part B
e-Training	Independent variable	Acquisition of skills and competences that result in enhanced productivity levels	<ul style="list-style-type: none"> • An updated HR skills inventory • Existence of training plans • Records of training costs • Records of trained staff • Improved efficiency & employee satisfaction 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part B
e-Appraisal	Independent variable	Improving the performance of employees through career development	<ul style="list-style-type: none"> • e-Performance appraisal reports • HR scorecards • Employees' turnover rate • Continuous monitoring, feedback to employees • Improved performance & productivity 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part B
e-Payroll	Independent variable	Regular internal payroll audits	<ul style="list-style-type: none"> • Timely processing of payroll & salary payment • Reduced payroll errors, duplications, frauds • Headcount and leave of absence reports • Compliance to statutory remittance - KRA, NHIF • Wage bill and personnel emoluments reports • Archived e-payslips • Payroll audit reports • Archived Payroll backups 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part B
e-Communication	Independent variable	Continuous coordination and dissemination of data and information in the Ministries	<ul style="list-style-type: none"> • Presence of online publications containing government policies, strategic plans, service charters, e-Newsletters, performance reports • Communication logs & surveys • Expenditure on HRMIS for maintenance, upgrades, ICT infrastructure & equipment, Wi-Fi, intranets, patents, trademarks, copyrights 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part B

Variable	Nature	Operationalization	Measurement/Key Performance Indicators	Dimension/Part in the Questionnaire
Government policy	Moderating variable	Continuous review and dissemination of Government policy manuals and guidelines on HRM	<ul style="list-style-type: none"> • Number of sensitization surveys on existing Government policies, norms & standards • Number of monitoring & evaluation of compliance to Government policy • Expenditure to: <ul style="list-style-type: none"> ○ Develop & review Government policies ○ Sensitize & conduct surveys on norms & standards ○ Conduct HR audits 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part C
Service delivery	Mediating variable	Extent employees are willing and committed to serve and respond to the needs of clients	<ul style="list-style-type: none"> • Reliability • Responsiveness • Tangibility • Assurance • Empathy 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part D
Organizational performance	Independent variable	Optimal use of available resources to transformation organizational activities to achieve key business goals	<ul style="list-style-type: none"> • Staff productivity • Operational efficiency • Communication effectiveness • Employee satisfaction 	<ul style="list-style-type: none"> • Statements to be measured using a 1-5 point scale • Part E

Source: (Researcher, 2021)

3.4 Target Population

The target population comprised of 271 employees working in 6 selected National Government Ministries in Nairobi City County (see Appendix V). The unit of analysis was one National Government Ministry while the unit of observation were 162 employees who included 49 top managers, 90 mid-level managers and 132 operational staff drawn from HR, ICT and Finance departments. The employees were specifically preferred because of the geographical distribution that helped determine effective HRMIS implementation, training and utilization.

The target population of the study is as presented in Table 3.2.

Table 3.2: Target Population

Levels of Management	Population	Percentage %
Top Management	49	18
Middle-level Management	90	33
Operational Staff	132	49
Total	271	100

Source: Human Resource office, State Department for Public Service and Youth (2021)

3.5 Sampling Design and Procedure

The research adopted stratified random sampling method. The researcher divided the entire population into 3 different sub-groups or strata, then randomly selected the final subjects proportionally in order to ensure that the sample would be a representative of the population and unbiased. As suggested by Mugenda and Mugenda (2013), the same sampling fraction was used for each stratum regardless of the differences in population size of the strata. Each stratum had an equal chance of being picked and represented in the study (Sekaran, 2003).

The proportionate stratified random sample was preferred in the study because it offers a high degree of accuracy and precision of the statistical samples. It allows the researcher to use different sampling methods on different sub-groups to obtain a representative sample (Best & Kahn, 2011). Further, stratified random sampling was employed because it has a blend of randomization and categorization, which enabled the researcher to collect quantitative and qualitative data in this study.

3.6.1 Sample Size

Yamane (1967) suggested the following formula for sample size determination:

$$n = \frac{N}{(1 + (Ne^2))}$$

Where: n = is the proposed sample size of the study, N = target population, e = the projected margin error at 5%, and e = is the calculated confidence level at 95%.

$$\begin{aligned}
 &= \frac{N}{(1 + (Ne^2))} \\
 &= 271 / (1 + (271 (0.05^2)) \\
 &= 271 / 1 + 0.6675 \\
 &= 162 \text{ Participants}
 \end{aligned}$$

The study adopted Yamane (1967) sample size formula, with a margin error of 5% and a 95% confidence level, which yielded 162 participants as illustrated in Table 3.3.

Table 3.3: Sample Size

Levels of Management	Population	Sample size
Top	49	29
Middle-level	90	54
Operational Staff	132	79
Totals	271	162

Source: Human Resource office, State Department for Public Service and Youth (2021)

The unit of observation were 162 participants who were drawn from the HR, ICT and Finance departments. They comprised of operational, top and middle-level management staff. The participants were preferred because they are knowledgeable about HR matters. Besides, the employees are best placed to provide a comprehensive feedback on HRMIS and performance of selected National Government Ministries in Nairobi City County.

3.6 Data Collection Instrument

Primary data in this research were collected using self-administered questionnaires. The self-administration questionnaire method was preferred because it facilitates fast and reliable responses from respondents. The questionnaires were structured into six parts, containing closed-ended questions.

Part A contained demographic characteristics of respondents. Part B contained HRMIS while Part C questions covered Government policy. Part D covered service delivery while Part E covered organizational performance of the Ministries. The questionnaires also had open-ended questions to provide extra views and suggestions.

3.7 Validity and Reliability of Research Instrument

The study conducted tests to measure validity and reliability of the research instrument to ensure its applicability and suitability.

3.8.1 Validity of Research the Instrument

Validity test refers to how accurately a research instrument measures what it claims or expects to measure (Kothari, 2008). A validity test is vital because it helps the researcher to determine what questions to use and to ensure that the questions accurately measure issues of importance in the research. To test validity, a pilot test was conducted to evaluate content validity of the study instrument.

Content validity was conducted to ensure that the questionnaires covered every variable under study. The raters who are scholars and supervisors at Kenyatta University undertook an evaluation of validity of the measuring instrument. These experts were knowledgeable and conversant with constructs of interest. Consequently, they recommended changes, which were incorporated to improve content of final instrument.

3.8.2 Reliability of the Research Instrument

Reliability test is the measurement of the stability, precision and consistency of questionnaires, interviews or survey results (Cooper & Schindler, 2008). A reliability test is important because it ensures the internal consistency of a research instrument is stable, relevant and dependable to yield similar results in case of repeated trials by different raters (Berg & Gall, 2013; Vogt, 2007).

In this study, internal consistency of the research instrument was measured using Cronbach's Alpha. The researcher conducted a pilot study using 15 participants and a questionnaire with 48 items, which had an overall Cronbach's alpha value (α) of 0.726. This was above the recommended value of 0.700 and therefore was considered adequate for the study.

The threshold for reliability testing of the instrument was informed by Cronbach's argument that an alpha value (α) equal to 0.5 or greater than 0.7 was enough to make inferences in research (Cronbach, 1951). The results of the pilot study are summarized in Table 3.4 below.

Table 3. 4: Results of the Reliability Test of the Research Instrument

Variable	No. of Items	Alpha (α)	Conclusion
e-Recruitment	7	0.677	Reliable
e-Training	6	0.735	Reliable
e-Appraisal	6	0.719	Reliable
e-Payroll	6	0.696	Reliable
e-Communication	6	0.650	Reliable
Government Policy	5	0.731	Reliable
Service delivery	6	0.760	Reliable
Performance of National Government Ministries	6	0.836	Reliable
Aggregate Score	48	0.726	

Source: (Pilot Test Data, 2021)

Table 3.4 shows Cronbach's Alpha was 0.726. This result was significant and it showed that data was reliable. As a measure and criterion related to reliability, results of the instrument were compared to earlier scholars such as Khashman (2016) who used a tool with an Alpha value (α) of 0.750 while Kaygusuz, Akgemci & Yilmaz (2016) got an alpha value (α) of 0.61. Consequently, the results indicate that study variables were within requisite criterion for reliability testing, hence were acceptable for further analysis.

3.8 Data Collection Procedures and Instruments

Data collection procedure began by obtaining approvals from National Commission for Science, Technology and Innovation (NACOSTI) and a letter of introduction from Kenyatta University. Further, the researcher sought formal authorization from the management and consent from respondents to collect data from the six selected National Government Ministries in Nairobi City County. The respondents were picked from HRM, ICT and Finance Departments using stratified random sampling method.

The study adopted both primary and secondary data collection methods. Primary data was collected using self-administered questionnaires while secondary data were obtained through books, journals (magazines, newsletters), articles, web pages and government publications (records, annual reports, strategic plans, among other relevant official documents). The researcher also consulted empirical works of other scholars.

The study used three research assistants who were informed on the ethics of research for the purpose of this study. Each research assistant was allocated two out of the six selected National Government Ministries. The one hundred and sixty two (162) questionnaires were self-administered to respondents using the drop-and-pick later method. The completed questionnaires were picked after about two or three days to ensure high acceptance and response rates. The researcher did follow-ups via regular visits and telephone calls. Data collection process and analysis took about two and a half months.

To complement the primary sources, the study collected qualitative data using open-ended questions. The aim was to get additional information that could not be captured by the researcher using self-administered questionnaires (closed-ended questions). Open-ended questions were processed using themes as suggested by Sultana, Rashid, Mohiuddin & Mazumder (2013). Seven themes were identified to interpret meaning from the content of text data and summarize responses to draw inferences.

3.9 Data Analysis and Presentation

After collecting data from the field, the initial manual editing and coding of quantitative data was done to ensure the raw data was accurate and relevant for analysis.

3.9.1 Quantitative Data

The study used closed-ended questions to collect quantitative data. The data were analyzed using descriptive statistics, Anova and Pearson correlations. Inferential statistics analyzed using SPSS version 21 and Ms-Excel 2010. Inferential statistics such as regression equations were calculated at an estimated 0.05% significant levels. P-values helped to determine significance of the hypothesized relationships of the variables under study. The results of quantitative data were presented using tables containing mean scores, standard deviations and percentages to for easy of interpretation.

3.9.2 Quantitative Data

Qualitative data on the other hand, were analyzed using content analysis. Content analysis is a research tool used to determine the presence, meanings of certain words or concepts within a given set of qualitative data (Hsieh & Shannon, 2005). In this study, comparable response data were summarized in specified content categories (patterns or themes). The coded categories were then operationalized based on the literature review adopted from the study variables (Ary, Jacobs & Sorensen, 2010). Thematic coding was considered because helps to shorten text data into themes to draw inferences about a population or subject of interest as suggested by Ryan & Bernard (2003). The results of qualitative data were presented in form of a continuous narrative.

3.10 Diagnostic Tests

Several diagnostic tests namely normality, linearity, multicollinearity, heteroscedasticity and autocorrelation were conducted to verify suitability of data and check the assumptions underlying linear regression models as suggested by Hair, Black, Babin and Anderson (2010).

Normality test was conducted to verify whether distribution of residuals in the regression model were normal. According to Santoso (2010), a normality test establishes whether residuals behave normally hence should be performed before any conclusions about the normality of data. As suggested by Field (2009), if the p-value is found to be greater than 0.05 ($p > 0.05$) and the statistic ranges from zero to one, then the residuals have a normal distribution. To check if data in the regression model followed the normality assumption test, the study used Shapiro Wilk test.

Linearity test was conducted to verify whether a linear relationship exists between the variables in the regression model. To check if data in the regression model met linearity assumption test, the study adopted Pearson's Correlation Coefficient as suggested Yount (2006). Non-linearity is considered significant in a study if the p-values for the non-linear component is less than 0.05 ($p < 0.05$) significance level.

Multicollinearity test was conducted to verify whether there exists a correlation between the variables in the model. A Tolerance Value that is less than 0.10 or a Variance Inflation Factor (VIF) that is greater than 10 signifies the presence of multicollinearity. VIF checks for presence of correlations (multicollinearity) between variables. Correlations affect the p-values making the regression model unfit for hypotheses testing and regression analysis. To check for multicollinearity, the study adopted VIF and TV as recommended by Robinson & Schumacker (2009).

Heteroscedasticity test was conducted to verify whether all the random errors have the same constant variance across observations in the regression model. To check whether data in the regression model adhered to the heteroscedasticity assumption test, the study adopted ANOVA as recommended by Hill, Griffiths & Lim (2011). If p-values are greater than 0.05, then it indicates that data in the regression model has a normal distribution and hence does not suffer heteroscedasticity.

Autocorrelation test was conducted to verify the presence or absence of serial correlation between variables in the regression model. As a rule of thumb, the statistic values of a Durbin-Watson (d) test should fall between the range of 1.5 and 2.5 (Durbin & Watson, 1971; Field, 2009). Any values under 1 or more than 3 signifies presence of serial correlation hence data becomes unfit for further analysis. To check for autocorrelation, the study adopted the Durbin-Watson (d) test.

3.11 Empirical Model

Multiple regression models were used to examine relationships between the study variables. The study used three models. Model 3.1 presents the direct relationship between independent and dependent variables. Model 3.2 and 3.3 shows the moderating and mediating effect of government policy and service delivery on the relationship between independent and dependent variables as shown below.

3.11.1 Direct Effect Model

The regression model 3.1 addressed the direct relationship between Human Resource Management Information System (HRMIS) and performance of selected National Government Ministries in Nairobi City County. The direct effect model is shown using the equation below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mathcal{E} \dots \dots \dots 3.1$$

Where:

Y = Dependent Variable (Performance of selected National Government Ministries in Kenya)

β_0 = Constant co-efficient of the model

β_{1-5} = Multiple linear regression coefficients (the change induced in Y by each X)

X_{1-5} = Independent Variables (e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication) that assessed Y

\mathcal{E} = Error term of the model

3.11.2 Moderating Effect Model

The regression model 3.2 addressed the moderating effect of Government policy on the relationship between HRMIS and performance of selected National Government Ministries in Kenya. The equation for the moderating effect is shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mathcal{E} \dots \dots \dots 3.2$$

Where:

Y = Dependent Variable (Performance of selected National Government Ministries in Kenya)

β_0 = Constant co-efficient of the model

β_{1-5} = Multiple linear regression coefficients (the change induced in Y by each X)

X_{1-5} = e-Recruitment, e-Training, e-Appraisal, e-Payroll & e-Communication) that assessed Y

X_6 = Government Policy (the moderating effect on relationship between X and Y)

\mathcal{E} = Error term of the model

3.11.3 Meditating Effect Model

The regression model 3.3 addressed the mediating effect of service delivery on the relationship between HRMIS and performance of selected National Government Ministries in Nairobi City County. The equation for the direct effect is shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_7 X_7 + \mathcal{E} \dots \dots \dots 3.3$$

Where:

Y = Dependent Variable (Performance of selected National Government Ministries in Kenya)

β_0 = Constant co-efficient of the model

β_{1-5} = Multiple linear regression coefficients (the change induced in Y by each X)

X_{1-5} = Independent Variables (e-Recruitment, e-Training, e-Appraisal, e-Payroll, e-Communication) that assessed Y

X_7 = Service Delivery (the mediating effect on relationship between X and Y)

\mathcal{E} = Error term of the model

3.12 Hypotheses Test

The study applied inferential statistics to establish the extent of relationships between the study variables. The hypothesized relationships were tested and estimated at 95% confidence level as recommended by Hill, Griffiths & Lim (2011).

3.13 Ethical Considerations

The researcher ensured the study adhered to recognized ethics in research. To start with, the researcher got the introduction letter from Kenyatta University to facilitate issuance of research license by NACOSTI to collect research data. Secondly, the researcher sought the consent of the management in the selected National Government Ministries to undertake the survey. Respondents were requested for consent to participate in the study and were assured of privacy. They had an option to withdraw freely without any negative consequences. No personal information or data were obtained from the respondents. Scholarly books, journal articles, conference papers, Government reports or research documents belonging to other researchers and authors were fully acknowledged in the study. The APA referencing style was strictly followed in the entire research.

CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the response rates and demographic characteristics of respondents under study. Both descriptive and inferential statistics were analyzed. Content analysis were also analyzed and were presented using a continuous narrative. The chapter ends with the summary of study findings, contribution to the body of knowledge, policy recommendations and finally recommendations for future research.

4.2 Response Rate and Respondents Demographic Characteristics

This section provides a quantitatively summarized collection of information and results on responses obtained from the field and demographic characteristics of the population of interest and variables under study.

4.2.1 Response Rate

The researcher distributed 162 questionnaires out of which 138 usable responses were received from the field. This represented a successful response rate of 85.1%. The remaining 14.9 % comprised of unreturned questionnaires. The results of the response rate are presented in Table 4.1.

Table 4.1: Results of Response Rate

Targeted National Government Ministries	Sampled National Government Ministries	Number of Questionnaires			Response Rate (%)
		Distributed	Returned	Unreturned	
Selected National Government Ministries in Nairobi City County	Selected National Government Ministries in Nairobi City County	162	138	24	85.18

Source: (Research Data, 2021)

Table 4.1 shows that selected National Government Ministries in Nairobi City County were sampled in the study. The results further indicate that out of 162 questionnaires distributed to respondents, 138 usable responses were received from the field while 24 were unreturned. The 138 returned questionnaires represented an acceptable response rate of 85.1%. According to Saunders, Lewis & Thornhill (2009), a response rate of between 50% - 70% is generally sufficient in research. It Minimizes response bias, guarantees reliability and increases accuracy of information. Based on this assertion therefore, the 85.1% response rate for the current study was considered adequate for reporting and analysis. The 24 unreturned questionnaires comprised of 14.9%. However, seventeen of these questionnaires were incomplete or improperly filled, while another 7 arrived too late, which necessitated their exclusion from the study.

4.2.2 Demographic Characteristics of the sample (n = 138)

The information collected on demographic characteristics was presented in Table 4.2.

Table 4.2: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	79	57.25
	Female	59	42.75
	Total	138	100
Age Group	Below 35 years	34	24.64
	35 to 40 years	42	30.43
	41 to 45 years	20	14.49
	Over 45 years	42	30.43
	Total	138	100
Education Level	High school	5	3.62
	Diploma	37	26.81
	Bachelor's Degree	55	39.86
	Master's Degree	40	28.99
	Doctorate	1	0.72
	Total	138	100
Management Level	Top-level Management	14	10.14
	Middle-level Management	65	47.10
	Operational staff	59	42.75
	Total	138	100
Length of Service in Ministry	1 to 3 years	31	22.46
	4 to 5 years	5	3.62
	Over 5 years	102	73.91
	Total	138	100

Source: (Research Data, 2021)

Table 4.2 shows the results of demographic characteristics and summary statistics of the 138 respondents in the study. On distribution of respondents by gender, the research shows that 57.25% were male and 42.75% female. While male respondents appeared to be slightly more than female respondents, the difference was negligible. As a result, the study was not skewed towards any specific gender. This is consistent with the Constitution of Kenya, which highlights such principles as equity, equality and non-discrimination (GoK, 2010).

On distribution of respondents by age, the research shows that 24.64% were below 35 years, 30.43% were between 35 to 40 years, and 14.49% were between 41 to 45 years while 30.43% were over 45 years. The results also show an aging workforce in National Government Ministries. This is consistent with a payroll audit report of April 2016 by DPSM, which revealed that most senior employees are over 45 years and expected to drift towards retirement or exit service in the next 10 years. The results further revealed that the numbers are likely to rise within the next 5 years if necessary measures are not implemented.

Regarding distribution of respondents by education levels, this research established that 3.62% had secondary school certificates. About 26.81% were diplomas holders, 39.86% were degree holders while 28.99% had master's degrees. One director had a doctorate degree. The result shows that most respondents had requisite academic qualifications for top and middle-level managerial positions. This is consistent with career paths requirements as set in different schemes of service/career progression guidelines for staffs in National Government Ministries. However, the results revealed that these positions were not alluring to doctorate degree holders.

About distribution of respondents by tenure (length of service) in the Ministry, 22.46% had served in their respective for 1 to 3 years, 3.62% had served for 4 to 5 years while

73.91% had served for over 5 years. This reflects job security levels and low turnover rates that could be due to supportive work environments in those Ministries.

Concerning the distribution of respondents by level of management, 10.14% were top-level, 47.10% were middle-level and 42.75% were operational staff. The numbers for top-level management were small. This indicates escalation to top-level management requires many years of work experience beside the requisite academic and professional qualifications. However, lack of vital requirements as stipulated in different schemes of service/career progression guidelines for National Government Ministries had become an inhibitor to effective career progression for the middle-level management as well as operational staff. Besides, the controlled recruitment to top positions or the time taken to fill vacant posts or delayed declaration of vacant posts had resulted to staffing gaps and long stagnation periods in the service.

4.3 Descriptive Statistics

This section is organized based on the seven variables under study. Descriptive statistics were used to measure the mean score and standard deviations. The findings for each variable are presented as follows:

4.3.1 E-Recruitment and Performance of selected National Government Ministries

Respondents were requested to rate e-Recruitment using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviation were computed. The outcomes are illustrated using Table 4.3.

Table 4.3: Responses on E-Recruitment

e-Recruitment	Mean	Standard Deviation	Min.	Max.
e-Recruitment makes tracking of job applicants is reliable and efficient	4.45	0.736	1.00	5.00
e-Recruitment enables HR managers and supervisors to process appointments and deployment of potential job candidates	4.37	0.765	1.00	5.00
e-Recruitment allows HR managers and supervisors to access e-resume forms and make informed hiring decisions	4.07	0.873	1.00	5.00
e-Recruitment helps reduce the costs of recruiting employees as compared to use of traditional and manual hiring systems	4.50	0.795	1.00	5.00
e-Recruitment has expedited the process of allocating personal numbers to new employees in the Ministry	4.07	0.956	1.00	5.00
e-Recruitment has enhanced efficiency and effectiveness of the hiring process in the Ministry	4.03	0.904	1.00	5.00
e-Recruitment is not utilized in this Ministry due to lack of funds, human capital, ICT equipment and infrastructure	3.49	1.216	1.00	5.00
Aggregate Scores	4.139	0.892		

Source: (Research Data, 2021)

Table 4.3 shows the mean score for e-Recruitment is 4.139 while standard deviation was 0.892. This denotes that respondents confirmed that e-Recruitment as compared to manual systems, expedites applicant tracking and enables organizations to meet the requisite staffing requirements. The statement that e-Recruitment is not utilized in the Ministry got a low mean score of 3.49 while standard deviation was 1.216, indicating use of e-Recruitment is minimal and that its full potential system has not been achieved and this could be affecting organizational performance. According to Ogohi (2019), implementation of the best technology and presence of physical resources without the right and available personnel can affect organizational success. Hence, the need for every organization to uptake use of technology to improve efficiency to gain a competitive advantage over their competitors (Khashman, 2016).

The item that e-Recruitment saves time and lowers costs as compared to use of manual systems got a high mean score of 4.50 while standard deviation was 0.795. This implies e-Recruitment has a positive and significant influence on productivity and organizational performance. This result corresponds with Midiwo (2016) argument that e-Recruitment allows organizations to plan their HR costs more effectively which lead to increases in efficiency and effectiveness. The results further support the argument by RBV theorists Penrose (1959), Wernerfelt (1984) that effective use of an internal resource is a source of achieving a superior firm performance and success.

On the contrary, Bogatova (2017) cited that although tracking of job applicants has become reliable and efficient, e-recruitment can be expensive and time-consuming when there is inadequate HR planning, funding and creativity by managers in organizations. Accordingly, Karikari, Boateng and Ocansey (2015) revealed that while e-Recruitment saves on time and lowers recruitment costs, government organizations should consider incorporating learning institutions such as universities and technical training institutes to get a wider pool of potential candidates.

4.3.2 E-Training and Performance of selected National Government Ministries

The respondents were requested to rate e-Training using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviations were computed. The outcomes of the study are presented in Table 4.4.

Table 4. 4: Responses on e-Training

e-Training	Mean	Standard Deviation	Min.	Max.
e-Training is easily accessible. It can occur anywhere, anytime	4.01	1.011	1.00	5.00
e-Training enables employees to increase job skills and efficiency of the assigned tasks	4.23	0.708	1.00	5.00
Managers can plan and project training programs for the year	4.16	0.804	1.00	5.00
e-Training generates data that HR managers can use in career management and succession planning decision	4.16	0.795	1.00	5.00
e-Training assists managers to process training requests	3.93	0.953	1.00	5.00
e-Training is not utilized in this Ministry due to lack of funds, human capital, ICT equipment and infrastructure	3.57	1.220	1.00	5.00
Aggregate Score	4.011	0.915		

Source: (Research Data, 2021)

Table 4.4 shows the mean score for e-Training is 4.011 while standard deviation was 0.915. The assertion that e-Training is not utilized in this Ministry got a low mean score of 3.57 while standard deviation was 1.220, suggesting that automation levels of e-Training practices are low. As compared to their counterparts in the developed and developing countries, Kenyan Ministries are yet to realize full potential of the innovation due to persistent use of manual systems, thus decreasing automation levels.

The assertion that e-Training enables employees to increase job skills and improves efficiency of the assigned tasks got a high mean score of 4.23 while standard deviation was 0.708. This supports Rajasekar & Khan (2013) argument that training motivates staffs to perform better, which translates to higher productivity and invariably improved organization's performance. This result supports human capital theory on training of staffs to raise productivity and aid organizations to yield returns on investments.

However, according to Rajasekar and Khan (2013), failure to adopt a reliable training evaluation framework is identified as a cause for increases in attrition cases that are reported after employee training. Moreover, organizational policies that compel uninterested employees to attend certain training courses often leads to negative attitudes, which greatly limit the effectiveness of the training.

4.3.3 e-Appraisal and Performance of selected National Government Ministries

The respondents were requested to rate e-Appraisal using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviations were computed. The outcomes are shown using Table 4.5.

Table 4. 5: Responses on e-Appraisal

e-Appraisal	Mean	Standard Deviation	Min.	Max.
e-Performance is easy and convenient to use	4.02	0.932	1.00	5.00
e-Appraisal helps managers and supervisors to monitor staff productivity and identify training needs	3.99	0.993	1.00	5.00
e-Appraisal is used to generate relevant appraisal reports that managers and supervisors can use to support retention and turnover rates	4.01	1.039	1.00	5.00
e-Appraisal has enhanced the rating of performance appraisals in the Ministry	3.78	1.052	1.00	5.00
e-Appraisal is utilized to measure the performance of the HR department in the Ministry	3.55	1.153	1.00	5.00
e-Appraisal is not utilized in this Ministry due to lack of funds, human capital, ICT equipment and infrastructure	3.14	1.348	1.00	5.00
Aggregate Score	3.751	1.086		

Source: (Research Data, 2021)

Table 4.5 shows the mean score for e-Appraisal is 3.751 while standard deviation was 1.086. The statement that e-Appraisal is not utilized in this Ministry got a low mean score of 3.14 while standard deviation was 1.348, implying use of e-Appraisal system in Ministries is minimal and that the potential of the innovation has not been fully realized due to persistent use of manual systems.

The statement on if e-Appraisal is convenient and easy to use got a high mean score of 4.02 while standard deviation was 0.932, implying the system helps improve staffs performance and job satisfaction. The result supports Olufemi (2014) argument that organizations should effectively implement e-Appraisals to achieve the expected level of productivity and performance. This result supports goal model's argument that goals set by the managers should support realization of organizational performance and success.

However, some scholars have cited contrary opinion on performance appraisals. Osabiya (2014) argued that organizations were doing very little in trying to appraise their employees. He added that performance appraisal was judged by the subjective impressions of the reporting officers who appraised employee performance in terms of intangible executive qualities. This led to ineffective appraisals and low morale since the evaluations were mainly based on how well the supervisors or managers like or get along with individual employees.

There was also a tendency of non-disclosure of appraisal results to the employees, which led to unacceptability and low productivity levels (Al-Raisi, Amin & Tahir, 2011). Further, it was revealed that some employees in organizations were unsupportive of the performance appraisals since they had not been sensitized on the same and this was affecting achievement of desired appraisal results. With the growing recognition that organizational success is largely attributable to improved productivity, many managers are now seeking creative ways to improve staff performance (Jimgris, 2007).

4.3.4 E-Payroll and Performance of selected National Government Ministries

The respondents were requested to rate e-Payroll using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviations were computed. The outcomes are shown using Table 4.6.

Table 4. 6: Responses on e-Payroll

e-Payroll	Mean	Standard Deviation	Min.	Max.
e-Payroll has enhanced accuracy and speed of processing payrolls in the Ministry	4.57	0.683	1.00	5.00
e-Payroll has reduced use of routine tasks and duplication of employee records	4.61	0.667	1.00	5.00
e-Payroll helps to generate timely salary reports & e-payslips	4.67	0.544	1.00	5.00
e-Payroll assists managers to maintain accurate attendance data to support pay decisions	3.95	1.042	1.00	5.00
e-Payroll provides accurate and reliable data for timely decision making	4.46	0.727	1.00	5.00
e-Payroll is not utilized in the Ministry due to lack of funds, human capital, ICT equipment and infrastructure	2.04	1.219	1.00	5.00
Aggregate Score	4.050	0.814		

Source: (Research Data, 2021)

Table 4.6 shows the mean score for e-Payroll is 4.050 while standard deviation was 0.814. The statement that e-Payroll is not utilized in the Ministry due to lack of skills and ICT infrastructure got a low mean score of 2.04 while standard deviation was 1.219, implying e-Payroll is not fully implemented in most National Government Ministries due to continued use of manual systems. The statement that e-Payroll helps managers to generate timely salary reports and print e-payslips got a high mean score of 4.67 while standard deviation was 0.544, implying enhanced efficiency and effectiveness of the organization.

The results support Jibrin, Ejura and Augustine (2015) who argued that effective payroll management is a key to operational efficiency, service success, improved organizational performance and effectiveness. The results also support Palladan and Palladan (2018) who posits that e-Payroll has direct and positive effect on employees' productivity and organizational performance. However, untimely payment of benefits cause fatigue among employees, which ultimately leads to the reduction of their productivity, which in turn affects organizational performance (Palladan & Palladan, 2018).

4.3.5 e-Communication and Performance of selected National Government Ministries

The respondents were requested to rate e-Communication using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviations were computed. The outcomes are shown using Table 4.7.

Table 4.7: Responses on e-Communication

e-Communication	Mean	Standard Deviation	Min.	Max.
e-Communication ensures unlimited access to information at any time, place	3.99	1.029	1.00	5.00
e-Communication enables employees to access and share information efficiently	4.03	0.935	1.00	5.00
e-Communication enables timely dissemination of organizational information (policy guidelines, reports)	4.14	0.892	1.00	5.00
e-Communication reduces costs associated with printing of brochures, newsletters, policies and reports	4.32	0.810	1.00	5.00
e-Communication enables the Ministry to efficiently disseminate information contained in policy guidelines and reports, surveys	4.07	0.991	1.00	5.00
e-Communication is not utilized in the Ministry due to lack of funds, human capital, ICT equipment and infrastructure	2.82	1.347	1.00	5.00
Aggregate Score	3.895	1.001		

Source: (Research Data, 2021)

Table 4.7 shows mean score for e-Communication is 3.895 while standard deviation was 1.001. The statement that e-Communication is not utilized in the Ministry got a low mean score of 2.82 while standard deviation was 1.347. This indicated a low uptake of HRMIS. Most National Government Ministries were largely dependent on manual processes. This included use of government postal systems, which are costly (due to transportation of bulky packages), ineffective (due to delayed communication because of coverage of long distances) or time consuming (no direct feedback).

Further, written communication is dominant for dissemination of directives, orders or instructions through letters, emails, memos, advertisements, manuals, circulars or government policies. While both government postal systems and written communication are useful and rampant, there is need for National Government Ministries to uptake use of e-communication as this has a positive and significant influence on productivity and performance.

The statement that e-Communication reduces costs associated with printing (brochures, reports, newsletters, manuals, policies), got a high mean score of 4.32, while standard deviation was 0.810. This result supports Ukamaka, Jyoti & Neil (2016) assertion that e-Communication is a critical component in achieving organizational goals. This is because it is an effective managerial tool for information sharing, coordination and collaboration. This supports RBV's assertion that cooperation and coordination are valuable resources to a firm to speed up the decision-making process, which influences the firm's outcomes.

Barley, Meyerson and Grodal (2011) cited that despite the fact that e-Communication enhances efficiency in disseminate of organizational communication, the practice has significantly extended employees work hours (at workplace, at home in the morning, evening and sometimes on weekends), leading to increased techno-stress and work overload.

4.3.6 Government Policy and its Moderator Effect on Performance of selected National Government Ministries

The respondents were requested to rate Government Policy on various personnel actions using a scale of 1 to 5, where 5 represented ‘strongly agree’ and 1 ‘strongly disagree’. Mean score and standard deviations were computed. The results are shown in Table 4.8.

Table 4. 8: Responses on Government Policy

Government Policy	Mean	Standard Deviation	Min.	Max.
Government policy documents are applied to provide guidance on personnel actions (recruitment, training, performance payroll, communication), among others)	4.39	0.719	1.00	5.00
Government policies are reviewed from time to time to reflect policy changes	4.14	0.803	1.00	5.00
Government policy promotes consistency, equality and excellence in delivery of public services	4.20	0.743	1.00	5.00
Government policy promotes integrity, transparency and accountability of personnel actions in this Ministry	4.03	0.862	1.00	5.00
There is laxity on compliance to Government policy relevant to HRM (recruitment, training, performance payroll, communication), among others	3.04	1.264	1.00	5.00
Aggregate Score	3.958	0.878		

Source: (Research Data, 2021)

Table 4.8 shows mean score for Government policy is 3.958, while standard deviation was 0.878. The statement that there is laxity on adherence to Government policy on HR actions got a low mean score of 3.04 while standard deviation was 1.264. This explains the presence of illegalities in recruitment, inadequate institutional skills, poor performance evaluations, payroll irregularities and delayed exchanges across Ministries.

The item that government policy documents are applied to provide guidance on HR actions like recruitment, training, among others got a high mean score of 4.39 while standard deviation was 0.719. This implies that effective application of relevant government policy would promote professionalism across Ministries. The result supports Chelimo & Ouma (2017) who argued that a well-implemented policy is key in achieving organizational goals. This assertion supports RBV theorists' argument that control of internal resources determines a firm's performance and its competitiveness.

4.3.7 Service Delivery and its Mediator Effect on Performance of selected National Government Ministries

The respondents were requested to rate service delivery using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviations were computed. The outcomes are shown using Table 4.9.

Table 4.9: Responses on Service Delivery

Service Delivery	Mean	Standard Deviation	Min.	Max.
Front office staffs in this Ministry are friendly and neat in appearance	3.99	0.778	1.00	5.00
The work environment is clean, conducive and visually appealing	3.70	0.985	1.00	5.00
I have the right equipment (computer, internet connectivity) for efficient and effective service delivery	3.38	1.263	1.00	5.00
Information on our Ministry's mandate, strategic plans and performance reports are easily available to employees	3.46	1.061	1.00	5.00
This Ministry has a grievance handling mechanisms to address employees' complaints and grievances	3.20	1.073	1.00	5.00
Government services offered to clients in this Ministry are reliable, responsiveness and satisfactory	3.91	0.935	1.00	5.00
Aggregate Score	3.606	1.016		

Source: (Research Data, 2021)

Table 4.9 shows mean score for service delivery is 3.606, while standard deviation was 1.016. The statement that our Ministry has a grievance handling mechanism to address employees' concerns got a low mean score of 3.20 while standard deviation was 1.073. The statement that front office staffs in this Ministry are friendly, well dressed and neat in appearance got a high mean score of 3.99 while standard deviation was 0.778, implying that respondents somewhat agreed on service reliability and responsiveness.

The results are consistent with the argument by Danjuma & Rasli (2012) that service quality is as an essential strategy for organizational success and survival. This supports RBV supports that firms should use valuable resources to establish processes that enable them to change practices, capabilities or even services. This will not only increase client satisfaction but also help them improve their performance relative to competitors.

4.3.8 Performance of Selected National Government Ministries

The respondents were requested to rate organizational performance using a scale of 1 to 5, where 5 represented strongly agree while 1 connoted strongly disagree. Mean score and standard deviation were computed. The results are presented in Table 4.10.

Table 4. 10: Responses on Performance selected National Government Ministries

Organizational Performance	Mean	Standard Deviation	Min.	Max.
The selected National Government Ministries are working towards achieving its strategy, mission, vision	4.20	0.775	1.00	5.00
Employees are well-utilized to deliver services efficiently and effectively	3.77	0.970	1.00	5.00
The Ministries use HRMIS to improve employee productivity and organizational performance	3.64	0.934	1.00	5.00
The Ministries make optimal use of its resources (funds, people, technology) to realize its organizational goals	3.69	0.911	1.00	5.00
The Ministries are a good place to work in. I am satisfied with my job	3.80	0.927	1.00	5.00
The Ministries have been able to meet the expected organizational goals	3.79	0.900	1.00	5.00
Aggregate Score	3.817	0.903		

Source: (Research Data, 2021)

Table 4.10 shows mean score for organizational performance is 3.817 while standard deviation was 0.903. The statement that the selected National Government Ministries use HRMIS to improve efficiency and effectiveness got a low mean score of 3.64 while standard deviation was 0.934. This shows that use of HRMIS is marginal since Ministries continue to use manual systems in their day-to-day operations, thus narrowing transformation efforts.

The statement that the Ministry is working towards achieving its strategy, mission and vision got a high mean score of 4.20 while standard deviation was 0.775. This implies that Ministries are working efficiently and effectively to achieve organizational goals. The result supports Khashman (2016) view that organizations must efficiently use existing resources to improve organizational performance. The result supports the Goal Model Approach that achievement of intended goals is key to a competitive advantage.

4.4 Inferential Analysis

4.4.1 Test of Regression Assumptions

Prior to multiple regression analysis, 5 diagnostic tests were conducted to establish if collected data in the study conforms to requisite regression assumptions to ensure suitability of the model. The findings of the diagnostic tests are as follows.

4.4.1.1 Normality Test

The study tested for normality of data to be used in this study. This test was conducted to verify whether distribution of data in regression model is normal or not. These measures of shape were estimated using skewness and kurtosis statistics. According to Field (2009), data is normally distributed if the skewness and kurtosis values range between -1 and + 1. The results of the test are presented using Table 4.11.

Table 4. 11: Findings of the Test for Normality

Variable	Measure	Statistic	Std. Error of Skewness	Conclusion
e-Recruitment	Skewness	-0.917	0.206	Normal distribution
	Kurtosis	1.822	0.410	
e-Training	Skewness	-1.297	0.206	Normal distribution
	Kurtosis	4.443	0.410	
e-Performance	Skewness	-0.952	0.206	Normal distribution
	Kurtosis	0.935	0.410	
e-Payroll	Skewness	-0.853	0.206	Normal distribution
	Kurtosis	1.927	0.410	
e-Communication	Skewness	-0.509	0.206	Normal distribution
	Kurtosis	0.379	0.410	
Government policy	Skewness	-0.200	0.206	Normal distribution
	Kurtosis	0.360	0.410	
Service delivery	Skewness	-0.308	0.206	Normal distribution
	Kurtosis	0.185	0.410	
Organizational Performance	Skewness	-0.576	0.206	Normal distribution
	Kurtosis	0.627	0.410	

Source: (Research Data, 2021)

Table 4.11 shows that e-Recruitment, e-Training, e-Appraisal e-Payroll, e-Communication, Government policy, service delivery and organizational performance had a normal distribution with skewness and kurtosis values ranging between -1 and +1. This shows that the variables met the threshold for normality test and hence were suitable to enable further analysis and drawing inferences.

4.4.1.2 Linearity Test

The study tested for linearity to determine whether the relationship between the independent and dependent variables is linear or not. Thus, Pearson's Correlation Coefficients were applied as recommended by Yount (2006). The results for the test are presented using Table 4.12.

Table 4.12: Findings of the Test for Linearity

Variable	Measure	Organizational Performance	Conclusion
e-Recruitment	Pearson Correlation	0.029	Linear relationship
	Sig. (2-tailed)	0.732	
	N	138	
e-Training	Pearson Correlation	0.006	Linear relationship
	Sig. (2-tailed)	0.941	
	N	138	
e-Appraisal	Pearson Correlation	0.192*	Linear relationship
	Sig. (2-tailed)	0.024	
	N	138	
e-Payroll	Pearson Correlation	0.074	Linear relationship
	Sig. (2-tailed)	0.392	
	N	138	
e-Communication	Pearson Correlation	0.205*	Linear relationship
	Sig. (2-tailed)	0.016	
	N	138	
Government policy	Pearson Correlation	0.163	Linear relationship
	Sig. (2-tailed)	0.056	
	N	138	
Service delivery	Pearson Correlation	0.670**	Linear relationship
	Sig. (2-tailed)	0.000	
	N	138	

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed).

Source: (Research Data, 2021)

Table 4.12 shows a significant linear relationship between the variable with e-recruitment at 0.732, e-training at 0.941, e-Appraisal at 0.024, e-Payroll at 0.392, e-communication at 0.016, Government policy at 0.056 and service delivery at 0.000 significance level. The results confirm the data was normally distributed therefore was suitable for further analysis and reporting.

4.4.1.3 Multicollinearity Test

The study tested for multicollinearity in the data to be used in the research. The study sought to verify whether there exists a high correlation between the independent and dependent variables in the regression model. Multicollinearity was tested using Variance Inflation Factor (VIF) and Tolerance Value. The results are presented in Table 4.13.

Table 4.13: Findings of the Test for Multicollinearity

Variables	Tolerance	VIF	Conclusion
e-Recruitment	0.580	1.724	No multicollinearity
e-Training	0.700	1.429	No multicollinearity
e-Appraisal	0.696	1.437	No multicollinearity
e-Payroll	0.652	1.533	No multicollinearity
e-Communication	0.748	1.337	No multicollinearity
Government policy	0.823	1.215	No multicollinearity
Service delivery	0.876	1.141	No multicollinearity
Mean VIF	0.725	1.402	

a. Dependent Variable: Organizational Performance

Source: (Research Data, 2021)

Table 4.13 shows the mean score for Tolerance is 0.725 while VIF is 1.402. The results indicate that all study variables had a VIF that is less than 10 and tolerance value that is greater than 0.1. This infers that no multicollinearity problem between the study variables in the model. Thus, data collected on each individual variable was normal and hence suitable for hypotheses testing and regression analysis.

4.4.1.4 Heteroscedasticity Test

The study tested for heteroscedasticity to verify whether random errors in the regression model have the same constant variance across observations. Heteroscedasticity was tested using ANOVA and the results are presented in Table 4.14.

Table 4.14: Findings of the Test for Heteroscedasticity

ANOVA^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.956	7	0.565	2.940	0.007 ^b
Residual	24.989	130	0.192	-999.000	-999.000
Total	28.946	137			

Predictors: (Constant) = e-Recruitment, e-Training, e-Appraisal, e-Payroll Management and e-Communication

Source: (Research Data, 2021)

Table 4.14 shows a mean squared regression of 0.565 with an associated statistical significance value of 0.007. The rule of thumb is that, a null Hypotheses (H₀) is reject if the significance level is >0.05. The results indicate that the significance value was greater than 0.05, hence the null Hypotheses was not rejected, implying that residuals at 0.192 were distributed normally and hence did not have heteroscedasticity problem as p-values were >0.05. The null Hypotheses (H₀) was not rejected at a critical p-value of 0.05 since the reported residual value was 0.192>0.05.

4.4.1.5 Autocorrelation Test

The study tested for autocorrelation to verify the existence or absence of serial correlation between the variables in the regression models. The study adopted Durbin-Watson (d) test as recommended by Durbin & Watson (1971). The results are presented Table 4.15.

Table 4.15: Findings of the Test for Autocorrelation Test

Variable	Durbin-Watson	Conclusion
e-Recruitment	1.875	No Autocorrelation
e-Training	1.877	No Autocorrelation
e-Appraisal	1.817	No Autocorrelation
e-Payroll	1.878	No Autocorrelation
e-Communication	1.866	No Autocorrelation
Government Policy	1.889	No Autocorrelation
Service Delivery	1.919	No Autocorrelation

a. Dependent Variable = Organizational performance

Source: (Research Data, 2021)

Table 4.15 shows the results each variable met the threshold value for Durbin-Watson autocorrelation test. The rule of thumb, the statistic values of a Durbin-Watson's test should fall between the range of 1.5 and 2.5. Any values under 1 or more than 3 indicates existence of autocorrelation which renders data unreliable for further statistical analysis. Thus, the findings of the study indicate that each variable yielded values that are within

the acceptable statistical ranges, implying absence of serial autocorrelation. Thus, data for this study were found to be reliable and suitable for further analysis.

4.5 Regression Analysis

The study sought to establish the relationship between the HRMIS and performance of selected National Government Ministries in the linear regression model. The regression results are presented in Table 4.16 (i).

Table 4.16 (i): Goodness-of-Fit of the Regression Model

R	R Square	Adjusted R Square	Std. Error of the Estimate
.692	.479	.451	.49468

Predictors (Constant) = e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication

Source: (Research Data, 2021)

The results in Table 4.16 (i) show the coefficient of correlation (R) is 0.692. This suggests a 69.2% direct and significant relationship between HRMIS and performance of selected National Government Ministries in Nairobi City County. The adjusted R² for the model is 0.451. This implies that HRMIS jointly determine or explain the 45.1% of variation on organizational Performance of selected National Government Ministries in Kenya. The remaining 0.549 (54.9%) is explained by variables not fitted in the model. The findings of the current study concur with Khashman (2016) whose study established the role and importance of HRMIS in improving productivity and organizational performance.

Table 4.16: (ii): Statistical Significance of the Models

Models	Sum of Squares	df	Mean Squares	F	Sig.
Regression	29.293	7	4.185	17.101	.000
Residual	31.812	130	.245		
Total	61.105	137			

Dependent Variable = Organizational Performance

Predictors (Constant) = e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication

Source: (Research Data, 2021)

The result of F-test as shown in Table 4.16 (ii) found that the calculated F-value equals 17.10 while the significance of p-value is 0.000, which is less than 0.05 ($p \leq 0.05$). A p-value of 0.000 signifies that the model was statistically significant and hence was found to have goodness of fit. The study found that HRMIS has a positive and significant influence on organizational Performance of Selected National Government Ministries in Kenya. These findings support Kananu (2014) who established that use of HRMIS facilitates efficient and effective management of HR matters to improve organizational performance and competitiveness.

Table 4.16: (iii) Regression of HRMIS on Organizational Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.382	.510		2.711	.008
e-Recruitment	.277	.109	.240	2.554	.012
e-Training	.191	.073	.254	2.639	.009
e-Appraisal	.250	.073	.289	3.403	.001
e-Payroll	.403	.086	.358	4.687	.000
e-Communication	.153	.066	.178	2.323	.022

Dependent Variable = Organizational Performance

Source: (Research Data, 2021)

Table 4.16 (iii) shows the results for coefficients of the regression model, the t-statistics and p-values for each HRMIS practice namely e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication. A unit increase in any of the HRMIS would result in proportionate increase in organizational Performance of Selected National Government Ministries in Nairobi City County. In general, there is a significant influence between HRMIS and organizational performance.

From the results presented in Tables 4.16 (i), (ii) and (iii), the regression equation to estimate organizational performance was formulated as:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$$

Where:

Y = Organizational Performance

β_0 = Constant

X₁ = e-Recruitment

X₂ = e-Training

X₃ = e-Appraisal

X₄ = e-Payroll

X₅ = e-Communication

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 = Coefficients of Independent Variables

ε = Error term (changes that are explained by other variables not included in the equation)

The regression results of the model were:

$$\text{Organizational Performance} = 1.382 \text{ (Constant)} + 0.240 \text{ (e-Recruitment)} + 0.254 \text{ (e-Training)} + 0.289 \text{ (e-Appraisal)} + 0.358 \text{ (e-Payroll)} + 0.178 \text{ (e-Communication)} + \varepsilon$$

From the regression results, it is clear that a unit increase in e-Payroll can influence organizational performance by up to 35.8% while a unit increase in e-Appraisal can influence organizational performance by up to 28.9%. Similarly, a unit increase in e-Training can influence organizational performance by up to 25.4% while a unit increase in e-Recruitment can influence organizational performance by up to 24%. Further, a unit increase in e-Communication can influence organizational performance by 17.8%. In general, the Performance of Selected National Government Ministries in Nairobi City

County can therefore be summed up as the sum total of e-Recruitment plus e-Training plus e-Appraisal plus e-Payroll plus e-Communication plus the error margins.

4.4.1 Test of Direct Relationship

The direct relationship between the independent and dependent variables in this research were tested using multiple regressions as stated in the regression model 3.1. The test results are presented in Table 4.17.

Table 4.17: Regression on Direct Relationship between HRMIS and Organizational Performance

Goodness of Fit	Test Statistics		P-Value
Adjusted R Squared	.451		
R Square	.479		
F-Statistics	17.100		0.000**
Regression Results			
Constant	Coefficient	T-Statistics	P-Value
e-Recruitment	.240	2.71	.008**
e-Training	.254	2.55	.012**
e-Appraisal	.289	2.63	.009**
e-Payroll	.358	3.40	.001**
e-Communication	.178	4.68	.000**
Key **Significant level at 0.05			

Source: (Research Data, 2021)

Table 4.17 shows the adjusted R squared for the model is 0.451. This infers that the 5 independent variables jointly explain the 45.1% variance in the dependent variable while the rest is explained by the error term. The remaining 0.351 (35.1%) is explained by variables not fitted in the model. The F-Statistic is 17.100 with a corresponding p-value of 0.000. This implies that the relationship between the independent and dependent variables is significant. T-statistics provided information on the significance of the relationship between the variables. Therefore, the null hypotheses were rejected in favour of the alternate hypotheses.

Additionally, the coefficients for the following independent variables namely e-Recruitment is 0.240; for e-Training is 0.254; for e-Appraisal is 0.289; for e-Payroll is 0.358; while for e-Communication is 0.178. The result shows that the coefficients for the 5 independent variables had p-values<0.05, implying a significant relationship amongst the study variable and organizational performance. A unit increase in any of the variables would result in proportionate increase in Performance of Selected National Government Ministries in Nairobi City County.

Based on the findings in Table 4.17, the result for the regression model is:

$$\text{Organizational Performance} = 1.382 (\text{Constant}) + (0.240\text{e-Recruitment} + 0.254\text{e-Training} + 0.289\text{e-Appraisal} + 0.358\text{e-Payroll} + 0.178\text{e-Communication}) + \varepsilon \dots\dots\dots 3.1$$

Where:

Y = Dependent Variable (Performance of selected National Government Ministries in Nairobi City County)

β_0 = Constant in the equation

β_{1-5} = Multiple linear regression coefficients (the change induced in Y by each X)

X_{1-5} = Independent Variables (e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication) that assessed Y

ε = Error term of the model

4.5.2 Hypotheses Testing

The seven (7) hypotheses of the study as outlined in section 1.4 were tested as follows:

4.5.2.1 Hypotheses 1: Relationship between e-Recruitment and performance of Selected National Government Ministries

Table 4.16 (iii) shows the first null hypothesis (H_{01}) which proposed that there is no relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and p-value =

0.012. The beta coefficient for e-recruitment is 0.240, implying that a unit increase in e-Recruitment would lead to a 24.0% increase in organizational performance.

This implies that e-Recruitment has a significant influence on Performance of Selected National Government Ministries Nairobi City County. The findings of this study are in consistent with previous empirically research by Adam, Ogolla & Maore (2017) who stated that e-Recruitment got a high degree of positive and significant influence on organizational performance. Thus, top management should ensure the e-Recruitment practices are implemented in the most efficient and effective manner to enhance organizational goal attainment and success.

4.5.2.2 Hypotheses 2: Relationship between e-Training and performance of selected National Government Ministries

Table 4.16 (iii) shows the second null hypothesis (H_{02}) which proposed that there is no relationship between e-Training and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and p-value = 0.009. The beta coefficient for e-Training is 0.254, implying that a unit increase in e-Training would lead to a 25.4% increase in employee productivity and the organization's performance.

This infers that e-Training has a positive and significant influence on Performance of Selected National Government Ministries Nairobi City County. This result corresponds with past empirical studies by Rajasekar & Khan (2013) that e-Training is very effective and also saves time and cost. It keeps employees well developed, productive and engaged, which leads to enhanced organizational performance and competitiveness. The result corresponds with earlier studies by Khan, Khan and Khan (2011) that e-Training has a significant influence on organizational performance. Thus, organizations should provide training to staffs to not only equip them with skills but also increase efficiency.

4.5.2.3 Hypotheses 3: Relationship between e-Appraisal and performance of selected National Government Ministries

Table 4.16 (iii) shows the third null hypothesis (H_{03}) which proposed that there is no relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and p-value = 0.001. The beta coefficient for e-Appraisal is 0.289, implying that a unit increase in e-Appraisal would lead to a 28.9% increase in employee productivity, job satisfaction and organization's performance.

This suggests that e-Appraisal has a positive and significant influence on Performance of Selected National Government Ministries Nairobi City County. This result corresponds with earlier studies by Al-Raisi, Amin. & Tahir (2011) and Troshani, Jerram & Rao (2011) which confirmed that e-Appraisal facilitates regular assessment of an employee's performance, their potential and personal development, which leads to improved employee productivity and organizational performance.

4.5.2.4 Hypotheses 4: Relationship between e-Payroll and performance of selected National Government Ministries

Table 4.16 (iii) shows the fourth null hypothesis (H_{04}) which proposed that there is no relationship between e-Payroll and performance of selected National Government Ministries in Nairobi City County was rejected since $\beta \neq 0$ and p-value = 0.000. The beta coefficient for e-Payroll is 0.358, implying that a unit rise in e-Payroll would lead to a 35.8% increase in organizational performance.

This signifies that e-Payroll has a positive and significant influence on Performance of Selected National Government Ministries Nairobi City County. The results of this study agree with the empirical findings of the study by Sam, Hoshino & Tahir (2012) that e-Payroll provides accurate and comprehensive results of financial operations in the

organization, which allows managers to make informed decisions. Similarly, the results of this study are consistent with the findings by Palladan & Palladan (2018), who argued that productivity and performance of employees in organizations depends on the satisfaction levels and largely, rewards or compensation.

4.5.2.5 Hypotheses 5: Relationship between e-Communication and Performance of selected National Government Ministries

Table 4.16 (iii) shows fifth null hypothesis (H_{05}) which proposed that there is no relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and $p\text{-value} = 0.022$. The beta coefficient for e-Communication is 0.178, implying that a unit increase in e-Communication would lead to a 17.8% increase exchange and distribution of information and improved interactions, which ultimately enhances coordination, collaboration and organizational performance.

This shows that e-Communication has a positive and significant influence on Performance of Selected National Government Ministries Nairobi City County. The result of this study are consistent with the empirical findings of the study by Raulea & Raulea (2014) who outlined the positive influence of e-Communication on organizational performance and stated its importance in enabling organizational coordination, distribution of real-time information and collaboration.

4.5.2.6 Hypotheses 6: Moderating effect of Government policy on the relationship between HRMIS and performance of selected National Government Ministries

Table 4.18: Regression of Government policy on HRMIS and Performance of selected National Government Ministries

Variable	Coefficients	Test Statistic	P-Value
(Constant)	2.950	6.501	0.000
Government policy (Moderator)	0.219	1.927	0.056
R-squared		0.027	
Adjusted R-squared		0.019	
F-Statistic		3.714	0.000

Dependent Variable = Organizational Performance
 Predictors: (Constant) = e-Recruitment, e-Training, e-Appraisal, e-Payroll management, e-Communication,
 Service delivery = Mediator Variable

Source: (Research Data, 2021)

Table 4.18 shows the sixth null hypothesis (H_{06}) which proposed that Government policy has no moderating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and p-value = 0.056. The moderated regression of Government policy on HRMIS and performance of selected National Government Ministries resulted in an adjusted R-squared of 0.019 while the beta coefficient for e-Communication is 0.219%.

This denotes that a unit increase in use of Government policy would lead to a 21.9% increase in organizational performance. This explains the 21.9% of the variation in the organizational performance. The findings of this research corresponds with an earlier empirical research by Chelimo and Ouma (2017) that Government policy provides clear roles and responsibilities to enable employees to make better decisions. This implies that that Government policy has a strong influence on the organization's performance. Therefore, effective implementation of existing Government policy promotes compliance, which in turn steers organizational performance to greater levels.

Since the study had a moderating variable, multiple regression analysis was used to test the significance of coefficients that represented the moderating effect of Government policy on the relationship between independent variables and performance of performance of selected National Government Ministries. The moderating effects of the hypothesized relationships was tested using the following regression model:

$$Y = \beta_0 + \beta_{1-5}X_{1-5} + \beta_6X_6 + \mathcal{E}$$

Where:

Y = Organizational Performance

β_0 = Constant

X_{1-5} = Independent Variables

B_{1-5} = Coefficients of Independent Variables.

β_6 = Government policy (Moderating variable)

\mathcal{E} = Error term of the model

Consequently, the result for the statistical regression model was:

Organizational Performance = 1.382 (Constant) + (0.240e-Recruitment + 0.254e-Training + 0.289e-Appraisal + 0.358e-Payroll + 0.178e-Communication) + 0.219Government policy.

From the findings in Table 4.17, the study concluded that Government policy has a strong moderating effect on the relationship between HRMIS and Performance of Selected National Government Ministries in Nairobi City County.

4.5.2.7 Hypotheses 7: Mediating effect of service delivery on the relationship between HRMIS and performance of selected National Government Ministries

Table 4.18: Regression of service delivery on HRMIS and Performance of selected National Government Ministries

Variable	Coefficients	Test Statistic	P-Value
(Constant)	1.488	6.596	0.000
Service delivery (Mediator)	0.646	10.518	0.000
R-squared		0.449	
Adjusted R-squared		0.445	
F-Statistic		110.635	0.000

Dependent Variable = Organizational Performance

Predictors: (Constant) = e-Recruitment, e-Training, e-Appraisal, e-Payroll management, e-Communication.

Moderator Variable = Government policy

Source: (Research Data, 2021)

Table 4.18 shows the seventh null hypothesis (H_{07}) which proposed that service delivery has no mediating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County was rejected in the study since $\beta \neq 0$ and $p\text{-value} = 0.000$. The mediated regression of service delivery on HRMIS and performance of selected National Government Ministries resulted in an adjusted R-squared of 0.445 while the beta coefficient for e-Communication is 0.646. Thus, a unit increase in service quality would lead to a 64.6% increase in client satisfaction, loyalty and organizational performance.

This implies that there a positive mediating effect of service delivery on the relationship between HRMIS and performance of selected National Government Ministries. This explains the 64.6% of the variation in the organizational performance. The result of this research corresponds with the empirical study by Swar & Sahoo (2012) and Ali & Bisht

(2018) which stated that organizations should provide frequent training to employees in service delivery units and evaluate their service experiences to enhance client satisfaction, loyalty and overall organizational performance.

As the study had a mediating variable, multiple regression analysis was also used to test the significance of coefficients that represented the mediating effect of service delivery on the relationship between independent variables and performance of performance of selected National Government Ministries. The mediating effects of the hypothesized relationships was tested using the following regression model:

$$Y = \beta_0 + \beta_{1-5} X_{1-5} + \beta_6 X_6 + \beta_7 X_7 + \mathcal{E}$$

Where:

Y = Organizational Performance

β_0 = Constant

X_{1-5} = Independent Variables

B_{1-5} = Coefficients of Independent Variables.

β_6 = Government policy (Moderating variable)

β_7 = Service delivery (Mediating variable)

\mathcal{E} = Error term of the model

The result for the statistical regression model was:

Organizational Performance = 1.382 (Constant) + (0.240e-Recruitment + 0.254e-Training + 0.289e-Appraisal + 0.358e-Payroll + 0.178e-Communication) + 0.165Government policy + 0.646Service delivery.

From the findings in Table 4.18, the study concluded that service delivery has a strong mediating effect on the relationship between HRMIS and Performance of Selected National Government Ministries in Nairobi City County.

Table 4.19: Summary of Hypothesis Testing Results

Hypothesis Testing	Estimate (Z-Score)	T-Statistics (.05 Sig. Level)	Hypothesis Testing Results	Empirical Results
H01: There is no relationship between e-Recruitment and performance of National Government Ministries in Nairobi City County	0.240	0.012	Positive and significant (Rejected)	Supported
H02: There is no relationship between e-Training and performance of National Government Ministries in Nairobi City County	0.254	0.009	Positive and significant (Rejected)	Supported
H03: There is no significant relationship between e-Appraisal and performance of National Government Ministries in Nairobi City County	0.289	0.001	Positive and significant (Rejected)	Supported
H04: There is no significant relationship between e-Payroll and performance of National Government Ministries in Nairobi City County	0.358	0.000	Positive and significant (Rejected)	Supported
H05: There is no significant relationship between e-Communication and performance of National Government Ministries in Nairobi City County	0.178	0.022	Positive and significant (Rejected)	Supported
H06: Government policy has no moderating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.	0.219	0.056	Positive and significant (Rejected)	Supported

Hypothesis Testing	Estimate (Z-Score)	T-Statistics (.05 Sig. Level)	Hypothesis Testing Results	Empirical Results
H ₀₇ : Service delivery has no mediating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.	0.646	0.000	Positive and significant (Rejected)	Supported

4.5 Content Analysis

This section presented findings of qualitative data collected in the study using open-ended questions. The findings were summarized using a narrative based on 8 major themes which were developed as broadly outlined in Chapter 3.10. This study used the 8 themes to present the comments or remarks reported by respondents on the relationship among study variables and Performance of Selected National Government Ministries in Nairobi City County. The qualitative data were collected to complement the quantitative information collected using the questionnaire method.

4.6.1 Theme 1: e-Recruitment and Performance of Selected National Government Ministries

This section covered some of the comments or remarks reported by respondents on e-Recruitment in the selected National Government Ministries. One respondent reported, “The Ministry needs to use e-Recruitment practices to easily and swiftly track job applicants”. Another respondent stated, “The Ministry should provide a satisfactory pool of qualified individuals to fill current and future demand of employees”. According to one participant, the Ministry should “adopt e-Recruitment to cut on printing costs and enhance efficiency of the hiring process”. One more respondent stated, “The Ministry should train and sensitize employees especially on e-Recruitment practices to improve effectiveness of the hiring process.”

4.6.2 Theme 2: e-Training and Performance of Selected National Government Ministries

This section consisted of remarks reported by respondents on e-Training in the selected National Government Ministries. Some respondents cited “There is need to prioritize e-training to ensure employees are equipped with adequate or requisite skills that are related to their current job or abilities that will enable them to carry out new jobs”. Another respondent stated, “There is need to regularly train employees to motivate and empower them to deliver better services”. One other participant stated, “The Ministry should have continuous training to allow employees grow their careers.” Another reported, “Train staff for at least once a year to enable them enhance their abilities and capabilities.”

According to the survey results, most respondents felt that the Ministry should “ensure proper deployment of trained employees and place them in relation to their qualifications and acquired skills”. Another response that stood out was from a respondent who opined that the Ministry should “sensitize and train employees up to the lowest levels on the use of e-Training to improve productivity”. Another respondent reported, “Older employees should be given equal opportunities in e-Training to advance their skills”.

4.6.3 Theme 3: e-Appraisal and Performance of Selected National Government Ministries

This section comprised of comments reported by respondents on e-Appraisal in the selected National Government Ministries. According to one respondent, the Ministry should “use e-appraisal reports to not only reward and motivate good performers but also address career development”. One exceptional response was that “after e-appraisals, staff should be motivated through promotion on merit”. Another outstanding response was from a respondent who reported that the Ministry should have “clear policies and guidelines on e-Appraisal to improve effectiveness of the evaluation process”.

Indeed, another respondent cited that, the Ministry should “embrace e-appraisals to enhance communication and improve feedback about past, current and future performance expectations”. According to one participant, the Ministry should “strengthen employee supervision to improve efficiency and productivity”. Similarly, another respondent reported that the Ministry should “train and sensitize employees on e-Appraisal to enhance evaluation activities”.

4.6.4 Theme 4: e-Payroll and Performance of Selected Government Ministries

This section comprised some of the comments or remarks reported by respondents on e-Payroll management in the selected National Government Ministries. Most of the respondents agreed that, “The speed of salary processing had improved due to adoption of e-Payroll”. One participant remarked that, “the Ministry should embrace e-Payroll “for employees to be accountable for results”. Another respondent stated that, “the Ministry should adopt stern disciplinary measures on employees who fail to adhere to existing e-Payroll guidelines”. A participant noted, “To eliminate irregular payments in the payroll, there should be regular auditing and reporting”.

4.6.5 Theme 5: e-Communication and Performance of Selected National Government Ministries

This section contained some of the comments or remarks reported by respondents on e-Communication in the selected National Government Ministries. Interestingly, one participant opined that the Ministry should use e-Communication “so that employees can get a pop-up notifications and access HR information easily.” Another respondent reported that the Ministry should “increase use of e-Communication to disseminate information between departments”.

Another participant remarked that, “all employees should use e-Communication since there is a lot of information available there”. This point was further emphasized by one

more respondent who reported that, “the Ministry needs to enhance use of e-Communication platform is to enable employees to interact, share views as well as get immediate feedback on matters concerning them”. Lastly, there is a participant who reported, “e-Communication should be made active to enhance distribution of information to all employees”.

4.6.6 Theme 6: Government Policy and its moderator effect on Performance of Selected National Government Ministries

This section contains some of the comments or remarks on Government policy in the selected National Government Ministry. According to one respondent, “the Ministry needs to encourage employees to use HR policies to improve integrity, transparency and accountability of personnel actions in the Ministry”. Another respondent reported that the Ministry should ensure that “Government policy on HRM is communicated to all employees to enhance compliance”. Another participant reported that the Ministry should “sensitize employees on relevant Government policy to improve uniformity of personnel actions.” Yet another employee reported that the Ministry should “ensure employees observe applicable Government policies to maintain ethical norms and standards”.

4.6.7 Theme 7: Service Delivery and its mediator effect on Performance of Selected National Government Ministries

This section contains some of the comments or remarks on service delivery in the selected National Government Ministry. One respondent reported, “More attention is required to sensitize employees on the importance of service quality to clients”. Another participant opined that the Ministry should, “ease access to Government services and provide timely feedback to clients on the promised service.” Another respondent added that the Ministry should “sensitize and train the front-office employees to equip them with skills to handle clients with care”.

4.6 Comments on Performance of Selected National Government Ministries

This section contains comments elicited by different respondents on overall organizational Performance of Selected National Government Ministries. Similar response patterns were grouped in manageable clusters to enable easy analysis and reporting. The findings are summarized as follows:

4.7 Positive Opinions on Performance of Selected National Government Ministries

Some of the respondents expressed a positive opinion about performance of the Ministry. For instance, some respondents reported, “Performance of this Ministry is good. However, there is still room for improvement”. Another respondent stated, “Performance of this Ministry is good. However, employees lack necessary working tools/equipment and office space. There is also staff shortage hence employees are being overworked.” A different respondent added that performance of the Ministry is good but employees are overworked due to persistent use of traditional and manual HR practices.”

Moreover, a respondent who rated performance of the Ministry as good remarked, “Enhancement of financial allocation to the Ministry will go a long way towards achieving the Ministry's mandate.” Some respondent reported, “Performance is good but additional funds for the department’s development activities be allocated to the Ministry to facilitate achievement of mandates and set goals”. Some respondent reported, “Performance of the Ministry is good but there is still a lot more potential to do better.” Additionally, a respondent of who rated performance the Ministry at 60% reported, “A lot needs to be done to attain optimal performance.” Quite a number of respondents reported that performance of the Ministry is good though there is still room for improvement.”

4.8 Contrary Opinions on Performance of Selected National Government Ministries

Some respondents expressed a contrary opinion about performance of the Ministry. A respondent reported, “The Ministry is not performing well due to limited funds hindering implementation of the planned programmes.” Another reported, “Promote lower cadre officers who obtain required qualifications to boost their morale.” Some respondent reported, “Employees be enlightened on the Ministry’s strategic direction to enable them work towards achievement of its goals.” One more reported, “The Ministry avoid too many adhoc projects within the year.”

Some respondents reported, “Provide enough computers and employees.” A different respondent reported, “There is fatigue and burn-out due to under-staffing.” Another recounted, “There is low morale due to stagnation in same job group. Staffs are not getting enough training.” Another respondent reported, “The staffs are few”. In addition, a different respondent reported, “The Ministry should deploy employees according to their skills and qualifications to improve efficiency”. One more respondent reported, “There is no employee involvement in decision-making. Thus, it is difficult to know whether organizational objectives have been met or not.”

Another respondent reported, “Offer a conducive work environment and equip employees with office equipment for efficient service delivery”. Another respondent reported, “Employee need adequate provision of working tools/equipment and office space.” Another respondent reported, “Make available adequate working tools and improve on office accommodation. “Still one more respondent reported, “Allocate more office space for better service delivery.”

4.9 Comments on HRMIS and Performance of Selected National Government Ministries

This section contains some of the comments reported by the respondents on HRMIS in their respective National Government Ministries. One respondent reported, “Adoption of HRMIS have enhanced performance of this Ministry. Another respondent remarked that the Ministry should, “Increase use of HRMIS to enhance efficiency and ensure timely delivery of public services”. Another respondent reported, “The Ministry can do much better through automation of core HR practices”.

However, some of the respondents reported that, “HRMIS is very slow and sometimes not accessible due to failure of network.” Another respondent remarked, “There is low utilization of HRMIS in the Ministry due to poor internet connectivity and lack of appropriate ICT infrastructure”. One more respondent remarked, “HRMIS is up but very slow. A different respondent remarked, “HRMIS network fails from time to time. Besides, system hang-ups are too frequent hence affecting productivity”.

4.10 Suggestions on improvement of Performance of Selected National Government Ministries

This section contains suggestions provided by different respondents on improvement of performance through use of HRMIS in National Government Ministries. The findings were as summarized below:

4.10.1 E-Recruitment and Performance of Selected National Government Ministries

One respondent suggested, “The Ministry should prioritize and increase use of e-Recruitment to increase efficiency and effectiveness of the HR function.” One respondent proposed, “The Ministry should ensure appropriate deployment of employees in line with

their skills and qualifications/specialization.” Another respondent suggested The Ministry should employees in relation to their duties.”

4.10.2 E-Training and Performance of Selected National Government Ministries

Some respondents suggested, “The Ministry should train all employees to equip them with requisite skills to enhance efficiency”. Another recommended, “The Ministry should offer more training to employees as a motivation.” One respondent proposed, “Provide more e-Training especially on the older workforce who are not conversant with the technology.” One respondent proposed, “Prioritize and fund sensitization and training of employees up to the lowest levels to improve productivity and service delivery.”

Some respondents suggested, “The Ministry needs to invest in e-Training programs at least once a year to boost its overall performance.” A number of respondents proposed, “Employees in the Ministry need to be given equal opportunities for e-Training because it is still not clear how to use the module.” One respondent proposed, “The Ministry should have well-planned and continuous e-Training for employees' to make work easier and employees more skilled.”

A different respondent reported, “Discourage use of traditional HR systems so that Ministries can make optimum use of funds budgeted for HRMIS training and implementation.” Most respondent suggested, “The Government should make HRMIS use compulsory for employee to perform their duties efficiently.” One respondent suggested, “There is need to upscale digitization of all HR processes and training of all employees to realize the intended business goal.

4.10.3 E-Appraisal and Performance of Selected National Government Ministries

One respondent suggested, “The Ministry should have clear policies and guidelines on performance management to improve the e-appraisal process.” One respondent proposed,

“The Ministry should encourage employee to adhere to work plans and team work to improve reporting during performance appraisals.” One respondent suggested, “Strengthen e-performance appraisal tool to enhance feedback to employees.”

One respondent proposed, “Employee involvement by cascading performance contracts to all employees”. Another respondent proposed, “The Ministry should use e-performance appraisal reports to promote good performers, employee development as well as address the issue of employees who have stagnated for many years. Some respondents suggested, “Prioritize training of employees on e-Appraisal and strengthen employee supervision and improve efficiency and productivity.”

4.10.4 E-Payroll and Performance of Selected National Government Ministries

The participants used different words to describe how the old manual payroll system adversely affected the employees’ productivity and organization’s overall performance. One respondent suggested, “The Ministry needs to increase use of e-Payroll to automate all payroll information and improve efficiency.” Another respondent suggested, “The Ministry should adopt stern disciplinary measures on employees who fail to adhere to laid down guidelines on e-Payroll. Another respondent proposed, “The Ministry should embrace e-Payroll and encourage employees to be accountable for results.” Another participant suggested, “There is need to reward staffs suitably to improve their morale”.

4.10.5 E-Communication and Performance of Selected National Government Ministries

One respondent suggested, “The Ministry should utilize e-communication to facilitate immediate feedback and improve firm performance.” Another respondent suggested, “Provide employees with computers to enable better processing of information.” Some respondents suggested, “The Ministry should enhance use of e-communication platform to enable employees interact, share views and get feedback on matters concerning them.”

A different respondent recommended, “Utilize e-communication more to facilitate quick circulation of information.” Another respondent suggested, “All employees should embrace use of e-communication since there is a lot of information there.”

4.10.6 Service Delivery and Performance of Selected National Government

Ministries

One respondent suggested, “The Ministry should provide more resources (funds, human capital, HRMIS) to enhance service delivery.” Another suggested, “The Ministry should “increase use of e-services to ease access and timely delivery of public services.” In addition, one respondent suggested, “The Ministry should put in place a mechanism in which employees can get timely feedback on their complaints.” Some respondents suggested, “The need for reduction on bureaucratic practices and use of e-services to fast-track provision of public services to clients.” Another suggested, “The Ministry should “Sensitize and train employees to use e-services effectively and improve efficiency.

4.10.7 Government Policy and Performance of Selected National Government

Ministries

One respondent suggested, “The Ministry should ensure that Government policy guiding HRM practices are brought to the attention of all employees.” Another respondent suggested, “Employees in the Ministry should adhere to laid down Government policy and HRM procedures to promote professionalism and efficiency.” One respondent suggested, “All relevant Government policies should be well-communicated and made available on the Ministry's website.” A respondent suggested, “The Ministry should improve and revise existing policies to improve integrity and transparency.” Another respondent suggested, “Sensitize all employees on use of relevant Government policies and existing HR manuals/guidelines to promote compliance.

4.11 Overall Suggestions to improve use of HRMIS in the Selected National Government Ministries

In conclusion, majority of the respondent suggested that the Government should, “Upgrade the HRMIS infrastructure to improve speed, internet connectivity and other ICT infrastructure”. “Create more innovations and offer technical support to employees on use of HRMIS to improve efficiency and effectiveness.”

One respondent suggested, “The Ministry should improve the work environment and facilitate employees with necessary resources such as computers, stationery, office space and equipment, among others to improve efficiency and HRMIS automation levels.”

Most respondents suggested, “The Ministry should manage and utilize HRMIS resources efficiently and effectively to achieve the intended organizational goals.”

Other respondents proposed, “Involvement of employees in strategic planning and decision-making to enable timely achievement of intended HRMIS goals”. Another respondent proposed, “The Ministry should be allocated sufficient funds to cater for HRMIS improvements.” Another reported, “The Ministry should be proactive to deal with expected technological changes so as they occur to get a competitive edge in the labour market.”

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the current study, its conclusion, specific contributions to the body of knowledge, policy recommendations and suggestions for further research.

5.2 Summary

Since the 1990s, National Government Ministries in Kenya are experiencing glaring challenges in terms of performance hindering their appropriate contribution on the national development agenda. In an endeavour to address the challenges, the Government in 2003-2007 initiated several public sector reforms aimed at transformation of National Government Ministries to improve productivity and organizational performance (GoK, 2003; GoK, 2007).

A number of the initiatives introduced include implementation of HRMIS to assist in management of the human resource practice. However, the implementation of HRMIS has not realized the desired outcomes as National Government Ministries continue to use manual or traditional HR systems thus, compounding human resource management challenges. The resultant effect is that National Government Ministries are unable to achieve efficiency or deliver services at optimal levels.

It is in light of the above that it was found necessary to undertake this study. Past studies on performance of selected National Government Ministries in Kenya have paid little attention to the influence of human resource management information systems on organizational performance, hence the attention on this study to analyze the influence of

human resource management information systems on performance of selected National Government Ministries in Nairobi City County.

The specific objectives were to investigate the relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County; To determine the relationship between e-Training and performance of selected National Government Ministries; To explore the relationship between e-Appraisal and performance of selected National Government Ministries; To evaluate the relationship between e-Payroll and performance of selected National Government Ministries; and To analyze the relationship between e-Communication and performance of selected National Government Ministries.

The research further examined the moderating effect of Government policy on the relationship between human resource management information systems and performance of selected National Government Ministries. It also investigated the mediating effect of service delivery on the relationship between human resource management information systems and performance of selected National Government Ministries.

The research was a descriptive survey, which adopted the positivism research philosophy. Data were collected using questionnaires. Respondents were picked using proportionate stratified random samples. Data were analyzed using descriptive and inferential statistics and summarized using aggregate mean while standard deviations. Multiple regressions were employed to test the linear relationships between the hypothesized variables and organizational performance.

The first research objective was to establish the relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County. The null hypotheses indicated that there is no relationship between e-Recruitment and

performance of selected National Government Ministries Nairobi City County and therefore, it was rejected in favour of the alternate hypotheses. This implies that e-Recruitment has a significant influence on performance of selected National Government Ministries in Nairobi City County.

Appropriate e-Recruitment practices are essentially significant to any organization in need of identification, attraction and acquisition of potentially qualified pool of human resources. Acquisition of competent employees enables them to handle tasks efficiently and effectively. This in turn enhances their productivity, which consequently leads to improved performance. Thus, organizations should uptake e-Recruitment practices to facilitate hiring of potentially qualified pool of human resources to achieve the predetermined business goal efficiently and effectively.

The second research objective was to determine the relationship between e-Training and performance of selected National Government Ministries in Nairobi City County. The null hypotheses stated there is no relationship between e-Training and performance of selected National Government Ministries in Kenya and therefore, it was rejected in favour of the alternate hypotheses. This denotes that e-Training has a major influence on performance of selected National Government Ministries in Nairobi City County.

When employees become aware that the organization has drawn attention on their training, they in turn show commitment and apply their best creativity to achieve organizational goals. Without proper e-Training, employees cannot develop requisite skills required for performing assigned tasks. Well-trained staffs always get good results and this is significant to productivity and performance. Thus, top managers should realize that inculcating a continuous learning culture makes employees become more efficient

and satisfied with their jobs, which contributes towards achievement of organizational goals and objectives.

The third research objective was to explore the relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County. The null hypotheses specified that there is no relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County and hence, it was rejected in favour of the alternate hypotheses. This denotes that e-Appraisal has a significant influence on performance of selected National Government Ministries in Nairobi City County.

When employees become aware that performance of assigned tasks is being evaluated, they become motivated and are willing to take up extra responsibilities to achieve intended organizational outcomes. Such employees have higher levels of productivity and job performance, which eventually leads to improved organization's performance. When organizations implement effective e-Appraisal practices, the managers can identify areas that need enhancement, which has a significant effect on organizational performance.

The fourth research objective was to evaluate the relationship between e-Payroll and the performance of selected National Government Ministries in Nairobi City County. The null hypotheses indicated that there is no relationship between e-Payroll and performance of selected National Government Ministries in Nairobi City County and hence, it was rejected in favour of the alternate hypotheses. This means that e-Payroll has a positive and statistically significant influence on performance of selected National Government Ministries in Nairobi City County.

Organizations should have an e-Payroll system that provides access to timely information that top management can use to make better business decisions. The system should also

generate payroll data to assist managers analyze departmental trends in terms of attendance, absence, leave, turnover, among others to gain understanding whether the organization is efficient or effective or vice versa. Besides, data from the payroll can be useful in benchmarking against competition, thus enhancing the payroll process. Thus, top management should ensure e-Payroll practices are effectively implemented as this in turn contributes towards achievement of the organization's goals

The fifth research objective was to analyze the relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County. The null Hypotheses indicated that there is no relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County and therefore, it was rejected in favour of the alternate hypotheses. This suggests that e-Communication has a positive and significant influence on performance of selected National Government Ministries in Nairobi City County.

E-communication is an essential part of a business strategy. Organizations that encourage employees to use of e-Communication achieve their organizational goals and have clear values, mission and vision. Employees who are facilitated with an effective e-Communication system are able to exchange and coordinate information within the workplace, which is key to organizational effectiveness and excellence. It is therefore important for National Government Ministries to ensure that e-Communication practices are put in place as they promote cohesive relations between employees and external clients, which are critical to productivity and performance of the organization.

The sixth research objective was to examine whether Government policy has a moderating effect on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City

County. The null hypotheses specified that there is no relationship between Government policy and performance of selected National Government Ministries in Nairobi City County and therefore, it was rejected in favour of the alternate hypotheses. This suggests that Government policy has a significant moderating role on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.

A Government policy is the pivot on which other organization's resources such as funds, human capital and innovations revolve on, hence are important in achieving organizational goals. Therefore, top managers should ensure that every Government policy is implemented effectively to boost compliance, equity and transparency. The managers should also provide clear roles and responsibilities to ensure the right HR regulations, standard and norms are practised to facilitate better senior management decisions and enhance organizational goals.

The seventh research objective was to establish whether service delivery has a mediating effect on the relationship among human resource management information systems and performance of selected National Government Ministries in Nairobi City County. The null hypotheses indicated that there is no relationship between service delivery and performance of selected National Government Ministries in Nairobi City County and therefore, it was rejected in favour of the alternate hypotheses. This suggests that service delivery has a significant mediating role on the relationship between human resource management information systems and performance of selected National Government Ministries in Nairobi City County.

Public organizations were established to serve people and thus service quality is dictated by client's expectations and satisfaction. Hence, public organizations that provide quality

services win clients' commitment and make them loyal for a long time. To achieve optimal client expectations and satisfaction levels, National Government Ministries in Kenya should intensify efforts to bring about an attitudinal change in public service that values transparency and accountability to the citizens of Kenya. This is key to survival, growth, competitiveness and sustainability.

5.3 Conclusions

One of the public sector reforms initiatives was implementation of HRMIS, which was aimed at transforming National Government Ministries to improve productivity and overall organizational performance. To achieve this goal, National Government Ministries were expected to uptake and use HRMIS. To achieving this goal, National Government Ministries are expected to create a conducive and enabling environment to enable employees to deliver services efficiently and effectively. However, the full potential of HRMIS has not been realized as National Government Ministries continue to use manual or traditional HR systems in their day-to-day operations

Earlier empirical studies on performance of public sector organizations including National Government Ministries in Kenya have not fully addressed the role of HRMIS in improving organizational performance. While there exists empirical evidence on studies conducted elsewhere, there is little to no empirical research in the context of the selected National Government Ministries in Nairobi City County. Furthermore, most scholars had their focus on the direct relationship among HRMIS and performance of organizations. Sparse research exists on effect of Government policy as a moderator and service delivery as mediator on the relationship among HRMIS and performance of organizations. It is against this setting that the researcher sought to fill this evident knowledge gap. With focus on research objectives, the researcher made the following conclusions.

The first research objective was to investigate the relationship between e-Recruitment and performance of selected National Government Ministries in Nairobi City County. The study concluded that e-Recruitment positively influences organizational performance. Thus, National Government Ministries should uptake the practices to forecast current and future demand and supply of employees to achieve the business goal.

The second research objective was to determine the relationship between e-Training and performance of selected National Government Ministries in Nairobi City County. The study concluded consistent human capital development should be given great importance and value for the organization's continuity and success. The study also concluded that organizations should embrace the culture of e-Training as it greatly contributes towards high job performance results and long-term organizational success.

The third research objective was to explore the relationship between e-Appraisal and performance of selected National Government Ministries in Nairobi City County. The study concluded that organizations in Africa including National Government Ministries in Kenya should effectively implement HRMIS to achieve the expected level of efficiency, productivity and organizational performance.

The fourth research objective was to evaluate the relationship between e-Payroll and the performance of selected National Government Ministries in Nairobi City County. The study concluded that e-Payroll has direct effect on employees' productivity and performance. Therefore, organizations should lay emphasis on the system to manage public funds in the most effective and economic manner.

The fifth research objective was to analyze the relationship between e-Communication and performance of selected National Government Ministries in Nairobi City County. The study concluded that that e-Communication is effective for sharing organizational

information. Thus, greater attention should be given to e- e-Communication because it is an important lifeline in every organization.

The sixth research objective was to examine whether Government policy has a moderating effect on the relationship among human resource management information systems and performance of selected National Government Ministries in Nairobi City County. The study concluded that effective application of Government policy promotes compliance. Therefore, effective implementation of existing Government policy boosts employees' compliance, which ultimately steers organizational performance to greater levels.

The seventh research objective was to investigate whether service delivery has a mediating effect on the relationship among human resource management information systems and performance of selected National Government Ministries in Nairobi City County. Based on the findings, the researcher concluded that service quality is as an essential strategy for organizational success and survival. Accordingly, National Government Ministries should enhance service quality to meet clients' expectations in order to positively impact on organizational performance.

5.4 Contributions of the Study to Knowledge

The study sought to examine the influence of HRMIS on organizational performance. Existing studies have looked at the relationship among HRMIS and organizational performance. However, most studies were undertaken in the developed countries like UK and USA. In the developing countries, some researchers have attempted to conduct a study in this area. However, few researchers have measured the moderating effect of Government policy and mediating effect of service delivery on organizational performance.

The current study therefore, contributes to knowledge in this topic, based on a Kenyan context with special emphasis on selected National Government Ministries in Nairobi City County. The conclusions of the study will shed some light for policy makers in National Government Ministries and assist them to increase their uptake on HRMIS because of its significance in improving organizational performance. Theoretically, the current study contributes to HRM and HRMIS literature by supporting the RBV, TAM, human capital theory and the Goal Model Approach, which highlights the need for organizations to utilize technology to improve performance and gain a sustainable competitive advantage.

Finally, the current study contributes to the unexplored research area on performance of selected National Government Ministries in Kenya. Previous studies have revealed a significant integration between HRMIS and organizational performance. However, most studies were conducted in very different contexts such as public universities, private hospitals, banks or hotels with very little attention being given to the public sector in particular, National Government Ministries in Kenya. This gap in knowledge has therefore been addressed through this study in the context of selected National Government Ministries in Nairobi City County.

5.5 Policy Recommendations

The policy recommendations have been drawn from the conclusions as discussed in section 5.3 of this Thesis. From the study findings, it was evident that e-Recruitment, e-Training, e-Appraisal, e-Payroll, e-Communication, Government policy (moderator) and service delivery (mediator) have a positive and significant influence on Performance of Selected National Government Ministries in Nairobi City County. Based on the conclusions of the study, the researcher's recommendations are as follows:

On e-Recruitment, which was found to have a significant influence on organizational performance, the study recommends that National Government Ministries should uptake the use of e-Recruitment practices to ensure newly recruited candidates are duly informed about necessary recruitment information to increase their level of efficiency and effectiveness in the organization.

On e-Training which was found to have a significant influence on organizational performance, the current study recommends that National Government Ministries should conduct regular e-Training programs to equip employees with requisite skills as well as boost knowledge management aspects and facilitate skills capture and audits for effective performance. The study also recommends capacity building of HRMIS developers to cater for ever-changing user requirements. Additionally, the Ministries should strengthen training impact assessments to check the value for public funds spent on programs and evaluate the outcome on productivity and performance.

On e-Appraisal, which was found to have a significant influence on organizational performance, the study recommends strengthening while standardization of e-performance evaluations to provide for identification of employees with training needs (using the annual appraisal forms), enable execution of a disciplinary action or promotion of good performers with focus on staff mobility and career progression.

On e-Payroll, which was found to have a significant influence on organizational performance, the study recommends that National Government Ministries should engage different arms of Government to conduct regular payroll audits to avert fraud and embezzlement of public funds. Further, Ministries should oversee regular payroll cleansing to check duplicate records or inactive (ghost) employees. In addition, the study

suggests integration of e-Payroll to existing information systems in Government to curb misuse of resources and enhance payroll controls.

On e-Communication, which was found to have a significant influence on organizational performance, the study recommends that National Government Ministries should uptake use of HR portals to distribute information and increase coordination and collaboration between departments. The study also recommends that employees should utilize online platforms to interact and obtain timely responses or resolutions to their grievances. The study further suggests that Ministries should automate institutional repositories (circulars, policies, strategic plans, reports) and effectively manage them for future use.

On Government policy, which was found to have a significant influence on organizational performance, the study recommends that National Government Ministries should review and harmonize existing Government policy to incorporate changes necessitated by rapid technological advances, re-organization of Government or new legislation. The study further recommends that Ministries should conduct frequent compliance surveys and audits on Government policy to check the levels of adherence amongst employees and enforce stringent measures to address professional misconduct.

On service delivery, which was found to have a significant influence on organizational performance, the study recommends that National Government Ministries should establish and rollout self-service centres manned by competent employees to enhance delivery of government services. Further, the study recommends Ministries should undertake regular client satisfaction surveys to gather information about positive and negative perceptions that could improve service quality. Additionally, Ministries should provide frequent training to contact employees to evaluate their service experiences and

provide the latest technology in terms of computers in order to avert unnecessary delays thereby enhancing service quality in National Government Ministries.

On HRMIS, the study recommends that the Government should come up with an economic model that will be implemented consistently over a sustained period of time to achieve the intended goal of improved performance, efficiency and effectiveness. Further, should allocate enough funds for upgrades and maintenance of ICT facilities and infrastructure to enhance integration of main server capabilities and strengthen use of HRMIS in Ministries.

On organizational performance, the study recommends that National Government Ministries should provide a conducive environment for employees to increase productivity and job satisfaction. Further, Ministries should maintain optimal staffing numbers and provide employees with appropriate work equipment to improve efficiency and effectiveness. Additionally, the Government should adequately fund Ministry for successful implementation of projects.

Lastly, National Government Ministries should effectively implement the existing HR plan to create room for recruitment of new employees and training of young professionals to take up jobs upon exit of older staffs. On staffing gaps, Ministries should develop modalities and criteria to identify and promote staffs with relevant skills to higher grades within the existing grading structures to cater for career management.

5.6 Suggestions for Further Study

This research was a cross-sectional descriptive survey on the influence of HRMIS on performance of selected National Government Ministries Nairobi City County. Therefore, longitudinal survey is necessary in the context of County Governments in Kenya to investigate the unexplored HRMIS in the study such as selection, development, planning,

leave management, reward management, employee relations among others to determine the causal links more explicitly.

Further, the findings of the current study may not suit all National Government Ministries or public organizations in the developing countries mainly in Africa, due to varying types of geographical locations, economic, cultural or institutional characteristics, workforce sizes or internal business operations and processes. Therefore, further research is needed using different theoretical models of measurement to obtain a broader understanding of the topic as well as facilitate generalizability of the study findings.

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APPENDICES

APPENDIX I: SELECTED NATIONAL GOVERNMENT MINISTRIES

The selected National Government Ministries in Nairobi City County are:

S/No.	Selected National Government Ministry
1.	Ministry of Public Service and Gender
2.	Ministry of Information and Communication Technology
3.	The National Treasury and Planning
4.	Ministry of Education
5.	Ministry of Interior and Co-ordination of National Government
6.	Ministry of Foreign Affairs

Source: Executive Order on Organization of Government of Kenya (GoK, 2018)

APPENDIX II: COVER LETTER

Janet C. Kipchoge
P.O. Box 30050-00100
NAIROBI

To Whom It May Concern

Dear Sir/Madam,

RE: HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS AND PERFORMANCE OF SELECTED NATIONAL GOVERNMENT MINISTRIES IN NAIROBI CITY COUNTY

I am a Postgraduate student pursuing a degree in Master of Science (Human Resource Management (Option) at Kenyatta University, Nairobi.

As part of the requirement for the award of the Masters' degree, I am expected to carry out a research study on "*Human Resource Management Information Systems and performance of selected National Government Ministries in Nairobi City County*". To enable completion of this thesis, I humbly request your assistance to provide data from your Ministry.

I have attached a copy of the questionnaire. Kindly answer all the questions appropriately. The information you provide will be used for academic purposes only and will be treated with utmost confidentiality. No specific references were made on your Ministry. However, the summary results/findings of the research study were made public.

I look forward to your utmost support and cooperation

Kind Regards,

Janet C. Kipchoge
Reg. No. D58/CTY/PT/21847/2012
Kenyatta University
School of Business

APPENDIX III: QUESTIONNAIRE

KENYATTA UNIVERSITY

School of Business

Dear Sir/Madam,

The purpose of this questionnaire is to collect information as part of a research for the award of Master of Science (HRM Option) at Kenyatta University, Nairobi. The topic of the study is “*Human Resource Management Information Systems and performance of selected National Government Ministries in Nairobi City County*”.

I will be thankful if you respond to the questions accurately. This is only academic paper and your responses will be treated with utmost anonymity and confidentiality. Thank you

PART A: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Kindly respond to all questions. Tick (✓) appropriate box that best defines your response.

1. Kindly indicate your gender:

Male [] Female []

2. What age group are you in?

Below 35 years [] 35 to 40 years [] 41 to 45 years [] Over 45 years []

3. What is your highest education level:

High School Certificate [] Diploma [] Bachelor's degree []

Masters' Degree [] Doctorate []

4. Indicate your Ministry:

Interior and Coordination of National Government [] Education []

Public Service, Youth and Gender [] Foreign Affairs []

Information and Communication Technology []

The National Treasury and Planning []

5. Indicate your department:

HRM [] ICT [] Finance []

6. Indicate your Management level:

Top management [] Middle-level management [] Operational staff []

7. Length of service in current Ministry:

1 to 3 years [] 4 to 5 years [] Over 5 years []

**PART B: HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEMS
(HRMIS) AND ORGANIZATIONAL PERFORMANCE**

The following statements/items have been used to seek your views on the influence of e-Recruitment, e-Training, e-Appraisal, e-Payroll and e-Communication on Performance of selected National Government Ministries in Kenya.

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on e-Recruitment and performance of your Ministry (5=Strongly agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	e-Recruitment and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
1.	e-Recruitment makes tracking of job application fast and easy					
2.	e-Recruitment enables employers to manage diverse job applicants and appointment of potential candidates					
3.	e-Recruitment allows employers to pre-screen CVs, shortlist best candidates and manage online resumes for future staffing needs					
4.	e-Recruitment lowers costs on printing, photocopy and advertisements as compared to use of manual systems					
5.	e-Recruitment helps managers to manage personal number allocation requests for new staff in Ministries					
6.	e-Recruitment enhances the quality and efficiency of the hiring process					
7.	e-Recruitment module is not utilized in this Ministry					

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on e-Training and performance of your Ministry (5=Strongly agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	e-Training and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
8.	e-Training is easily accessible. It can occur anywhere, anytime.					
9.	e-Training enables employees to increase job skills and efficiency of the assigned tasks					
10.	HR Managers can plan and project e-training programs as well as generate reports on training costs per year					
11.	HR Managers can use data that HR managers can use in making career management and succession planning decisions					
12.	e-Training assists HR managers to process training requests and conduct e-training needs analysis					
13.	e-Training module is not utilized in this Ministry					

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on e-Appraisal and performance of your Ministry (5=Strongly agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	e-Appraisal and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
14.	e-Appraisal system is convenient and easy to use					
15.	e-Appraisal helps supervisors to monitor productivity and identify employee training needs					
16.	e-Appraisal system generates relevant data that managers can use to support decisions on promotions, training					
17.	e-Appraisal has enhanced the appraisal rating system					
18.	e-Appraisal is utilized for appraisal activities (target setting, work planning) in this Ministry					
19.	e-Appraisal is not utilized in this Ministry					

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on e-Payroll and performance of your Ministry (5=Strongly agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	e-Payroll and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
20.	e-Payroll facilitates accuracy and speed of processing monthly payrolls and e-payslips					
21.	e-Payroll has reduced paper work, duplicate records and printing costs in this Ministry					
22.	e-Payroll helps managers to generate timely salary reports					
23.	e-Payroll provides attendance records to support decisions on personnel emoluments and budgeting					
24.	e-Payroll is utilized to manage the wage bill and resources (human capital, funds, innovations) in this Ministry					
25.	e-Payroll is not utilized in the Ministry					

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on e-Communication and performance of your Ministry (5=Strongly agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	e-Communication and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
26.	e-Communication is accessible from various locations within the Ministry					
27.	e-Communication provides real-time HR updates and employees are able to interact in the Ministry					

S/No	e-Communication and performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
28.	e-Communication allows dissemination and easy access to organizational information (policies, Acts and regulations)					
29.	e-Communication reduces costs associated with printing (brochures, posters, reports, newsletters)					
30.	e-Communication enables the Ministry to efficiently disseminate information contained in policy guidelines, manuals					
31.	e-Communication module is not utilized in the Ministry					

PART C: EFFECT OF GOVERNMENT POLICY ON PERFORMANCE OF NATIONAL GOVERNMENT MINISTRIES IN KENYA

The following statements/items have been used to seek your views on the moderating effect of government policy on performance of your Ministry

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on the moderating effect of government policy on performance of your Ministry (5=Strongly Agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly Disagree (SD))

Tick (√) appropriate box that best defines your response

S/No	The moderating effect of government policy on performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
32.	Government policy documents are applied to provide guidance on HR actions like recruitment, training					
33.	Government policies on HRM are reviewed from time to time to reflect policy changes					
34.	Government policy promotes consistency, equality and excellence in delivery of public services					
35.	Government policy promotes integrity, transparency and accountability of personnel actions in the Ministry					
36.	There is laxity on adherence to Government policy on personnel actions					

PART D: THE MEDIATING EFFECT OF SERVICE DELIVERY ON PERFORMANCE OF YOUR MINISTRY

The following statements/items have been used to seek your views on the mediating effect of service delivery on performance of your Ministry

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on the mediating effect of service delivery on performance of your Ministry (5=Strongly Agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly Disagree (SD))

Tick (✓) appropriate box that best defines your response.

S/No	The mediating effect of service delivery on performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
37.	Front office employees in this Ministry are friendly and neat in appearance					
38.	The work environment is clean, conducive and visually appealing					
39.	I have appropriate equipment (computer, printer, telephone, furniture, internet connectivity) for efficient and effective service delivery					
40.	Information on our Ministry's mandate, strategic plan and performance reports are easily available to employees					
41.	Our Ministry has a grievance handling mechanism to address employees' concerns					
42.	The services offered in this Ministry are reliable, responsiveness and satisfactory					

PART D: PERFORMANCE OF YOUR MINISTRY

The following statements/items have been used to seek your views on overall Performance of your Ministry

On a scale of 1 to 5, please indicate the extent to which the following statements are accurate or inaccurate on overall performance of your Ministry (5=Strongly Agree (SA), 4=Agree (A), 3=Not sure (NT), 2=Disagree (D) and 1=Strongly Disagree (SD))

Tick (✓) appropriate box that best defines your response

S/No	Overall Performance of your Ministry	5 SA	4 A	3 NT	2 D	1 SD
43.	The Ministry is working towards achieving its strategy, mission, vision which are effectively communicated to staffs					
44.	Employees are well-utilized to deliver services efficiently and effectively					
45.	The Ministry uses HRMIS to improve operational efficiency and organizational effectiveness					
46.	The Ministry makes optimal use of its resources (funds, people, innovations, assets) efficiently to realize its organizational goals					
47.	This Ministry is a pleasant place to work in. Employee productivity is measured. Most are satisfied with their current deployment and job					
48.	During the last 3 years, the Ministry has met expected goals and objectives					

49. In view of the statements/items above, what are your additional remarks/comments on performance of this Ministry?

50. What other suggestion(s)/recommendation(s) would you propose to improve performance of the Ministry's?

Thank you for your time

APPENDIX V: RESEARCH AUTHORIZATION/ CLEARANCE LETTER

Kipchoge Janet Chavuya
P.O. Box 30095 - 00100
NAIROBI

___ / ___ / 2021

The Principal Secretary
Ministry of _____
P.O. Box _____
NAIROBI

Dear Sir/Madam,

RE: PERMISSION TO COLLECT RESEARCH DATA IN YOUR MINISTRY

I am a post-graduate student at Kenyatta University, in the School of Business, Department of Business Administration. I am pursuing a Master of Science Degree in Human Resource Management.

I am undertaking a research titled “Human Resource Information Systems and Performance of Selected National Government Ministries in Nairobi City County”.

The purpose of this study is to assess the perception of employees on the influence of Human Resource Management Information Systems on the Performance of selected National Government Ministries situated in Nairobi City County.

Through this letter, I am seeking for your permission to collect data from members of staff in your Ministry.

I wish to assure you that the information obtained from the employees in your Ministry were used solely and strictly for the purpose of this research.

On completion of this study, I undertake to submit a bound hard copy of this thesis report to your office/resource centre.

Attached please find copies of my NACOSTI research permit, thesis proposal and a copy of the questionnaire for your consideration.

Thanking you in anticipation.

Yours faithfully,

Janet C. Kipchoge
Reg. No. D58/CTY/PT/21847/2012
Kenyatta University
School of Business