

**PERCEIVED FACTORS INFLUENCING THE IMPLEMENTATION OF  
HUMAN RESOURCE INFORMATION SYSTEM AT KENYA  
REVENUE AUTHORITY**

**BY**

**FATUMA MILGO MOHAMED**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF  
MASTER IN BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS,  
UNIVERSITY OF NAIROBI**

## DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

Signature \_\_\_\_\_

**FATUMA MILIGO MOHAMED**

Date \_\_\_\_\_

**D61/8312/2006**

This research project has been submitted for examination with my approval as the university supervisor.

Signature \_\_\_\_\_

**MRS. FLORENCE MUINDI**

**LECTURER**

**SCHOOL OF BUSINESS**

**UNIVERSITY OF NAIROBI**

Date \_\_\_\_\_

## **ACKNOWLEDGEMENT**

I would like to thank first and foremost the Almighty God. Without His strength, insight and provision this project would not have been possible.

My supervisor, Mrs. Muindi worked tirelessly to give guidance and moral support. She was always available and supportive. I would also like to thank Mr. Omondi for his constructive criticism and contribution.

My family too, for the support and encouragement as I worked long hours after work, sacrificing precious family time. My husband and daughters always inspired me to move forward till completion of the project.

My classmates in the MBA program were a source of encouragement, especially during the project phase. The team spirit, sharing ideas and constant encouragement propelled me to move forward. My workmates were instrumental, both for their moral support and their input in data collection as respondents. My immediate superiors were also supportive during the entire MBA period.

May God bless you all!

## **DEDICATION**

I dedicate this research project to my family who encouraged me to pursue the program in spite of various challenges. To my three loving daughters, your smiles motivated me to pursue the program to completion.

To my parents Mr. & Mrs. Mohamed Osman, whose struggle has seen me through my education challenges, I also extend my heartfelt thanks.

## **ABSTRACT**

In an era striving for excellence, human resources become a crucial source of competitiveness (Porter, 1998). Pitman, 2004 reported that the five best performing firms in the USA rely not only on technology, patents, or strategic position but on the management of their workforce for sustained advantages in the market place. The business community also realizes that after people, information technology is its most important asset. The study was therefore aimed at identifying the perceived factors affecting the implementation of Human Resource Information System at Kenya Revenue Authority. The researcher adopted a descriptive survey design with the population consisting of KRA employees based in Nairobi. A stratified random method of sampling was used. The study collected primary data through a questionnaire and the respondents were drawn from KRA staff based in Nairobi. The data was analyzed using descriptive statistics including frequencies tables, percentages, mean scores, standard deviation, ranking orders and pie charts. The respondents agreed to the fact that top management support, effective communication, training, support of ICT department, support of HR department and user involvement influences the implementation of HRIS at KRA. The study recommends allocation of adequate resources by management for the implementation and maintenance of the HRIS. Communication between managers and employees needs to be encouraged. HR managers should play a proactive role to support HRIS implementation in their organizations. Academically, the present study has important implications for studies aimed to understanding HRM, HRIS implementation in developing countries. By highlighting the significance of several contextual factors, this study also hopes to expand the focus of HRIS. To the public institutions, the study provides some insights into the implementation of HRIS which should help HR practitioners acquire a better understanding of the current HRIS implementation status, applications, benefits and barriers.

# TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>iii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>ABSTRACT</b> .....	<b>vi</b>
<b>LIST OF TABLES</b> .....	<b>viii</b>
<b>LIST OF ABBREVIATION</b> .....	<b>ix</b>

## **CHAPTER ONE: INTRODUCTION**

1.1 Background of the study.....	1
1.1.1 Concept of perception.....	3
1.1.2 Human Resource Management.....	4
1.1.3 Human Resource Information System.....	5
1.1.4 Kenya Revenue Authority.....	6
1.2 Research problem .....	8
1.3 Objective the study.....	11
1.4 Value of the study.....	11

## **CHAPTER TWO: LITERATURE REVIEW**..... **12**

2.1 Introduction.....	12
2.2 Human Resource Management.....	12
2.3 Human Resource Information System.....	13
2.4 Contents of Human Resource Information System.....	16
2.5 Factors affecting implementation of Human Resource Information System.....	17
2.5.1 Top Management Support.....	18
2.5.2 Effective Communication.....	19
2.5.3 Training.....	19
2.5.4 Support of Information Communication and Technology department.....	20
2.5.4 Support of Human Resource department.....	21
2.5.5 User involvement and participation.....	22

## **CHAPTER THREE: RESEARCH METHODOLOGY**..... **23**

3.1 Introduction .....	23
3.2 Research Design .....	23
3.3 Population.....	23
3.4 Sample Design.....	23
3.5 Data Collection.....	24
3.6 Data Analysis.....	25

<b>CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF RESULTS</b>	<b>26</b>
4.1 Introduction	26
4.2 Response rate	26
4.3 Demographic characteristics of respondent	26
4.3.1 Job Position	27
4.3.2 Age	27
4.3.3 Gender	27
4.3.4 Education level	29
4.3.5 Years worked	30
4.3 Perceived factors influencing HRIS implementation	31
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION</b>	<b>40</b>
5.1 Introduction	40
5.2 Summary of findings	40
5.3 Conclusion	41
5.4 Recommendation	43
5.5 Limitations of the study	44
5.6 Suggestion for further study	45
<b>REFERENCES</b>	<b>46</b>
<b>APPENDIX 1: QUESTIONNAIRE</b>	<b>52</b>

## LIST OF TABLES

Tables 3.1.....	18
Tables 4.1.....	20
Tables 4.2.....	20
Tables 4.3.....	22
Tables 4.4.....	23
Tables 4.5.....	24
Tables 4.6.....	25
Tables 4.7.....	26
Tables 4.8.....	28
Tables 4.9.....	29
Tables 4.10.....	31



## **LIST OF ABBREVIATIONS**

HRM:	Human Resource Management
HRIS:	Human Resource Information System
KRA:	Kenya Revenue Authority
RARMP:	Revenue Administration Reform and Modernization Program
PMBO:	Programme Management and Business Analysis Office
ICT:	Information Communication and Technology

## **CHAPTER ONE:**

### **INTRODUCTION**

#### **1.1 Background of the Study**

We live in the information age, where the explosion of knowledge and flows of information, global business seek to improve or maintain their competitiveness in the increasingly challenging global market place. Information systems are often used as a tool to improve customer service, shorten cycle times and reduce costs (Hitt et al, 2002). To improve business performance, organizations require an efficient planning and control system that synchronizes planning of all processes across the organization. The key to success according to Chien et al (2010) lies in a solid information system infrastructure seamlessly aligned with core business processes developed for the delivery of high quality products and services to customers within the best time. Ajayi (2002) also noted that technological change has been a major hallmark of economic development in recent years. An interesting and vital part of that technical change process has been the rapid evolution of information and communication technology. It is notable that the world is experiencing an information technology revolution that has drastically changed many aspects of the human life, from education, industry, economy and politics to entertainment.

According to Porter (1998), organizations today are confronted almost daily with the need for change and to adapt to the current environment that is having very dynamic entries and exists from the industry playfield. As the environment changes, organizations must adapt if they are to be successful. Under these pressures, companies are downsizing, re-engineering, flattening structures, going global and initiating more sophisticated technologies. A major challenge facing organizations is to develop a management style and culture that will enable them cope with the challenges and opportunities they face. Human resources and information

technology are the two elements that many firms are learning to use as strategic weapons to compete (Jenkins and Lloyd, 1995). To capitalize on the synergy between these two assets, human resource information systems is an emerging area that may lead human resource management into a new era. In a report on human resources information system, Richards-Carpenter (1991) noted that if the personnel function is to take the next big step in its development, it will have to integrate with information technology. Human resources executive of Federal Express, James Perkins believes that now and in the future, excellence in human resources will be defined through the strategic use of information (O'Connell, 1994). Wagel (1990) also reported that human resource practitioners and scholars had predicted more human resources input into the decision-making process and in increasing utilization of computer technology to compile and analyze human resources data in the 1990s. Human resource information system is designed to support the planning, administration, decision-making, and control activities of human resources management (DeSanctis, 1986). They have enormous potential to make human resources more competitive and thus enable human resource departments to become strategic partners in business organizations (Broderick and Boudreau, 1992; Kossek, 1994). Pasqualetto (1993) argued that human resources information system should help reengineer human resources processes to maximize their effectiveness and evolve from capturing information to managing change. The benefits of human resource information system are yet to be fully exploited. Many personnel specialists are using the computer as no more than an electronic filing cabinet or for routine operational tasks (Kinnie and Arthurs, 1993).

Despite their widespread application over many years, the implementation of human resource information systems continues to be fraught with problems. According to Katzen (2001) businesses cannot afford the write offs associated with information technology project

failures not to mention secondary effects such as lost opportunities, reputations and staff morale. As noted by Skitmore and Sharma (2001), the main factors that cause failure of information technology systems are mainly human as opposed to materialistic or malfunction of the actual systems. Ngai and Wat (2006) in a study on human resource information system implementation found out that many organizations have problems when implementing new technologies including human resource information system due to many barriers. These barriers include lack of sufficient capital and skills, cost of setting up and maintaining the system, lack top management support and commitment, lack of human resource knowledge by system designers and lack of applications for human resource users (Kovach and Cathcart, 1999). This study combines some of the factors observed by the above scholars to assess the perceived factors that influence implementation of human resource information system at Kenya Revenue Authority.

### **1.1.1 Concept of Perception**

Perception is a cognitive process that enables us to interpret and understand our surrounding. Employee perception is a factor that can make a huge difference in the quality of the workplace (Bridges, 2003). When employees view the employer, their work, and their relationships within that workplace as being positive, there is a good chance the employee will be productive and remain with the employer for a long time. Negative perceptions of the company and the working environment can cause qualified employees to seek opportunities elsewhere. Some of the factors that can impact employee perception include how well the employer communicates with employees, the nature of the working conditions, the policies and procedures of the business in general, and how much trust and respect is present between managers, employees, and coworkers. In addition, the benefits paid and how they relate to the

work assigned can also have a huge impact on the perception of an employee (Armstrong, 2006).

Employees react to change in a variety of ways. Some vehemently resist the change and continue to do so months and even years after its implementation. Often, this resistance is expressed through reduction of output, disengagement, quarrelling, hostility and even turnover (Bridges, 1991). In contrast, others seem to exert extra effort to achieve the objectives of the change and even promote the value of the change to those both inside and outside of the organization (Herscovitch & Meyer, 2002). To understand such differences, it may be useful to consider models that describe the process by which individuals experience change in the workplace (Bridges, 2003).

### **1.1.2 Human Resource Management**

Human resource management is the management of an organization's workforce, or human resources. It is responsible for the attraction, selection, training, assessment, and rewarding of employees, while also overseeing organizational leadership and culture, and ensuring compliance with employment and labor laws. In circumstances where employees desire and are legally authorized to hold a collective bargaining agreement, human resource will typically also serve as the company's primary liaison with the employees' representatives (Dessler, 2013).

Human resources management has also been defined the strategic management of the employees, who individually and collectively contribute to the achievement of the strategic objectives of the organization. Assuming that the employees of an organization are individuals with own mental maps and perceptions, own goals and own personalities and as

such they cannot be perceived as a whole, human resource management holds that the organization should be able to employ both individual and group psychology in order to commit employees to the achievement of organizational goals (Hendrickson, 2007). In today's knowledge economy, the success of organizations depends mainly on the performance of their human resources (Lippers and Swiercz, 2005). Human resource management is about the procedures and practices that encompass the human resource aspect within organizations. Such practices should be connected to the overall strategy of the organization. Organizations do not owe their success solely to market realities and sustainable competitive advantages. Successful companies are those that consider their human capital as their most important asset. Facts and figures are the quantitative elements of successful management, yet the qualitative, i.e. the cognitive aspects, are those that actually make or break an organization. (Dessler and Al Ariss, 2012).

### **1.1.3 Human Resource Information System**

Human resource information system is one of the most important management information systems, which contributes to human resource administration functions of an organization. Human resource information system is described by Noe et al. (2007), as a computer system used to acquire, store, manipulate, analyze, retrieve, and distribute information related to human resources. Modern human resource information system needs to help organizations by automating most of the human resource planning functions. The system becomes an important strategic tool since it collects, manages and reports information for decision-making. Fully integrated organizational human resource information system ought to interface with other systems enabling and enhancing the communication between departments such as payroll system with accounting system. Since the system deals with employees' personal data, which are sensitive, it should ensure data security while

transferring information from one place to another. It should be able to enhance communication between employers and employees and build strong relationship with unions and management committees (Armstrong, 2006).

Human resource information systems involves a set of internally consistent policies and practices designed and implemented to ensure that a firm's human capital contribute to the achievement of its business objectives (Beckers and Bsath, 2002). Its concern is to ensure that human resources management is fully integrated with information systems needs of the firm; human resources policies coherent both across policy areas and across hierarchies; and human resources practices are adjusted, accepted, and used by line managers and employees as part of their everyday work. The system should be capable of identifying trends, evaluating and managing costs, comparing the organization with other competitive organizations and issue relevant reports. New human resource information system trends seem to build important effect on human resource planning embedding new technology with organizational objectives and goals. Enterprise resource planning system, when linked with the human resource information system, provides a competitive advantage to organizations over their competitors. Therefore human resource information system implementation should be macro-oriented, proactive and long term focused in nature viewing human resources as assets or investments not expenses.

#### **1.1.4 Kenya Revenue Authority**

Kenya Revenue Authority is a parastatal mandated to enhance mobilization of Kenyan government revenue while at the same time providing effective tax administration and sustainability in revenue collection. The Authority was established through an Act of Parliament (Cap. 469) on July 1, 1995 as a semi-autonomous government agency responsible

for revenue collection (<http://www.kra.go.ke>). Prior to 1995, revenue collection functions of the government were distributed among at least five different ministries and/or departments that lacked co-ordination and hence their performance was poor resulting in low levels of accountability and efficiency. The Authority has developed its vision of 'being the leading revenue authority in the world respected for professionalism, integrity and fairness'. It means that all reforms undertaken by the authority are geared towards achieving this vision. Human resources department works towards supporting this vision as well as other departments. Currently Kenya Revenue Authority is divided into five regions with a centralized human resource management department at the head office. Coordinating a work force of over five thousand employees therefore require an efficient system.

The reforms within the Authority are meant to enable it evolve into a modern, flexible and integrated revenue collection agency. KRA is being managed through adoption of corporate plans. Currently it is implementing its fifth corporate plan for the period 2012 – 2015. This actuated the Revenue Administration Reform and Modernization Program, which commenced in 2004/05 with the objective of transforming the Authority into a modern, fully integrated and client-focused organization. The RARMP process adopted project management and business analysis techniques in accordance with international best practice with the creation of the Programme Management and Business analysis Office (PMBO) under the office of the Commissioner General. This has led to the development of an institutionalized administrative framework for the RARMP making it easier to track progress in the reform initiatives and enhance project ownership and acceptance to change from both internal and external stakeholders. Amongst the projects, being implemented under this programme is the human resource revitalization project in which the implementation of a human resource information system is hinged upon. The human resource information system



in the Authority is meant to carry out all the human resource functions, more specifically, leave approval, procurement, human resource planning, online recruitment and even disciplinary functions.

## **1.2 Research Problem**

The use of human resource information system has been advocated as an opportunity for human resource professionals to become strategic partners with top management. The idea has been that human resource information system would allow the human resource function to become more efficient and provide better information for decision-making. It is often regarded as a service provided to an organization in the form of information (Beadles et al, 2005). Human resource information system is implemented at three different levels: the publishing of information; the automation of transactions; and, a change in the way human resource management is conducted in the organization by transforming human resource into a strategic partner with the line business. The evolution of human resource as promoted by human resource information system evolves from information to automation and from automation to transformation. According to Sanjay (2009) the implementation of computerized human resources functions is a great challenge for organizations. The macro- and micro-factors influencing a business are very dynamic and this leads to requirement of continuous monitoring and accommodating the changes in the implementation strategy accordingly. Implementation of human resource information system practices bears linkage to organizational performance; and focusing on the alignment of human resources with organization's information technology strategy as a means of gaining competitive advantage (Rajar and Shah, 2007). Ball (2001) observes that the emphasis of transforming the human resource element from being merely a tool within the work environment to being an important asset in the achievement of the organization's goals lies on the shoulders of the

management. Similarly, Bowen and Oestroff (2004) observes that the notion of implementing relevant human systems, including human resource information system, has become the key driver to changes in human resource management in all organizations particularly the public sector where quick implementation has led to failure and less effectiveness in the expensive systems installed.

Over the past nine years, Kenya Revenue Authority has been undertaking several Administration Reforms and Modernization Programmes (RARMP), all geared towards improving its revenue performance and rationalizing its strategic transformation. Human resource department in KRA supports the overall business strategy of the Authority. One way of doing this is by adopting modern ways of managing the human resource like the use of human resource information system. It is in view of this that the department introduced the system in the Authority in 2007 but has since been experiencing challenges in its implementation thereby not being able to effectively support the Authority in achieving its objectives. Human resources managers continue to face growing difficulties in coping with workforces that are spread across various counties, regions, cultures, and political systems. Given such trends, manual human resources systems management is completely inadequate (Beckers and Bsat, 2009).

Several studies have been done on human resource information system locally. For instance, Atika (2011) looked at the factors influencing the effectiveness of human resource information system at the National Cereals and Produce Board, Kenya. The study concluded that user satisfaction, attitudes, beliefs, cultural, and behavioral issues as key areas that influence successful implementation of information systems. (Kinyua, 2010) did a study on the challenges facing state corporations in Kenya in the implementation of human resource

management information system. The findings indicated that the adoption and use of information communication technology remains a major challenge in the implementation of human resource management information systems in Kenyan state corporations. M'mbui looked at the effect of performance appraisal system on employee job satisfaction at Kenya Revenue Authority. The findings of the study showed that performance appraisal system helps the Authority and individual employees meet set targets, however job satisfaction was lacking. Obwaya (2010) looked at the effectiveness of employee performance management system at Kenya National Audit Office. The study revealed the strengths of employee performance such as production of timely reports due to commitment and dedication of staff and improved quality, efficient and effective service. The study recommended that the management shed off the bureaucratic tendencies and adopt best practices of rewarding

Despite a great effort by the management and the heavy investments that has been made on the information technology based reforms at the Authority, implementation of human resource information system still appears to be a serious challenge. Even though studies have been done on human resource information system, little study has been done to establish the factors contributing to the sluggish implementation of the system at KRA. The researcher therefore, concludes that this is a research gap that needs to be addressed. Failure to establish such factors could lead to the system project being labeled a white elephant leading to public scrutiny and criticism. The researcher therefore, plans to address this gap in knowledge by establishing perceived factors influencing the implementation of human resource information system at the Kenya Revenue Authority.

### **1.3 Objective of the study**

The objective of the study is to establish the perceived factors influencing the implementation of human resource information system at the Kenya Revenue Authority.

### **1.4 Value of the study**

To KRA, this will be useful to both current and future reform initiatives that the Authority will implement. It will provide a basis of consistent and quality information to support management decisions. It will also provide a reference point for similar or related projects in the public sector.

To the academicians and students of human resource management, the study will contribute to the existing body of knowledge in the area of the factors that affect the implementation of the human resource information system in the public sector. It will also act as a stimulus for further research to refine and extend the present study in Kenya. The findings of the study will also benefit future researchers as well as fill the existing gaps in terms of literature in this field and part of scholarly work for private and public universities.

For public corporation, human resources information system plays a central role in the implementation and administration of technology within the organization. The study will help in planning, coordinating, and directing research on the computer-related activities of the organization. Organizations will determine the goals and then implement technology to meet these goals (David et al, 2006).

## **CHAPTER TWO:**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents relevant literature review gathered in relation to the study. It covers areas on human resource management, human resource information system, contents and factors affecting the implementation of human resource information system.

#### **2.2 Human Resource Management**

In today's knowledge economy, the success of organizations depends mainly on the performance of their human resources (Lippers and Swiercz, 2005). According to Dessler & Al Ariss (2012) human resource management is about the procedures and practices that encompass the human resource aspect within organizations. It's the people in an organization that carry out many important work activities. Managers and human resources professionals have the important job of organizing people so that they can effectively perform these activities. This requires viewing people as human assets, not costs to the organization. Looking at people as assets is part of contemporary human resource management and human capital management. An organization cannot build a good team of working professionals without good human resources. The key functions of the human resources management include recruiting people, training them, performance appraisals, motivating employees as well as workplace communication, workplace safety, and much more.

Johnson and Scholes (2004) noted that to thrive in the chaotic and turbulent business environment, firms need to constantly innovate and be "ahead of the curve" in terms of business practices and strategies. It is from this motivation to be at the top of the pack that human resources management becomes a valuable tool for management to ensure success.

They also noted that the practice of human resources management needs to be integrated with the overall strategy to ensure effective use of people and provide better returns to the organizations in terms of return on investment for every shilling spent on them. Unless the human resources management practice is designed in this way, the firms stand to lose from not utilizing people fully. The rapidly transforming business landscape means that there are currently many human resource management challenges which will continue to evolve for years to come (Guba and Lincoli, 1999).

### **2.3 Human Resource Information System**

Recent developments in technology have made it probable to make a real-time information-based, self-service, and interactive work environment. According to Desanctis (1986), personnel information systems have developed from the automated employee recordkeeping from the 1960s into more complex reporting and decision systems of late. Today, managers and employees are assuming activities once considered the field of human resource professionals and administrative personnel. As a result, given the authority and relevant accessible information for decision making, both managers and employees react more rapidly to changes (Lengnick-hall, 2003). The system is considered as a systematic procedure for collecting, storing, maintaining, and recovering data required by the organizations about their human resources, personnel activities and organizational characteristics (Kovach and Cathcart 2002). They argued that human resource information system varies among organizations in relation to their size; it can be informal as the payroll records and time cards in a small organization. For the huge organizations corporate success depend on the coordinated strategic management and integration of the company's human resources and information technology.

In a study on the implementation of human resource information system in Jordanian universities, Altarawneh (2010) looked at the perceived benefits and barriers. It was established that despite the investment of the system in the surveyed Jordanian universities, human resource information system in Jordanian universities was mainly adopted to automate human resources management activities in order to obtain some general administrative routine purposes. Namely, for employment information, absence monitoring and payroll services, rather than for decision making to provide strategic advantages and benefits for organizations. Second, the major benefits of the system are its quick response and the access it provides to information. Third, insufficient financial support; difficulty in changing the organization's culture; lack of commitment from top managers were the main barriers to human resource information system implementation.

Grant et al (2006) in studying the impact of human resource information system in four organizations based in Australia realized that the potential of human resource information system to deliver the strategic competencies promised remained unrealized. Initial findings from the four case studies suggested that although new or upgraded human resource information systems were being used to automate and devolve routine administrative and compliance functions traditionally performed by the human resources function, the potential for the technology to be used in ways that contribute to the strategic direction of the organization were not being realized. More specifically, the results suggested that the opportunity to enhance human resource's role as strategic partner as a result of the use of the system was being hindered by three main challenges. The first challenge related to the ability to maintain the levels of senior management commitment and resources needed to implement and manage new or upgraded human resource information system. The second concern was managing the complexity of the system and its associated functionality. The third challenge

stemmed from barriers associated with the acceptance of the system among key managers and employees along with the importance attached to managing the change processes associated with the implementation and introduction of the new or upgraded systems.

Ngai and Wat in (2006) conducted a survey of the implementation of human resource information system in Hong Kong organizations, they found that the greatest benefits to the implementation of human resource information system was the quick response and access to information that it brought while the greatest barrier was the insufficient financial support. In a study conducted by Direz and McIntosh (2009), titled “a review of the factors which influence the use and usefulness of information systems” aimed to identify the factors that have been found to influence the use and usefulness of information system and to provide a device for managing development and implementation. The study found that users characteristics, user participation and perceptions, intentions, user computer experience, top management support, training, external pressure, and the availability of external information sources have significant effect on successful adoption of information technology and on its widely acceptance.

It is worth noting that all these studies focused on the status of human resource information system and its uses and implementation, however, little or no research has been conducted to examine the similar of different characteristics in developing countries since the notion of human resource information system is still new and just in its initial years of implementation. Majority of the studies have been conducted in developed countries and hence this study will contribute immensely to knowledge of this area in Kenya. Thus, this study is a timely and important one as it examines the perceived factors influencing implementation of human resource information system at the Kenya Revenue Authority.



## **2.4 Contents of Human Resource Information System**

As the new economy shifts gears, we enter an era when the careful examination of value creation is not enough (Skitmore and Sharma, 2001). Therefore, entrepreneurs invested further on information technology and information systems intending to lead the market and gain a competitive advantage (Tansley *et al.*, 2001). Gradually information system turned out to be the backbone of organizations, used for most of the operational level activities such as sales/marketing systems, manufacturing/production systems, finance/accounting systems, human resource system, etc. furnishing effective and efficient services. Furthermore, information system has been developed to support business decision making in order to increase the quality of business decisions. Kavanagh *et al.* (1990) also noted that human resource information system functions interactively with human resources management systems such as human resource planning, staffing, training and career development, performance management, and compensation management. They further explained human resource information system in a continuum namely; transactional processing system, management information system, decision support system and executive support system.

One of the major types of systems used at the operational level of an organization is the transaction processing system. It is the basic business system that serves the operational level of the organization. A transaction processing system is a computerized system that performs and records the daily routine transactions necessary to conduct business. Examples are skills inventory, employee training data, performance data and payroll. Management information system serves the management level of the organization, providing managers with reports and often online access to the organization's current performance and historical records. Typically, management information system is oriented almost exclusively to internal, not environmental or external, events. It primarily serves the functions of planning, controlling,

and decision making at the management level. Generally, it depends on underlying transaction processing systems for its data. Decision-support system also serves the management level of the organization. It helps managers make decisions that are unique, rapidly changing, and not easily specified in advance. This includes succession planning, staffing simulation, compensation and performance management simulation. They address problems where the procedure for arriving at a solution may not be fully predefined in advance. Senior managers use executive support systems to help them make decisions. Executive support system serves the strategic level of the organization. It addresses non-routine decisions requiring judgment, evaluation, and insight because there is no agreed-on procedure for arriving at a solution. It is designed to incorporate data about external events, such as new employment and labour laws, but they also draw summarized information from internal management information system and decision-support system. The systems support different organizational levels. In most firms, these systems are loosely coupled resulting in inefficient information transportation from one to another, leading to failure to respond quickly to the challenges in the business environment. Lack of system integration becomes crucial when organizations try to achieve corporate objectives. It is definitely advantageous to integrate these systems so that information can flow easily between different parts of the organization and provide management with an enterprise-wide view of how the organization is performing as a whole Kavanagh et al. (1990).

## **2.5 Factors influencing the implementation of HRIS**

Implementation of human resources information system is an organizational change. For any change, resistance is expected. To ensure successful human resource information system implementation, context issues need to be assessed (McElroy, 1991). Successful human resource information system implementation relies on the support of top management, the

support of the information department, the involvement of human resource leaders, support of human resource staff, computer knowledge of human resource staff and human resource information system training .These six influencing factors are discussed as follows:

### **2.5.1 Top Management Support**

According to Wong et al. (1994), for system acceptance the most needed support comes from top management. Top management support is needed throughout the implementation. The project must receive approval from top management (Bingi, 1999; Buckhout, 1999; Sumner, 1999) and align with strategic business goals (Sumner, 1999). This can be achieved by tying management bonuses to project success (Wee, 2000). Top management needs to publicly and explicitly identify the project as a top priority (Wee, 2000). They must be committed with its own involvement and willingness to allocate valuable resources to the implementation effort (Holland *et al.*, 1999). Top management takes primary responsibility for providing sufficient financial support and adequate resources for building a successful human resource information system This involves providing the needed people for the implementation and giving appropriate amount of time and resources to get the job done (Roberts and Barrar, 1992). The lack of financial support and adequate resources will inevitably lead to failure. A comprehensive human resource information system requires a sizeable budget to implement and maintain. If top management does not understand how the human resource information system brings the benefits to the organization, they will not be willing to allocate valuable resources, time and efforts of implementation (Ngai and Wat, 2006). Managers should legitimize new goals and objectives. A shared vision of the organization and the role of the new system and structures should be communicated to employees. New organizational structures, roles and responsibilities should be established and approved. Policies should be

set by top management to establish new systems in the company. In times of conflict, managers should mediate between parties (Roberts and Barrar, 1992).

### **2.5.2 Effective Communication**

Effective communication is critical to system implementation (Falkowski *et al.*, 1998). Expectations at every level need to be communicated. Management of communication, education and expectations are critical throughout the organization (Wee, 2000). User input should be managed in acquiring their requirements, comments, reactions and approval (Rosario, 2000). Communication includes the formal promotion of project teams and the advertisement of project progress to the rest of the organization (Holland *et al.*, 1999). Middle managers need to communicate its importance (Wee, 2000). Employees should be told in advance the scope, objectives, activities and updates, and admit change will occur (Sumner, 1999). Communicating quickly and in an effective way across organizational, functional and cultural boundaries is crucial. Members of the project team need to be able to communicate with a common language (Koster, 2010). Communication between managers and employees within the organization is a vital way to get people motivated. Employees are more motivated by recognition and constructive feedback by their line manager. Two-way communication allows employees also to state desired outcomes to their manager. Unfortunately many managers lack communication skills. (Brooks, 2003). Communication has to be well planned. Communication has to be planned for the right people at the right time via the right communication channel (Green, 2007).

### **2.5.3 Training**

Implementing a new system can positively impact a business, providing a foundation for development and improvement. Training has a key role to play in delivering successful

implementations, as the way people are introduced to any new system and how they learn to use it may be the main contact they have with the programme. Delivering training that engages people, motivates them to embrace change and encourages improvement is the key. Education should be a priority from the beginning of the project, and money and time should be spent on various forms of education and training (Roberts and Barrar, 1992). Training, reskilling and professional development of the workforce is critical. Computer skills training for relevant employees help achieve optimal human resource information system effectiveness (O'Connell, 1994). Lack of computer knowledge has been attributed to slowness in applying information technology to human resources departments (Kavanagh et al., 1990). Kossek et al. (1994) also mentioned that user skill level may be strongly related to the variance in attitudes toward the value of human resource information system. (Denton, 1987) and DeSanctis (1986) described that one of the potential problems of human resource information system management is a lack of employee technical training and experience in information management. Kavanagh et al. (1990) also commented that for a successful human resource information system, appropriate training should go to all human resource staff, line managers, as well as other employees. User training should be emphasized, with heavy investment in training and reskilling of developers in software design and methodology (Sumner, 1999). Employees need training to understand how the system will change business processes. There should be extra training and on-site support for staff as well as managers during implementation. A support organization (e.g. help desk, online user manual) is also critical to meet users' needs after installation (Wee, 2000).

#### **2.5.4 Support of Information Communication and Technology Department**

In the evolution of human resource information system, the information system department plays a major role in facilitating the computerization of human resource information (Kinnei

& Arthurs, 1993). DeSanctis (1986) concluded from her survey that although the human resource information system has established independence from corporate management information system, it has not yet matured to be an independent entity within the personnel area in a large number of firms. Cholak & Simmons (1991) also mentioned that human resource information system still requires the participation of information technology department, particularly in the planning and developmental stages.

### **2.5.5 Support of Human Resource Department**

This factor also plays a big role in the implementation of human resource information system. As human resource computer use increase, Lederer (1984) reported that more and more firms formally housed the human resource computer systems within the human resource department. He also commented that the personnel department is in the best position to obtain and keep an organization's management commitment to human resource information system. Human resource department should be responsible for advocating the project, providing justification for the human resource information system, and for resources acquisition. However, Kossek et al. (1994) found that in corporations, the higher the positions in the human resources department, the more negative they become toward the human resource information system. Their interviews revealed that human resource information system use is viewed as a clerical activity that does little to enhance human resource's reputation. In addition, a human resource information system may foster increased information sharing. Since information is power, the system has the potential to change the power dynamics (Kossek et al., 1994).

## **2.5.6 User Involvement and Participation**

Involvement of human resource staff is very important. Resistance to change and computer phobia are impediments to human resource information system implementation. Pitman (1994) said that user participation is a critical factor to successful change. Since clerical staff have considerable responsibility in system operations, their support is crucial. Organizations should have a strong corporate identity that is open to change. An emphasis on quality, a strong computing ability, and a strong willingness to accept new technology would aid in implementation efforts. Management should also have a strong commitment to use the system for achieving business aims (Roberts and Barrar, 1992). Users must be trained, and concerns must be addressed through regular communication, working with change agents, leveraging corporate culture and identifying job aids for different users (Rosario, 2000). As part of the change management efforts, users should be involved in design and implementation of business processes and the system, (Bingi *et al.*, 1999; Holland *et al.*, 1999).

## **CHAPTER THREE:**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the technique used in conducting the study for it to realize the anticipated results. It highlights the research design and methodology in terms of the population of the study, sampling design, data collection techniques, data analysis and presents relevant information with reference to collection of primary data, analysis and presentation of the techniques.

#### **3.2 Research Design**

The researcher adopted a descriptive survey design. Descriptive survey is a fact finding enquiries and its purpose is the description of the state of affairs as it exists at the present since the researcher has no control over variables and can only report what is happening (Kothari, 2004).

#### **3.3 Population**

The population consists of 2000 employees of Kenya Revenue Authority headquarters based in Nairobi focus on the perceived factors influencing implementation of human resource information system at KRA ([www.kra.go.ke](http://www.kra.go.ke)).

#### **3.4 Sample Design**

A stratified random method is used. A random sample of the employees was drawn from Nairobi and the respondents were randomly selected from the three levels of staff at the Kenya Revenue Authority, namely the senior management, middle level management and



junior level staff. According to Kothari (2000) a representative sample is one which is at least 10% of the population. The researcher used 10% of the sample as summarized below in the table.

**Table 3.1 Sample Design**

		<i>Sample Frame</i>			
<i>Department category</i>	<i>Population</i>	<i>Senior Managers</i>	<i>Middle Managers</i>	<i>Junior Staff</i>	<i>Sample (10%)</i>
<b>Corporate support service</b>	357	57	86	214	36
<b>Revenue departments</b>	1480	122	260	1098	148
<b>Technical support services</b>	99	12	22	65	10
<b>Information technology</b>	64	8	14	42	6
<b>Total</b>	<b>2000</b>				<b>200</b>

Source: <http://www.kra.go.ke>)

### **3.5 Data Collection**

Primary data is used for the purpose of this study. The primary data is obtained through a semi-structured questionnaire with both closed and open ended questions. The questionnaire comprise of two sections. Section one collects information on personal profile of the respondent and section two addresses the perceived factors influencing the implementation of human resource information system. The respondents are drawn from Kenya Revenue Authority staff based in Nairobi. Electronic mail, drop and pick later methods is used to administer the questionnaire. Follow up is done through personal visits, telephone calls and emails to facilitate responses and also enhance the response rate.

### **3.6 Data Analysis**

Data collected from the completed questionnaires is summarized, coded and tabulated. Descriptive statistics such as mean, standard deviation, frequencies distribution is used to analyze the data. Data presentation has been done by use of charts, percentages and frequency tables. Inferential statistics has been used in drawing conclusions.

## **CHAPTER FOUR:**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the analysis and interpretation of the primary data on the perceived factors affecting the implementing of Human Resource Information System at KRA. The data collection instrument was a questionnaire with both open and close ended questions. The first part of the questionnaire sought information of general nature like job position, age, gender, education level and duration of years worked at KRA. The second part sought information on the perceived factors affecting the implementing of Human Resource Information System at KRA.

#### **4.2 Response Rate of Respondent**

The section contains response rate data from the survey. A total of two hundred questionnaires were distributed to the respondents. Out of the 200 questionnaires, 124 questionnaires were returned duly filled. 11 questionnaires were not filled thus being left out of the analysis. This represented a 62% response rate. According to Mugenda and Mugenda (2003), a response rate of 50% and above is a good for statistical reporting.

#### **4.3 Demographic Characteristics of the Respondent**

This section sought data on the respondent's job position, age, gender, education level and duration of years worked at KRA. This was meant to establish the suitability of the respondent to the study as these characteristics can influence the perception of the respondents on factors affecting Human Resource Information System at KRA.

### 4.3.1 Job Position of Respondent

The research sought to find out the job grades held by the respondents at KRA. The job grade in the questionnaire was to determine the authority of the respondents in the field under investigation. This was also to ensure the questionnaires were answered by the target persons hence making their responses valid and reliable as a true representation of the current situation. Table 4.1 below shows the response.

**Table 4.1: Job Position**

<b>Job Position</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Senior Managers	39	31	31
Supervisors	53	43	74
Officers	23	19	93
Subordinate Staff	9	7	100
Total	124	100	

**Source: Author, 2013**

The findings presented in table 4.1 shows that respondent supervisors were majority with 43% followed by senior managers at 31%. Officers were at 19% and the subordinate staff at 7%. This showed that majority of the respondents were supervisors and senior managers implying that they were in a position of decision making and thus perceived to have influence on the implementation of HRIS.

### 4.3.2 Age of Respondent

The research sought to find out the age distribution of the respondents. This is presented in table 4.2. The intension here was to know the age of the respondent as it is perceived that the

older generations are rigid and slow in accepting technological change compared to the younger generation.

**Table 4.2: Age**

<b>Job Position</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
18 -30	51	41	41
31 - 40	53	43	84
41 - 50	12	10	94
51 - 60	8	6	100
Total	124	100	

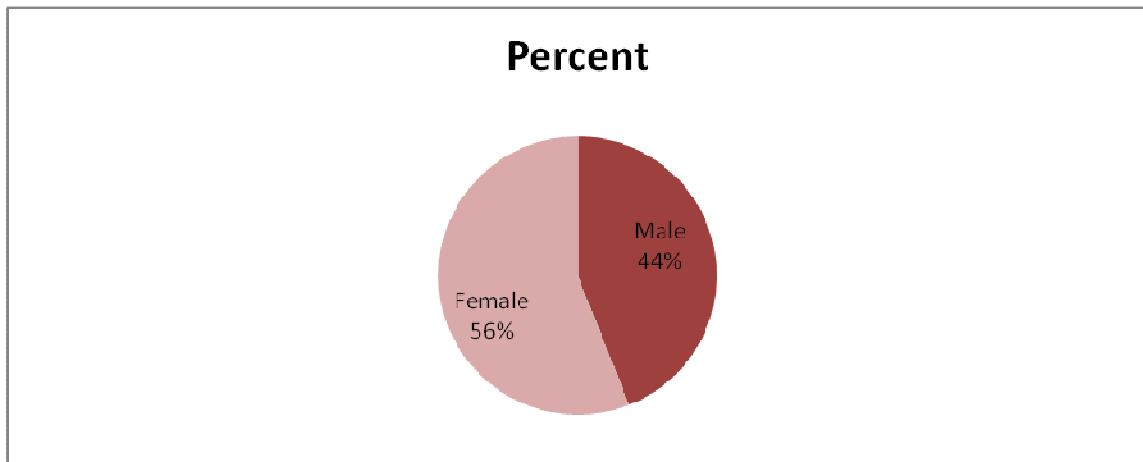
**Source: Author, 2013**

The study revealed that 41% of the respondents were between 18-30years, 43% were between 31-40years, 10% were between 41-50 while 6% formed the minority of the respondents who were between 51-60 years. This showed that most of the respondents were between 18-30 and 31-40 years forming the majority of the respondents. It is perceived young and middle aged people accept change more easily. Thus they will accept the system more easily.

### **4.3.3 Gender of Respondent**

The study sought to find out the Gender distribution in the Authority for the purpose of the study. The questionnaire was distributed to both male and female respondents. This is shown on figure 4.1 below.

**Figure 4.1: Gender**



**Source: Author, 2013**

The findings on gender distribution among the respondents showed that 44% were male while 56 % were female. Although female were more than male, the difference is not significant and therefore the study is not skewed towards any gender. This also for the study as will get to understand the opinion of both genders.

#### **4.3.4 Education Level of Respondents**

The study sought to establish the level of education of the respondents. Perception is influenced by the level of education and therefore establishing it will help identify the influence of education to this study. The study also sought to find out if the respondents were skilled enough and were computer literate to handle the HRIS in the Authority. This is represented in table 4.3 below.

**Table 4.3 Educational level of Respondent**

<b>Job Position</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
PhD Degree	0	0	0
Masters Degree	22	18	18

University Degree	81	65	83
Diploma	19	15	98
Secondary	2	2	100
Primary	0	0	100
Total	124	100	100

**Source: Author, 2013**

The study found out the majority of the respondents had a University degree at 65%. 18% of the respondents had Masters Degree qualifications. 15% of the respondents had a diploma and 2% had secondary level education. Neither of the respondent had a PhD degree nor had the highest education level at primary. Given the education levels presented in table 4.4, it can be concluded that the respondents were competent and qualified employees. They had the requisite academic credentials to understand the area of HRIS. This also implies that the respondents had the capacity to give quality response for the purpose of this study.

#### **4.3.5 Years worked for KRA**

The respondents were requested to indicate the period under which they had worked at KRA. This information aimed at testing the working experience appropriateness of the respondent in answering the questions regarding the perceived factors affecting the HRIS implementation at KRA. It was expected that the longer the years of experience at KRA the more likely it is to obtain reliable information on HRIS as they have interacted with the system longer. Also the more knowledgeable the respondent would be about KRA's systems and operations. Table 4.4 below presents the findings.

**Table 4.4: Years worked for KRA**

<b>Job Position</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Less than 1 year	1	1	1
2-5 years	7	6	7
6-10 years	34	27	34
11- 15 years	82	66	100
Total	124	100	

**Source: Author, 2013**

The table indicates that 1% of respondents had worked at KRA for less than a year, 6% had worked for KRA between 2-5 years and 27% had worked between 6-10. The majority of the respondents at 66% had worked for KRA between 10-15years; this implies that the respondents had worked for a period long enough to understand the systems and processes at KRA. Thereby understands the factors affecting the implementation of HRIS.

#### **4.4 Perceived factors influencing the implementation of HRIS**

This section reports on the perceived factors affecting the implementation of HRIS at the Kenya Revenue Authority. On a 5-point scale, the six factors under investigation were support of top management, effective communication, training, support of ICT department, support of HR department and user involvement and participation. The respondents were asked to indicate the level of agreement using a likert scale of 1-5 where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree. To be able to interpret the score, mean score of <1.5 implies strongly disagreed, 1.5 – 2.5 implies disagree, 2.5 – 3.5 implies neutral, 3.5 – 4.5 implies agree and >4.5 means strongly agree. A standard deviation



of >1.5 means a significant variance showing there is no consensus in the responses while <1 shows there was no significant variance hence consensus in response.

#### 4.4.1 Perception on Top Management Support

The respondents were asked if they thought top management approves the implementation of HRIS project and align it with strategic business goals in the Authority, if they felt decision making process by managers has been enhanced by use of HRIS, if management provides planning and coordination to employees through the use of HRIS, if management commits resources and if a sizeable budget is allocated to HRIS implementation and maintenance. The results are shown on table 4.5 below.

**Table 4.5: Top Management Support**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
Top management approves the implementation of HRIS project and align it with strategic business goals in the Authority	4.0	.85
Decision making process by managers has been enhanced by the use of HRIS	4.0	.70
Through use of HRIS, management provides planning and coordination to employees	3.5	1.1
Top management commits financial, time and human resources to HRIS project	3.3	.97
A sizeable budget is allocated to the implementation and maintenance of the HRIS project in the Authority.	3.0	1.0
<b>Average of Mean / Standard deviation</b>	<b>3.56</b>	<b>0.92</b>

**Source: Author, 2013**

The results on table 4.5 above revealed that the respondents agreed that top management approves the implementation of HRIS project by aligning it to the strategic business goals in the Authority. They also agreed decision making process has been enhanced by the use of HRIS. The mean score was 4.0 and 4.0 respectively. The respondents were neutral on

whether management uses HRIS to provide planning and coordination to employees with a mean of 3.5, on whether top management commits resources to HRIS project and on whether a sizeable budget is allocated to the implementation and maintenance of the HRIS project in the Authority with a mean score of 3.3 and 3.0 respectively. In conclusion, the analysis shows employees of KRA are in agreement on the top management support in approval of implementation of HRIS project and aligning it to strategic goals, they also agreed that HRIS has enhanced decision making process, planning and coordination by managers. However the employees were not sure about top management committal to resources and allocation of a sizeable budget to cater for the HRIS implementation.

#### **4.3.2 Effective Communication**

Respondents were asked to indicate whether communication influences HRIS implementation at KRA. They were asked to state whether communication through the use of HRIS has enhanced efficiency and effectiveness, HRIS project progress is communicated to employees, if new organizational structure roles and responsibility as impacted by HRIS is communicated to staff, whether communication between managers and employees is encouraged and whether Employees have access to relevant HRIS information in the Authority. Table 4.6 shows the results.

**Table 4.6: Effective Communication**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
Communication through HRIS enhances efficiency and effectiveness in the Authority	4.0	.00
The HRIS project progress is communicated to employees	4.0	.20
New organizational structure roles and responsibility as impact by HRIS is communicated to staff	3.7	.85
Communication between managers and employees is encouraged as it motivates staff during HRIS	3.1	.30

implementation		
Employees have access to relevant HRIS information in the Authority	2.0	.60
<b>Average of Mean / Standard deviation</b>	<b>3.3</b>	<b>0.39</b>

**Source: Author, 2013**

Findings in this study indicates that the respondents agreed that communication through the use of HRIS has enhanced efficiency and effectiveness, that HRIS project progress is communicated to employees and new organizational structure roles and responsibility as impacted by HRIS is communicated to staff. The mean score was 4.0, 4.0, and 3.7 respectively. They were neutral on whether communication between managers and employees is encouraged as it motivates employees during HRIS implementation with a mean score of 3.1. In regard to employees having access to relevant HRIS information in the Authority the respondents disagreed with a mean score of 2.0. In conclusion, employees were in agreement on the use of HRIS enhancing efficiency and effectiveness, HRIS project progress, new organizational structure, roles and responsibility being communicated to employees. However they were neutral on communication being encouraged between managers and employees. They also disagreed on the fact that employees have access to relevant HRIS information.

### **4.3.3 Training**

In order to evaluate the extent to which training influences the implementation of HRIS, the respondents were asked to state whether they are computer literate and know how to use HRIS, whether training motivates them to embrace change, if through use of HRIS the administration of training programs is faster, whether they were given adequate training on how to use HRIS and also whether training on HRIS is done frequently in the Authority. This is presented on table 4.7 below.

**Table 4.7: Training**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
I know how to use HRIS as am computer literate	4.3	.77
Training motivates and encourage employees to embrace change during HRIS implementation	3.6	.90
Administration of training programs is faster through the use of HRIS	3.3	1.0
I was given adequate training on how to use the HRIS	3.1	1.0
Training on the HRIS is done frequently in the Authority	2.5	1.2
<b>Average of Mean / Standard deviation</b>	<b>3.36</b>	<b>0.97</b>

**Source: Author, 2013**

In regard to computer literacy and use of HRIS, respondents agreed to a large extent giving it a mean score of 4.3. They were also in agreement that training motivates them to embrace change giving it a mean score of 3.6. However they were neutral on whether administration of training programs is faster through HRIS and on whether they given adequate training on how to use HRIS with a mean score of 3.3 and 3.1 respectively. The respondents also disagreed on the fact that training on HRIS is done frequently in the Authority with a mean of 2.5. In conclusion the employees agreed they were computer literate and therefore could use the HRIS. They also agreed that training motivates them to embrace change during HRIS implementation. But they were neutral on administration of training programs being faster through HRIS and on whether they were given adequate training on how to use HRIS. They also disagreed to the fact that training on HRIS is done frequently in the Authority.

#### **4.3.4 Support of Information Communication and Technology department**

On the support of Information Communication and Technology department, the respondents were asked to state if there exist an ICT department, if ICT department plays a major role in

facilitating the computerization of HRIS in the Authority, if ICT department has enough resources to undertake HRIS implementation, if ICT department participate in the planning and developmental stages of HRIS, if ICT department is responsible for the maintenance of the HRIS project. Table 4.8 explains.

**Table 4.8: Support of ICT department**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
There exists an ICT department in the Authority	4.71	.46
ICT department is responsible for the maintenance of the HRIS project in the Authority	4.21	.95
ICT department plays a major role in facilitating the computerization of HRIS in the Authority	4.10	1.0
ICT department participate in the planning and developmental stages of HRIS	4.10	.85
ICT department has enough resources to undertake HRIS implementation in the Authority	2.27	.75
<b>Average of Mean / Standard deviation</b>	<b>3.87</b>	<b>0.80</b>

**Source: Author, 2013**

The respondents agreed strongly that there exists an ICT department in the Authority. This was given a mean score of 4.7. They also agreed to a large extent that the ICT department is responsible for the maintenance of the HRIS project with a mean score of 4.2, that it plays a major role in facilitating the computerization of HRIS in the Authority with a mean score of 4.1 and that the department participate in planning and developmental stages of HRIS with a mean score of 4.1. On whether the ICT department has enough resources to undertake implementation of HRIS in the Authority, the respondents disagreed with a mean score of 2.3. The study revealed that respondents strongly agreed to the existence of an ICT department in the Authority, that the ICT department is responsible for the maintenance of the HRIS project, that it plays a major role in facilitating the computerization of HRIS in the

Authority and that the department participates in planning and developmental stages of HRIS. However they disagreed on the fact that the ICT department has enough resources to undertake implementation of HRIS in the Authority.

#### 4.3.5 Support of Human Resource Department

To evaluate whether the Human resource department supports the implementation of HRIS project, respondents were asked to state whether HR department is responsible for advocating for HRIS project, whether the HR department has enough human resource to undertake HRIS project, whether HR staff are involved in the HRIS implementation process , whether HR department encourages employees to embrace the HRIS by conducting training and on whether human resource managers are involved in the implementation of HRIS project. This is shown on table 4.9 below.

**Table 4.9: Support of Human Resource department**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
Human resource staff are involved in the implementation process of HRIS	4.9	.49
HR department encourages employees to embrace the HRIS by conducting training	4.7	.73
HR department is responsible for advocating for HRIS project	4.0	1.1
HR department ensures there is enough human resource to undertake the HRIS project	3.2	.87
Human resource managers are involved in the implementation of the HRIS project	2.9	.94
<b>Average of mean / Standard deviation</b>	<b>3.92</b>	<b>0.83</b>

**Source: Author, 2013**

The respondents strongly agreed that human resource staffs are involved in the implementation process of HRIS with a mean score of 4.9. It was also agreed that HR department encourages employees to embrace the HRIS by conducting training with a mean score of 4.7 and that HR department is responsible for advocating for HRIS project with a mean score of 4.0. The respondents were however neutral on whether the department ensures enough human resources to undertake the project with a mean of 3.2 and on whether HR managers are involved in the implementation of HRIS project with a mean score of 2.9. From the study it can be seen that there was consensus on all the other factors on HR support but consensus was not found on HR department being responsible for advocating the HRIS project.

#### 4.3.6 User Involvement and Participation

The respondents were asked whether job aids for different users is identified during the HRIS implementation, if users work with change agents during the HRIS implementation, if users accept change during HRIS implementation, if HRIS users are involved in the design and implementation process of HRIS, and if employees input is sort in the implementation of HRIS. This is shown in table 4.10 below.

**Table 4.10: User Involvement and Participation**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>
Users accept change during HRIS implementation	3.1	1.2
Users work with change agents during the HRIS implementation	2.9	1.0
HRIS users are involved in the design and implementation process of HRIS	2.3	.92
Employees input is sort in the implementation of HRIS	2.3	.71
Job aids for different users is identified during the HRIS implementation	2.2	.92
<b>Average of Mean / Standard deviation</b>	<b>2.554</b>	<b>0.95</b>

**Source: Author, 2013**

The study revealed that the respondents were neutral on whether users accept change during HRIS implementation with a mean of 3.1, on whether users work with change agents during the HRIS implementation with a mean of 2.9, on whether HRIS users are involved in the design and implementation process of HRIS and on the fact that employees input are sought in HRIS implementation with 2.3. They disagreed to the fact that job aids for different users is identified during the HRIS implementation with a mean score of 2.2. With a standard deviation of  $>1$ , there was no consensus in regard to user's acceptance of change during HRIS implementation but with a standard deviation of  $<1$ , there was consensus on all the other factors under user involvement and participation. In conclusion, the employees of KRA were neutral on whether users accept change during HRIS implementation, on whether users work with change agents and on whether HRIS users are involved in the design and implementation process of HRIS. They disagreed on job aids for different users being identified during the HRIS implementation.

#### **4.4 Discussions**

The study had the objective of establishing perceived factors affecting the implementation of Human Resource Information System at Kenya Revenue Authority which was fulfilled by the findings. These factors were top management support, communication, training, Support of ICT department, Support of HR department and users involved in the implementation of HRIS.

Corresponding to previous literature (Jones and Arnett, 1994; Kavanagh et al., 1990; Wong et al., 1994), strong support by top management has also been observed in this study. Their approval of the project and aligning it with strategic business goals is particularly enlightening. The human resource department has to play a greater number of roles in



maximizing the HRIS contribution. They need to ensure there is enough human resource to undertake the project. At least four roles could be more actively performed. HR leaders need to learn how to interpret trends of the external environment so as to feed the information into HRIS for appropriate decision-making. Harriger (1993) commented that to have a strategic impact, the human resource department should have the ability to provide true decision-support systems. HR managers need to learn to maximize the application of the system for effective management. Staff need to continuously upgrade their knowledge and skills to competently serve internal customers. They should utilize the system themselves to improve the performance of human resource management. The support of the ICT department is also noteworthy. A tremendous amount of effort, including extensive communication, and reaching a consensus for an overarching goal must be exerted. Unexpectedly, the involvement of HR managers is graded lower than the support of top management and the ICT department. Perhaps what Kossek et al. (1994) found to be true, namely 'the higher the positions in the human resources department, the more negative they become toward the HRIS', also poses a question for further investigation.

## **CHAPTER FIVE:**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings of the research generated from data analysis. The conclusion is drawn in line with the objective of the study. It then gives recommendation and finally gives suggestions for further studies. The researcher had intended to determine perceived factors that affect implementation of HRIS at KRA.

#### **5.2 Summary of Findings**

The objective of the study was to determine the perceived factors affecting the implementation of HRIS at Kenya Revenue Authority. The respondents were employees of Kenya Revenue Authority. On the demographic characteristics of the respondent, the research revealed that the majority of respondents were supervisors and senior managers implying that they were in a position of decision making and thus perceived to have influence on the implementation of HRIS. The research also established that most of the respondents were young and middle aged people. It is perceived young and middle aged people accept change more easily. Thus they will embrace the system more easily. Although female were more than male, the difference was not significant and therefore the study was not skewed towards any gender. Given the education levels of the respondents, majority possessed university degrees meaning they were competent and qualified employees. They had the requisite academic credentials to understand the area of HRIS. This also implies that the respondents had the capacity to give quality response for the purpose of this study. The majority of the respondents had worked for KRA between 10-15years; this implies that the respondents had worked for a period long enough to understand the systems and processes at KRA. Thereby understands the factors affecting the implementation of HRIS.

On the factors affecting the implementation of HRIS, there was consensus on all aspects of top management support except on management providing planning and coordination through HRIS. The respondents were in agreement on the top management approving the implementation of HRIS project and aligning it to strategic goals; they also agreed that HRIS has enhanced decision making process, planning and coordination by managers. However the employees were not sure about top management committal to resources and budget to cater for the HRIS implementation. The employees agreed that effective communication influences implementation of HRIS. Employees were in agreement on the use of HRIS enhancing efficiency and effectiveness, HRIS project progress, new organizational structure, roles and responsibility being communicated to employees. They were neutral on communication being encouraged between managers and employees. They disagreed on employees having access to relevant HRIS information.

In regard to training, the employees of KRA agreed that training influences the HRIS implementation. They agreed that they were computer literate and therefore could use the HRIS. They also agreed that training motivates them to embrace change during HRIS implementation. But they were neutral on administration of training programs being faster through HRIS and on whether they were given adequate training on how to use HRIS. The respondents disagreed to the fact that training on HRIS is done frequently in the Authority. The study revealed that respondents strongly agreed to the existence of an ICT department in the Authority, that the ICT department is responsible for the maintenance of the HRIS project, that it plays a major role in facilitating the computerization of HRIS in the Authority and that the department participates in planning and developmental stages of HRIS. However they disagreed on the fact that the ICT department has enough resources to undertake implementation of HRIS in the Authority. There was consensus on all the other factors on HR

support except on HR department being responsible for advocating the HRIS project. The employees of KRA were neutral on whether users accept change during HRIS implementation, on whether users work with change agents and on whether HRIS users are involved in the design and implementation process of HRIS. They disagreed on job aids for different users being identified during the HRIS implementation.

### **5.3 Conclusion**

The support of top management is critical to HRIS implementation. In addition to verbal support, top management need to demonstrate their confidence in HRIS by personally utilizing the system. Frequent personal HRIS usage may result in sufficient resources and an increased pressure for HRIS success. Budget support for system development, for training and cooperation of ICT department and line managers may be forthcoming. Communication between managers and employees needs to be encouraged. Proper communication from top management to middle management and to junior staff is essential in enhancing HRIS implementation. Using the HRIS system, employees' organization-wide can communicate more effectively with management, obtain access to company information for personal advancement such as job availability and other career opportunities, and check basic data to ensure their own rights. Resistance to change is one of the greatest challenges change managers face, particularly when the changes involve the use of information technology. The findings indicate that some of the employees were computer illiterate. This makes them resistance to change as they are unable to use the system. The ICT department requires more resources as to implement the system. Employees' input is very important during HRIS implementation as they are the end users. Job aids for different users also need to be identified during the system implementation.

## **5.4 Recommendation**

Based on the findings and discussions on the perceived factors affecting the implementation of HRIS at KRA, the researcher recommends that the management of KRA allocates adequate resources for the implementation and maintenance of the system. HR managers should play a proactive role to support HRIS implementation in their organizations. They should convince top managers and other line managers of the importance of HRIS implementation, so that time and budget required for implementing HRIS could be gained. They also have to allocate time and budget to train people on how to use and leverage the uses of HRIS, and on how to gain competitive advantage through HRIS. The top management needs to be convinced by the values and the strategic benefits of HRIS in order to grant the required financial and non-financial support for HRIS implementation.

Academically, the present study has important implications for studies aimed to understanding HRM, HRIS implementation in developing countries. By highlighting the significance of several contextual factors, this study also hopes to expand the focus of HRIS. To the public institutions, the study provides some insights into the implementation of HRIS which should help HR practitioners acquire a better understanding of the current HRIS implementation status, applications, benefits, and barriers. As we approach the twenty-first century with an ever increasing amount of information at our disposal, an effective HRIS can help capitalize on the synergy of the two most precious assets; human resources and information technology. Those companies that make the best use of these systems have the best chances to sustain a competitive advantage. There is also need for more consultation and involvement at all levels so that change initiatives can be readily accepted and implemented.. Change should be part of the organizational culture so that everyone becomes innovative and embraces it.

## **5.5 Limitations of the Study**

This study faced a number of challenges as it only focused on KRA employees based in Nairobi. The views of all the employees in the Authority should have been gathered. The time available was limited. Most respondents were engaged in their work and being the Taxpayers month the respondents were very busy. This required frequent follow ups which compelled the researcher to extend the allocated time for questionnaire. Respondents were spread in different parts of Nairobi like the Jomo Kenyatta International Airport, Wilson Airport and Community area. This needed the distance to be covered. The other limitation is scope. The various aspects of Human Resource Information System were not covered in depth given the general nature of the study.

## **5.6 Recommendation for Further Study**

The survey aimed at determining the perceived factors affecting the implementation of Human Resource Information System at KRA. Further studies should be done on the efficiency of HRIS in the public institutions in Kenya and on factors to consider when choosing HRIS vendor. This is very important as it will ensure the right system and the right vendor has been chosen. Getting right the first time saves time and money. Also this will yield more insights useful for building the body of knowledge on this area of Human resource management.

## REFERENCES

- Ajayi G. O. (2002). African Response to Communication Technology Revolution: Case study of the ICT Development in Nigeria. *African Technology Policy Studies Network Special Paper* No. 8. Nigeria.
- Altarawneh, I. (2010). Human Resource Information Systems in Jordanian Universities, *International Journal of Business and Management* Vol. 5, No. 10; October 2010, College of Business and Economics, Al-Hussein Bin Talal University, Jordan.
- Armstrong, M. (2006). *Human Resource Management* 10<sup>th</sup> Edition. London: Kogan Page.
- Atika, J. N. (2011). *Factors influencing the effectiveness of human resource information system at the National Cereals and Produce Board, Kenya*. Unpublished MBA project: University of Nairobi.
- Ball, K. S. (2001). *The use of human resource information systems: A survey*. *Personnel Review*, 30(6), 677-693.
- Beadles, N. A., Lowery, C. M., & Johns, K. (2005). The impact of human resource information systems: An exploratory study in the public sector, *Communication of the IIMA*, 5(4), pp. 39-46.
- Beckers, A. M., Bsat, M. Z. (2002). *A DSS classification model for research in human resource information systems*. *Information Systems Management*, 19(3), 41-50.
- Boateng, A.A. (2007). *The Role of Human Resource Information Systems (HRIS) in Strategic Human Resource Management (SHRM)*, unpublished thesis in Accounting, Swedish School of Economics and Business Administration.
- Bowen, D. E., & Ostroff, C. (2004). *Understanding HRM-Firm performance linkages: The role of the strengths of the HRM system*. *Academy of Management Review*, 29.
- Bridges, W. (2003). *Managing Transitions: Making the Best of Change*, (2nd ed.). Cambridge, MA: Perseus Publishing.

- Broderick, R. & Boudreau, J.W (1992), Human resource management information technology and the competitive edge, *Academy of Management Executive*, 6(2), 7-17.
- Brooks, I.( 2003). *Organizational Behaviour*. Individuals, Groups and Organization. Second Edition: Pearson Education Limited.
- Bussler, L., & Davis, E. (2001). *Information systems: The quiet revolution in human resource management*. *Journal of Computer Information Systems*, 42(2), 17-20
- Carol, Y.Y (2007). *Human Resource Information Systems: Implementation in Taiwan*, Taiwan : National Central University press
- Chapman, D.S., & Webster, J. (2003). *The use of technologies in the recruiting, screening, and selection processes for job candidates*. *International Journal of Selection and Assessment*, 11(2/3), 113-120
- Chien, S.W & Tsaur, S.M (2010). “Investigating the Success of ERP Systems” Case studies in Three Taiwanese High Tech Industries,” *Computers in Industry*,
- Cholak, P.M. and Simon, S.H. (1991). HRIS Asks ‘Who’s the Boss?’, *Personnel Journal*, August, 74-76.
- Coronas, T., & Oliva, M. (Ed.). *Encyclopedia of human resources information systems: Challenges in E-HRM* (pp. 110–116). Hershey, PA: IGI Global.
- David, G., Dery, K., Hall, R., Wailes, N., and Wiblen, S. (2006). *Human Resource Information Systems (HRIS): An Unrealized Potential*, Institute Publishers, The University of Sydney, Australia.
- Denton, K.D. (1987). Getting the technology up and running: An experience at Litton: *Advanced circuitry division, IE*, Jan-Feb. 20-12.
- DeSanctis, G. (1986). Human resource information systems: A current assessment, *MIS Quarterly*, March, 15-27.



- Dessler, G. & AlAriss, A. (2012). *Human Resource Management: Strategic Human Resource Management and the HR Scorecard*, 10th edition. India: Prentice Hall.
- Dessler, G. (2013). *Human Resource Management: Global Edition* (13th ed.). New Jersey: Pearson Prentice Hall.
- Green, M. (2007). *Change Management Master class. A Step by Step Guide to Successful Change Management*. Kogan Page Limited: British Library Cataloguing-in-Publication Data.
- Hendrickson, A. R. (2003). *Human resource information systems: Backbone technology of contemporary human resources*. *Journal of Labor Research*, 24(3), 381-394.
- Herscovitch, L. & Meyer, J. P. (2002). Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*, 87, 474–487
- Hisham, A., Sattam, A., & Eman, B., (2012). Factors influencing the successful adoption of Human Resource Information System: The Content of Aqaba Special Economic Zone Authority HRM strategic involvement. *Personnel Review*, 40(6), 742-760.
- Hitt, L.M. Wu, D.J & Zhou, X. (2002). “Investment in Enterprise Resource Planning: Business Impact and Productivity Measures,” *Journal of Management Information Systems*.
- <http://www.kra.go.ke>
- Jenkins, M.L. & Lloyd, G. (1985). How corporate philosophy and strategy shape the use of HR information systems, *Personnel*, May, 28-38.
- John, G. & Scholes, K. (2002). *Exploring corporate strategy – text and cases*. New Jersey: Prentice – Hall.
- Jones, M.C. & Arnett, K.P. (1994). Linkages between the CEO and the IS environment: An empirical assessment”, *Information Resources Management Journal*, 7(1), 20-33.

- Kavanagh, M.J., Gueutal, H.G. & Tannenbaum, S.I. (1990). *Human resource information systems: Development and application*, Boston: PWS-Kent Publishing Co.
- Kinnie, N. & Arthurs, A. (1993). Will personnel people ever learn to love the computer?, *Personnel Management*, 25(6), 46-51.
- Kinyua, J. (2012). *Challenges facing state corporations in Kenya in the implementation of human resource management information systems*. Unpublished MBA research project .University of Nairobi.
- Kossek, E.E., Young, N., Gash, D.C. & Nichol, V. (1994). Waiting for innovation in the human resources department: Godot implements a human resource information systems, *Human Resource Management*, 33(1), 135-159.
- Köster, K. (2010). *International Project Management*. British Library Cataloguing in Publication data : Addison –Wesley Publishers Ltd.
- Kothari, K.C., Ankit M., & Sanjay, K.(2009). *Challenges of Implementing HRIS in a Public Sector Enterprise*. New Delhi: Prentice hall.
- Kovach, K.A. & Cathcart, C.E. (2002). Human resource information systems (HRIS): providing business with rapid data access, information exchange and strategic advantage. *Public Personnel Management*. 28(2), 275-281.
- Lederer, A.L. (1994). Information technology: Planning and developing a human resources information system, *Personnel*, May-June, 14-27.
- Lengnick-Hall, M. L., & Moritz, S. (2003). *The Impact of e-HR on the Human Resource Management Function*. *Journal of Labor Research*, 24(3), 365-379.
- Lippers, S. K., & Swiercz, P. M. (2005). Human resource information systems (HRIS) & technology trust. *Journal of Information Science*, 31(5), 340-353.
- McElroy, J. (1991). The HRIS as an agent of change, *Personnel Journal*, May, 105-111.

- Miller, J. S., & Cardy, R. L. (2000). *Technology and managing people: Keeping the “Human” in human resources. Journal of Labor Research, 21(3), 447-461.*
- M'mbui, C. (2011). *Effect of performance appraisal on employee job satisfaction in Kenya revenue authority.* Unpublished MBA project. University of Nairobi.
- Mohan, T. & Kavanagh, M. J. (2008). *Evolution of Human Resource Management and Human Resource Information Systems: The Role of Information Technology,* New Jersey: Pearson Prentice-Hall.
- Ngai, E.W.T. & Wat F.K.T. (2006). Human resource information systems: a review and empirical analysis. *Human Resource Information Systems.*
- Noe, H. and Gerhard, W. (2007). *Fundamentals of Human Resource Management,* 2nd edition, The McGraw-Hill Companies.
- O'Connell, S.E. (1994). System redesign makes FedEx a technology leader, *HR Magazine,* April, 33.
- Obwaya, A. K. (2010). *The effectiveness of employee performance management system at Kenya National Audit Office.* Unpublished MBA project. University of Nairobi.
- Parry, E. (2009). *The benefits of using technology in human resources management.* Boston: Havard Business School Press.
- Pasqualetto, J. (1993). New competencies define the HRIS manager's future role, *Personnel Journal,* January, 91-99.
- Pitman, B. (1994). Critical success factors to organizational change, *Journal of Systems Management,* 45(9), 40.
- Porter, M.E. (1998). *Competitive advantage of Nations: Creating and sustaining superior performance.* New York: The Free Press.
- Rajar, S.S. & Shah, A. (2007). *The Challenges of Globalization and the Role of Human Resources.* Pakistan: Isra University publication.

- Richards-Carpenter, C. (1994). The shape of things to come”, *Personnel Management*, 26
- Ruël, H. J. M., Bondarouk, T. V., & Velde, M. V. (2007). The Contribution of E-HRM to HRM Effectiveness: Results from a Quantitative Study in a Dutch Ministry. *Employee Relation*, 29(3), 280-291.
- Sheehan, C., and Cooper, B. K., (2011), “HRM outsourcing: the impact of organizational size and HRM strategic involvement”, *Personnel Review*, 40 (6), 742-760.
- Skitmore, S. T., & Sharma, T. (2001). Human resource information system for Australian construction companies. Technology of contemporary human resources, *Journal of Labour Research*, 24(3), pp.381–394.
- Wagel, W.H. (1990). On the horizon: HR in the 1990s, *Personnel*, 67(1), 10-16.
- Wong, B.K., Monaco, J.A. & Sellaro, C.L. (1994), Disaster recovery planning: Suggestions to top management and information systems managers, *Journal of Systems Management*, 45(5), 28-33.

## APPENDIX 1: QUESTIONNAIRE

### SECTION ONE

#### DEMOGRAPHIC CHARACTERISTICS

1. KRA grade (*tick one*) (a) 1 – 5 (b) 6 – 10 (c) 11 – 16
  
2. KRA Department \_\_\_\_\_
  
3. What is your age bracket? (*tick one*)  
(a) 18 – 30 years (b) 31 – 40 years (c) 41 – 50 years (d) 51 – 55 years  
(e) Other
  
4. What is your Sex? (*tick one*)  
(a) Male  
(b) Female
  
5. Your highest level of Education (*tick one*)  
(a) Primary Level (b) Secondary Level (c) College Certificate  
(d) College Diploma (e) University Degree (f) Masters Degree  
(g) PhD Degree
  
6. Years worked for KRA (*tick one*)  
(a) Less than one year (b) 2 – 5 years (c) 6 – 10 years  
(d) 11 – 15 years (e) 16 – 20 years (f) More than 20 years
  
7. What are your terms of employment? (*tick one*)  
(a) Permanent and Pensionable  
(b) Contract  
(c) Probationary  
(d) Temporary

## **SECTION TWO**

### **Perceived factors influencing the effective implementation of Human Resource Information System.**

In order to obtain your views on the factors influencing effective implementation of HRIS, please select the response that you think is the most appropriate to each statement. Use the key below.

1. Strongly disagree    2. Disagree    3. Neutral    4. Agree    5. Strongly agree

<b>S/No</b>	<b>Top Management</b>	<b>Rating</b>				
1	Top management approves the implementation of HRIS project and align it with strategic business goals in the Authority	1	2	3	4	5
2	Top management commits financial, time and human resources to HRIS project	1	2	3	4	5
3	A sizeable budget is allocated to the implementation and maintenance of the HRIS project in the Authority.	1	2	3	4	5
4	Through use of HRIS, management provides planning and coordination to employees	1	2	3	4	5
5	Decision making process by managers has been enhanced by the use of HRIS	1	2	3	4	5
	<b>Effective Communication</b>	1	2	3	4	5
1	New organizational structure, roles and responsibility as impacted by HRIS is communicated to staff	1	2	3	4	5
2	The HRIS project progress is communicated to employees on a regular basis	1	2	3	4	5
3	Communication between managers and employees is encouraged as it motivates people during HRIS implementation	1	2	3	4	5
4	Communication through HRIS enhances efficiency and effectiveness in the Authority	1	2	3	4	5
5	Employees have access to relevant HRIS information to Authority	1	2	3	4	5
	<b>Training</b>	1	2	3	4	5
1	I know how to use HRIS as am computer literate	1	2	3	4	5
2	I was given adequate training on how to use the HRIS	1	2	3	4	5

3	Training on the HRIS is done frequently in the Authority	1	2	3	4	5
4	Training motivates and encourage employees to embrace change during HRIS implementation	1	2	3	4	5
5	Administration of training programs and training analysis is faster through the use of HRIS	1	2	3	4	5
	<b>Support of Information System department</b>	1	2	3	4	5
1	There exists an ICT department in the Authority	1	2	3	4	5
2	ICT department plays a major role in facilitating the computerization of HRIS in the Authority	1	2	3	4	5
3	ICT department has enough resources to undertake HRIS implementation	1	2	3	4	5
4	ICT department participate in the planning and developmental stages of HRIS	1	2	3	4	5
5	ICT department is responsible for the maintenance of the HRIS project	1	2	3	4	5
	<b>Human Resource department involvement</b>	1	2	3	4	5
1	Human resource department is responsible for advocating the HRIS project	1	2	3	4	5
2	The department obtain and keep the management commitment to HRIS	1	2	3	4	5
3	Human resource leaders are involved in the implementation of the HRIS project	1	2	3	4	5
4	HR department encourages employees to embrace the HRIS by conducting training	1	2	3	4	5
5	HR department ensures there is enough human resource to undertake the HRIS project	1	2	3	4	5
	<b>User Involvement and Participation</b>	1	2	3	4	5
1	HRIS users are involved in the design and implementation process of HRIS	1	2	3	4	5
2	Users accept change during HRIS implementation	1	2	3	4	5
3	Users work with change agents during the HRIS implementation	1	2	3	4	5
4	Job aids for different users is identified during the HRIS implementation	1	2	3	4	5
5	Employees input is sort in the implementation of HRIS	1	2	3	4	5

**Thank you for your co-operation in filling this questionnaire**