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Muriu Ruth Wambui & Mary Ragui, PhD

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Muriu Ruth Wambui [1] & Mary Ragui, PhD [2]

[1] *MBA (Strategic Management), School of Business Economics and Tourism Kenyatta University, Kenya*
[2] *Lecturer, School of Business Economics and Tourism Kenyatta University, Kenya*

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ABSTRACT

This study examined the influence of strategic capacity on the implementation of HRIS in Machakos County Government, Kenya. The specific objectives were to determine the effects of human resource capacity, leadership capacity, and infrastructure capacity on HRIS implementation. This study adopted a descriptive design that covered 280 staff members from both the Human Resource and ICT departments. A total of 155 respondents were drawn using a stratified random sampling approach, and 142 valid questionnaires were collected, producing a response rate of 91.61 percent. After obtaining responses through structured questionnaires, data were processed and analyzed using SPSS Version 25.0. Reliability results showed Cronbach's Alpha values greater than 0.7 across all variables. Human resource capacity, particularly IT skills and continuous professional development, emerged as the strongest predictor. Leadership commitment and support played a key role in motivating employees and overcoming adoption challenges, while infrastructural resources such as computers and stable internet connectivity were essential for system functionality. The study concluded that strengthening strategic capacity is indispensable for successful HRIS adoption and sustainability in county governments. It recommended investment in staff training, deliberate leadership commitment, and infrastructural upgrading to enhance HRIS outcomes. Policymakers and strategic human resource managers can leverage these insights to optimize HR functions and improve service delivery. Further research is suggested on the influence of organizational culture and change management on HRIS sustainability in the public sector.

Key words: *Human Resource Capacity, Leadership Capacity, Infrastructure Capacity*

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INTRODUCTION

Integrating human resource information systems is now viewed as a vital means of ensuring that human resource management aligns with organizational goals. Through HRIS, managers are able to access reliable data that support planning, monitoring, and strategic decision-making. The system enhances efficiency in personnel administration by automating core HR functions such as recruitment, performance appraisal, payroll management, and training coordination. According to Nguyen et al. (2021), effective HRIS adoption enables HR departments to move from routine record keeping to value-adding roles that provide insights for management. Al-Batashil and Dattana (2019) further note that HRIS performance depends on the quality of information and the usability of the technology, while Liang et al. (2020) emphasize the need for adequate infrastructure and user competence. When properly designed, HRIS supports long-term planning and creates a database that strengthens evidence-based human resource decisions (Jani et al., 2021).

Across the world, organizations operate in rapidly changing environments characterized by globalization, innovation, and diverse workforces. These trends have compelled institutions to adopt technology-driven management practices that enhance competitiveness (Parry & Battista, 2019). Advances in information and communication technology have particularly transformed human capital management by providing real-time access to personnel data and analytical tools for workforce planning (Talukdar & Ganguly, 2021). Through the use of management information systems, including HRIS, organizations are able to strengthen strategic capacity by integrating human resources with technology to deliver efficient and responsive services (Belz & Peattie, 2012). Consequently, HR departments now play multiple rolesstrategic partners, change agents, and service providerscharged with ensuring efficiency and accountability in human resource operations (Kiprono, 2014).

The contribution of HRIS to organizational success is well documented. Troshani et al. (2011) and Yilmaz et al. (2016) found that automated HR processes improve productivity, reduce administrative costs, and enhance data accuracy. Al-Dmour et al. (2014) observed that the availability of timely human resource data improves strategic management decisions and ultimately financial performance. Furthermore, organizations that effectively attract and develop skilled personnel through technology-supported HR systems are more likely to sustain competitive advantage (Kluemper et al., 2016). In developing economies, the adoption of HRIS is viewed as an essential step toward modernizing public administration and ensuring transparency in personnel management (Kago, 2014). The system consolidates employee records into a unified database, which simplifies monitoring and evaluation of staff performance while promoting accountability and service quality (Hameed & Counsell, 2014).

Although global experience confirms that HRIS can transform human resource management, its success depends on institutional readiness and strategic capacity. Studies from developing contexts indicate that inadequate technological infrastructure, limited financial resources, and insufficient staff training remain major constraints (Journal of Human Resource and Sustainability Studies, 2021). These barriers call for deliberate efforts by public institutions to invest in infrastructure, strengthen user competence, and align HRIS initiatives with organizational strategy. When these elements are addressed, HRIS becomes an important driver of efficiency, accountability, and informed decision-making in both private and public sectors.

A Human Resource Information System is a comprehensive software application that consists of electronic databases, management programs, and information technology infrastructure, including both hardware and software. Its primary function is to collect, store, manage, distribute, and utilize data related to human resources, enhancing

the efficiency of organizational operations (Parry & Battista, 2019; Mauro & Borges-Andrade, 2020). The successful implementation and use of such systems depend on several critical factors, including strong executive support, a forward-thinking approach to adopting innovative technologies, and a well-defined business strategy for integrating new technological solutions. Proficiency in information and communication technology is also essential to ensure smooth adoption and operation, aligning technology with human resource management practices to enhance decision-making, improve operational efficiency, and foster competitive advantage in evolving business environments (Parry & Battista, 2019; Obeidat, 2018).

The success of firms in the modern global economy depends significantly on the strength of their human capital and alignment with a knowledge-driven economy (Ahmer, 2013). To enhance human capital management, businesses must adopt creativity, innovations, and advanced information technology systems. Competitive advantages are not only gained through the acceptance of information communication technologies but also by utilizing these technologies to complement other organizational resources. Dery, Grant, and Wiblen (2009) emphasized that managing global enterprises effectively requires integrating information technology within human resource management functions.

An illustrative example of this integration is seen in Buildnet Inc. in the United States, which replaced discrete HR systems for applicant tracking, learning and development, and salary administration with MyHRIS from NuView Inc. This web-based solution allows seamless administration of employee salaries, benefits, interview tracking, talent management, and succession planning. The system also enables managers across subsidiaries to access more than 200 reports, including termination summaries and unfilled positions, facilitating comprehensive oversight of global human capital activities. The transition from traditional HR management to electronic HR systems has yielded significant operational benefits. In contrast, many organizations in Africa still rely on non-automated communication methods, limiting their ability to benefit from advanced HR systems. As noted by Saaredra (2010) and Okeke-Uzodike&Chitakunye (2014), many enterprises face challenges such as inadequate infrastructure and limited budgets, hindering the shift from traditional HR management to electronic systems. Osei-Nyame and Boateng (2015) reported that only 40% of firms in Ghana had adopted HRIS, with most still managing human resources manually, especially among small and medium enterprises. Effective human resource management requires timely and accurate information to support decision-making and enhance service delivery (Adeleye, 2011). However, the lack of automated systems in many African organizations has resulted in delays and inefficiencies.

This study evaluated HRIS through three key objectives. First, it assessed the influence of human resource capacity by examining the availability, skills, and competency of HR personnel in utilizing and managing the system. Second, it explored how leadership capacity affects HRIS adoption, focusing on the role of leaders in providing support, guidance, and facilitation throughout the implementation process. Lastly, the study evaluated the influence of infrastructure capacity by analyzing the technological and physical resources required to ensure the successful deployment and operation of HRIS within Machakos County Government, Kenya.

Strategic capacity refers to an organization's ability to efficiently and effectively leverage its resources, capabilities, and knowledge to achieve its strategic goals and objectives. This involves having the necessary structures, systems, processes, and human capital in place to support the implementation of strategies and achieve desired outcomes (Sarpin et al., 2018). Strategic capacity, especially in the Human Resource Information Systems implementation has continued to receive significant scholarly attention. For instance,

according to the International Labour Organization (ILO, 2018), many public sector programs including HRIS, were evaluated as moderately successful in implementation, with over 40 per cent facing challenges related to inadequate strategic capacity. Even well-designed HRIS programs that are planned to function effectively often fail to achieve their intended results if the strategic capacity elements such as human resources, leadership, and infrastructure are not adequately addressed. A report by the United Nations Development Programme (UNDP, 2019) supports this, noting that the success of HRIS program is influenced by various factors, including leadership commitment, staff skills, and the availability of technological infrastructure. Several HRIS programs in Kenya have struggled to meet their objectives. An assessment of HRIS implementation in Machakos County showed that out of the numerous HRIS modules introduced since 2015, only a fraction is fully operational, while others have remained underutilized or abandoned. This could be an indication of existing gaps in strategic capacity elements critical for HRIS success. Despite efforts to enhance HR management in Machakos County, challenges persist, particularly in the areas of leadership and infrastructure (Ndungu & Njuguna, 2022).

In different countries, strategic capacity deficiencies have hindered the success of HRIS. For example, in Uganda, HRIS initially faced significant obstacles due to inadequate leadership capacity and limited infrastructure. However, subsequent investments in leadership training and technological upgrades led to improved HRIS adoption and utilization (Mwesigwa &Nsimbe, 2022). In Ghana, studies revealed that enhancing HR capacity through targeted training programs significantly improved HRIS functionality and effectiveness (Bunch & Lopez, 2021). In Kenya, the role of strategic capacity in HRIS implementation cannot be overstated. For instance, in Nairobi County, gaps in HR and leadership capacity were identified as major hindrances to HRIS success. According to Omolo (2021), many HRIS programs in the county suffered delays and poor outcomes due to insufficient leadership commitment and a lack of skilled personnel. Similarly, the infrastructure needed to support these systems, such as reliable internet connectivity and up-to-date software, was often found lacking (Shah, pers. comm., 2020).

Human resource information system plays a central role in acquiring, processing, analyzing, and distributing workforce information to aid both HR and managerial decision-making. HRIS extends beyond hardware and software, encompassing forms, policies, procedures, personnel, and data. A key distinction between HRIS and traditional information systems is its focus on employees, making it the first system new hires interact with during recruitment. This interaction influences job acceptance, career progression, and retention decisions. Accurate, timely, and secure data management within HRIS is essential to prevent stigmatization and mitigate privacy concerns, safeguarding the organization's reputation. Thoughtful planning, implementation, and management of HRIS can yield significant benefits by enhancing HR operations and supporting strategic goals across the organization.

Machakos County, one of Kenya's 47 counties, was established as part of the decentralized governance system outlined in the 2010 Kenyan constitution. The county government has a total of 6, 321 employees as of November 2022 according to a report presented to Governor WavinyaNdeti by her administration's task force on Human Resources Audit, Zhu Y., et al, (2022). The county government has tried to streamline human resource department so as to be in line with the public service commission policy and service delivery charter. The policy for human resources requires county governments to have efficiently functioning departments to steer various human resource management functions such as recruitment, remuneration, and performance contracting (Bach & Serrano, 2021).In order to ensure efficiency in the public service, the human resource department has

to digitize all its records in order to weed out the cases of ghost workers and ensure there is smooth running of activities in the department, and county thereby saving the public from losing money, Bhattacharyya, D. K., *et al*. (2020). However, there has been a slow update and upgrading of the human resource management system which leads to a poorly and lowly managed human resource which in turn slows down the service delivery, Cho, *et al.* (2020).

Statement of the Problem

Ball (2021) notes that the evolution of human resources from a basic function into a strategic asset critical for achieving organizational goals is heavily influenced by effective management. However, they caution that the rapid implementation of these systems, particularly in the public sector, often results in inefficiencies and failures, limiting the effectiveness of these costly initiatives. This challenge is particularly relevant to Machakos County, one of Kenya's 47 devolved governments formed under the 2010 Constitution. The county government, managed by an executive arm led by an elected governor, comprises employees drawn from the national government and new recruits. During the devolution transition, municipal council employees, many of whom were semi-skilled, were integrated into the county workforce. This unique context highlights the importance of examining how the adoption of human resource information systems can support the smooth transition and optimize the use of human resources within the county government to enhance operational efficiency.

Human resource management is key in ensuring that organizations achieve their goals by effectively managing human capital. The implementation of Human Resource Information Systems has been widely adopted to modernize these functions,however, despite its potential benefits, HRIS implementation faces numerous challenges, particularly in public sector organizations like Machakos County Government. Success remains limited due to gaps in strategic capacity, such as inadequate leadership, insufficient human resource skills, and poor infrastructure support. Research has shown that HRIS can significantly improve organizational efficiency by automating administrative tasks and improving data accuracy. Grant et al. (2016) pointed out the system's ability to streamline operations, but identified critical gaps in leadership support that often hinder its full potential, especially in public institutions. Nguyen et al. (2023) stressed the importance of continuous training and capacity development but found that the lack of such efforts undermines HRIS success, particularly in environments with limited resources.

In many developing regions, HRIS implementation is often impeded by insufficient strategic capacity. Osei-Nyame & Boateng (2015) observed that in Ghana, a significant number of organizations have struggled to adopt HRIS effectively due to poor leadership commitment and inadequate infrastructure. The study called for targeted investments in leadership training and infrastructure development but did not address these challenges at the county government level, which faces unique constraints. Machakos County, like other counties in Kenya, has invested in HRIS to improve human resource management. However, studies indicate persistent challenges that limit its effectiveness. Ndungu & Njuguna (2022) reported that HRIS in Nairobi County remains underutilized, largely due to insufficient leadership support and outdated infrastructure.

The impact of human resource capacity, including skills and training, on HRIS effectiveness cannot be overstated. Wu et al. (2023) noted that the success of HRIS depends on the availability of skilled personnel who can effectively utilize the system. However, their research predominantly focused on private sector organizations, overlooking the distinct challenges faced by public sector entities like Machakos County. Similarly, Steyn (2023) observed that leadership commitment is a critical driver of HRIS success, yet gaps in leadership capacity remain a barrier, calling for more comprehensive leadership development strategies

geared towards the public sector. Further compounding these challenges is the inadequacy of infrastructure, which directly impacts HRIS implementation. Njuguna et al. (2023) discussed the need for stable internet connectivity and up-to-date hardware to support HRIS functions. However, their research did not delve into how localized infrastructure issues affect counties differently, particularly in under-resourced areas such as Machakos. While some counties have made progress in improving HRIS adoption through strategic investments, challenges persist. Mwesigwa &Nsimbe (2022) found that in Uganda, enhancing leadership and infrastructure capacities improved HRIS uptake, yet maintaining these improvements amidst evolving technological needs remains problematic. Zhu et al. (2022) reported that in Machakos County, limited IT skills and lack of ongoing training continue to hinder HRIS effectiveness, reflecting a broader challenge of underdeveloped strategic capacity within the county government.

Leadership style also has a significant impact on HRIS implementation. Chan and Mills (2020) found that participative and transformational leadership styles reduce resistance to new systems, yet their study did not fully address the complexities of public sector environments like those found in Kenyan counties, where leadership support is often inconsistent. These studies collectively show the pressing need to address strategic capacity gaps in HRIS implementation, particularly in public sector settings such as Machakos County. Strengthening leadership, enhancing human resource capacity, and investing in robust infrastructure are critical steps toward achieving successful HRIS adoption. It therefore remains unclear whether the human resource department in Machakos County has been implementing the human resource management systems. This therefore provides a strong motivation for this proposed study.

Objectives of the Study

The primary objective of this study was to determine the influence of strategic capacity on the implementation of Human Resource Information Systems (HRIS) within the Machakos County Government. The following were the specific objectives of the study:

- To establish the influence of HR Capacity on the implementation of HRIS in Machakos County Government, Kenya
- To establish the influence of Leadership Capacity on the implementation of HRIS in Machakos County Government, Kenya
- To examine the influence of Infrastructure Capacity on the implementation of HRIS in Machakos County Government, Kenya

The research was guided by the following hypotheses:

- **H_{01}:** There is no significant relationship between HR Capacity and the implementation of HRIS in Machakos County Government, Kenya
- **H_{02}:** There is no significant relationship between Leadership Capacity and the implementation of HRIS in Machakos County Government, Kenya
- **H_{03}:** There is no significant relationship between Infrastructure Capacity and the implementation of HRIS in Machakos County Government, Kenya

LITERATURE REVIEW

Model of Diffusion of Innovation

This was originally proposed by Everett Rogers in 1962, explains the process through which new concepts, technologies, or practices are accepted and disseminated among members of a social system over a period of time.It posits that adoption occurs when individuals or organizations recognize the value and relevance of an innovation in meeting their needs. The theory emphasizes that the perceived advantages, compatibility, and usefulness of the innovation play crucial roles in influencing its acceptance and integration into existing practices. The diffusion process consists of several key stage which are: awareness or understanding, where

individuals or organizations become familiar with the innovation; persuasion, where they are convinced of its value; decision-making, where a choice is made to adopt or reject it; implementation, where the innovation is put into use; and confirmation, where the decision is reinforced through continued positive outcomes. According to Makanyeza (2023), individuals must be psychologically prepared for new technologies to embrace them effectively, stressing the role of readiness in adoption.

Employees' attitudes toward using HRIS are critical, as their perceptions of the system's benefits will shape their acceptance or resistance. Thus, successful implementation requires organizations to not only introduce the system but also manage the process carefully by addressing concerns and demonstrating its advantages. The model provides a structured approach to analyzing how the provision of necessary infrastructure influences the adoption and integration of human resource information systems within organizations.

Integrated Management Competency Theory

The Integrated Management Competency Theory, advanced by Silva in 1972, posits that organizational success depends on aligning individuals' skills and competencies with appropriate job roles to effectively realize institutional objectives. It provides a competency-based framework that enables organizations to select employees with the appropriate knowledge, skills, abilities, and behaviors necessary for effective job performance. This model guides organizations in identifying career paths, fostering employee development, and aligning workforce competencies with organizational goals. It pinpoints that well-defined competencies are essential for planning and managing human resources, as they serve as a common language for performance management, employee selection, development, succession planning, and advancement.

This theory provides a relevant framework for evaluating how human resource competencies influence the implementation of human resource information systems within the Machakos County Government.For the system to be implemented successfully, employees must possess the required skills and competencies to operate and maintain it. The theory underscores the importance of capacity-building efforts, including targeted training and professional development, to ensure that employees can use the system effectively.

The Game Theory

Originating from the work of John von Neumann and Oskar Morgenstern in 1944, Game Theory illustrates how decision-makers coordinate, compete, or cooperate when their choices are mutually dependenta perspective useful for understanding interactions among HR managers, leaders, and departments during HRIS implementation. It is used to understand strategic interactions, where individuals or groups must consider the potential actions of others in their decision-making process. In the context of HRIS implementation, Game Theory can be applied to analyze the decision-making dynamics between different stakeholders, such as county government leaders, HR managers, and employees. Each "player" in the HRIS implementation process has specific actions they can take, with associated payoffs that depend on their own decisions and the decisions of others. For instance, leadership may decide whether to invest in HRIS based on expected benefits like improved efficiency, while employees may choose whether to embrace the system depending on how it impacts their work processes. The payoffs, such as improved service delivery or reduced operational costs, will vary depending on the alignment of these decisions. Leaders are tasked with ensuring that all stakeholderssuch as employees, management, and policymakerswork together towards the successful adoption of the system.

The Literature Review

In the words of Yaseen et al. (2022), Human Resource Capacity plays an important role in implementing HRIS. This capacity includes factors such as the number of staff, their IT skills,

competencies, and the availability of customized training. A skilled workforce with appropriate competencies ensures the system is effectively implemented, contributing to better service delivery. Research has shown that the technical abilities and continuous professional development of human resources are crucial for the success of HRIS projects. The success of these projects depends on the organization's dedication to building and maintaining this capacity through targeted training programs (Nguyen et al., 2023).

Wu et al. (2023) found that limited computer knowledge often causes delays in applying information technology to HR departments. Employee skill levels can affect their perception of HRIS. A lack of technical training among staff can lead to challenges in managing the system effectively. Therefore, all HR staff, managers, and employees need to receive appropriate training. Investment in user training and the development of technical skills among employees is essential for the system to function efficiently (Kim & Lee, 2022). Staff and managers also require additional training and on-site support during implementation, along with access to support services like a help desk or online manuals to assist them after installation (Singh & Sharma, 2020).

Training acts as a key driver for HRIS implementation, as the introduction of new technology requires employees and managers to develop the necessary skills. It is important to involve staff throughout the implementation phase, providing sufficient time for them to adapt to the system (Gachoki& Rotich, 2023). Effective training helps employees perform at higher levels. A study by Salicrup (2018) in Latin America, involving 300 researchers, found that most lacked the resources needed to carry out health research effectively. The research recommended that financial resources be made available to support researchers in managing their work efficiently and maintaining integrity. For training to be effective, it must follow a structured approach. This involves identifying the training needs, developing a program to address those needs, implementing the program, and evaluating its effectiveness (Afshan et al., 2022). Harvey (2022) suggests that organizations should conduct a training needs analysis to identify specific HRIS-related training requirements.

Leadership Capacity includes resource allocation, commitment, support, and motivation provided by leaders within the organization. Effective leadership ensures that the necessary resources are allocated to the HRIS project (Njuguna & Kamau, 2022). Leadership support fosters a positive environment for change and motivates employees to embrace the new system. The involvement of leaders at all levels is crucial for driving the project forward, addressing resistance, and ensuring that the HRIS aligns with the strategic goals of the organization (Ahmed et al., 2021).

In contrast, democratic leadership encourages participation, fostering smoother HRIS implementation by reducing resistance to change. Transformational leadership, which inspires and motivates employees toward a shared vision, is considered the most effective style for HRIS implementation. Steyn (2023) explains that strong top management commitment toward innovation supports the early adoption of technology, while a lack of such commitment hinders HRIS implementation. Top-level management plays a key role in technology adoption, contributing both financial resources and a culture that promotes change and innovation.

Thus, the role of leadership in HRIS implementation cannot be overstated. It is a multi-faceted process that requires a strategic vision, the ability to manage complex social interactions, and the capacity to motivate and guide employees through change. By understanding and leveraging these dynamics, organizations can enhance their chances of successful HRIS implementation, ultimately leading to more efficient and effective human resource management.

Infrastructure Capacity refers to the technological and physical resources available to support HRIS

implementation. This includes the number of computers, internet stability, real-time system capabilities (such as LAN), and access rights to the system. A robust infrastructure enables seamless access to HRIS from various locations, enhancing the flexibility and efficiency of HR processes. The availability of a stable internet connection and sufficient hardware is essential to ensure that the HRIS operates optimally, reducing downtime and enhancing the user experience (Njuguna et al., 2023).

Top management support plays a vital role in providing resources, commitment, communication, and involvement to ensure that organizations achieve their goals. Mwajuma (2023) identified a positive link between management style and strategy implementation, stressing that top management involvement extends beyond strategic planning into the execution phase. However, the study did not include evaluation in its scope. Mwajuma further found that multidirectional communication and employee participation positively influence strategy implementation, while Babalola and Taiwo (2022) also emphasized that top-level commitment and staff involvement are crucial to effective strategic management.

Senior management's role in fostering a learning culture that supports the use of evaluation outcomes is highlighted by Bossyut et al. (2022). Ruzgar and Kurt (2023) underscored the significance of interpersonal and informational managerial rolesof human resource strategies, both relying heavily on smooth information flow. At the strategic level, top management's influence is indispensable. Madanayake (2024) confirmed that top management supportreflected through strategic vision, sponsorship of business initiatives, and decisive communicationpositively impacts organizational outcomes.

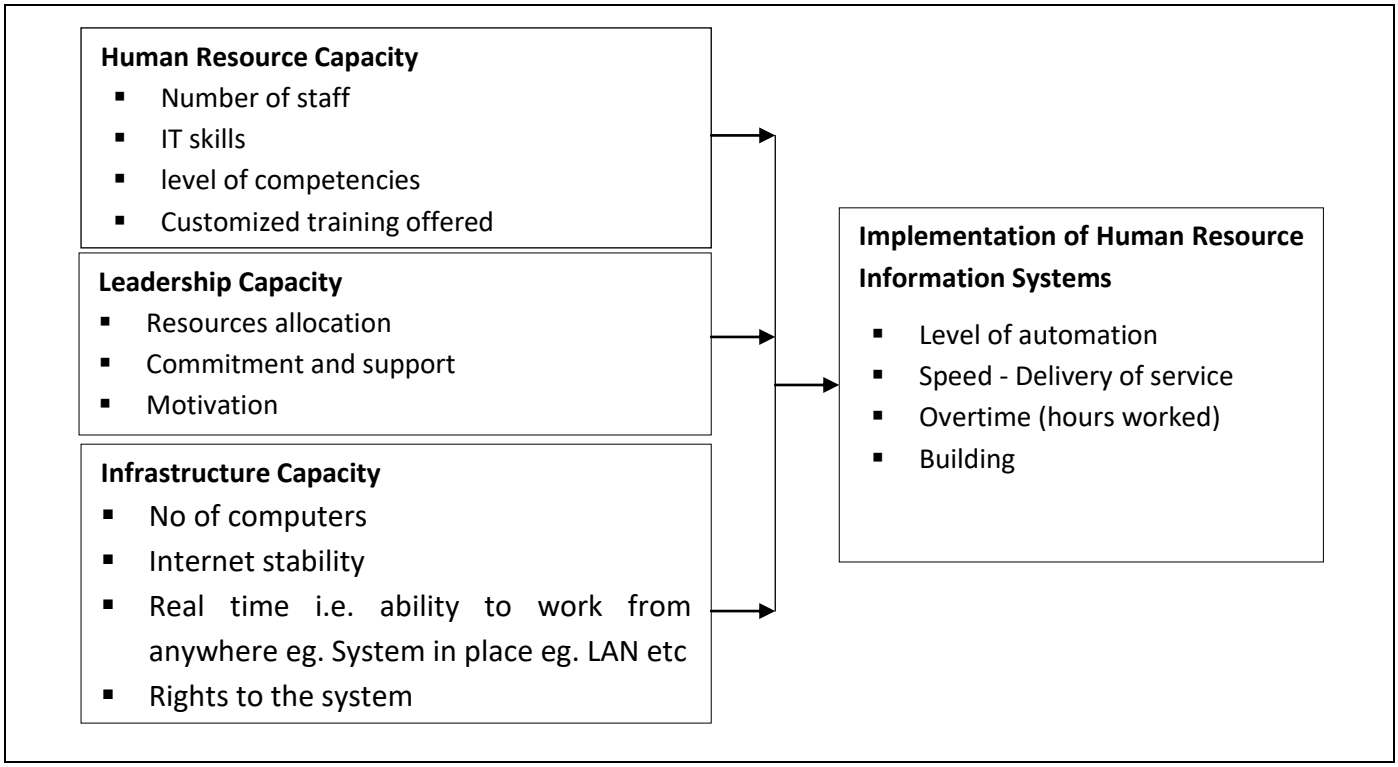
However, some research challenges the role of top management in strategic processes. Beuren and Teixeira (2023) identified communication gaps in the strategic plans communicated by senior management. Similarly, Lee and Teece (2022) observed that some studies place greater importance on middle management, highlighting the cognitive limitations and biases of top-level leaders. Further, Mwajuma (2023) found that communication did not significantly influence strategy implementation in Kenyan NGOs, a finding supported by an analysis at a Kenyan university, where weak communication hindered the revision of its strategic plan.

Strategic control remains an essential responsibility for managers, focusing on monitoring, evaluating, and refining organizational processes (El-Toukhy, 2024). Indicators of top management support include resource allocation, commitment, involvement, and clear communication. Bungay and Goold (2022) argued that aligning appropriate structures, developing competencies, setting control targets, and reducing bureaucracy are critical for building effective strategic control. Organizational structuressuch as specialization, standardization, and centralizationalso impact the effectiveness of top management support, as noted by SHRM (2023). Child (2024) warned that excessive hierarchy can obstruct communication by leading to withheld information or misinterpreted instructions. The restructuring efforts of top management are essential in dismantling bureaucratic barriers and empowering employees to unlock their creative potential (Dillon, 2024).

Despite these perspectives, some studies suggest that top management may not always be the most critical factor. Mikovca (2023) noted that human resource management control includes strategic and operational elements, although the role of top management was not explicitly emphasized. Elbanna (2024) found that strategic control can mitigate organizational politics but may also be undermined by middle managers' autonomy, which can intensify internal conflicts. In studies on project success, Young and Poon (2023) found that the impact of top management support was disproportionately significant, although the dependence of top management on other managers complicated efforts to measure its

precise contribution. Additionally, Obiefuna (2024) highlighted that senior managers often lack detailed operational knowledge of specific divisions, which limits their effectiveness in large organizations. This aligns with Newell's (2024) observation that many chief executives still view human resource functions as secondary, back-office operations.

Conceptual Framework



Independent Variable **Dependent Variable**

Source: Author (2024)

Figure 1: Conceptual Framework

METHODOLOGY

Descriptive is considered appropriate for systematically gathering and analyzing information to depict the attributes, perceptions, and behaviors of the target population. Kothari (2004) describes descriptive surveys as fact-finding inquiries conducted through questionnaires, making them an effective method for assessing the current state of the variables under investigation.

In the context of this study, the target population comprised employees working in the Human Resource and ICT departments of the Machakos County Government.This population was important due to their direct involvement in the implementation of the Human Resource Information Systems. The population consists of 276 HR department staff, 2 HR managers, and 2 ICT managers, totaling 280 individuals.

To determine sample size, Kothari (2004) formula, which is appropriate for calculating sample sizes from known populations was used. Given a target population of 280, the sample size calculation is detailed as follows:

$$n = x2N \times p(1- p) \div N \times e2 + x2\ p(1- p)$$

In this formula, n stood for the sample size, N for the total population (280), e for the permissible error margin (0.05), σ for the population standard deviation (assumed to be 0.5 when notavailable), and Z for the standard score at a 95% confidence

level (1.96). After substitution of the given values, the resulting sample size was 155 respondents

The sampling procedure for this study involved selecting participants randomly from the population. Random sampling was appropriate for this research because it provided each individual in the population an equal chance of being selected. By randomly selecting participants, the procedure enhanced the reliability of the findings and supported the generalizability of the results to the entire target population. The use of the Kothari formula to determine sample size, combined with random sampling, ensured that the study collected data efficiently while maintaining statistical rigor.

Data collection involved the use of questionnaires and interview schedules. The questionnaire featured open- and closed-ended items designed to generate both numerical and descriptive data, with a five-point Likert scale applied for response measurement. It was structured to capture information on the key study variables, namely human resource capacity, leadership capacity, infrastructure capacity, and the implementation of Human Resource Information Systems. The interview guide targeted selected key informants to obtain detailed qualitative insights. Document analysis was carried out to supplement primary data by reviewing relevant reports, county records, and policy documents related to HRIS. This triangulation of data collection methods ensured comprehensive coverage of the research objectives and enhanced the validity and credibility of the study findings.

The pre-testing exercise was conducted to verify that each questionnaire item was well understood by respondents, relevant to the study objectives, and effective in measuring the intended variables. The pilot involved ten percent of the total sample size, equivalent to fifteen respondents drawn from the Human Resource and ICT departments of the Machakos County Government. These respondents were excluded from the main study to avoid response bias. Feedback from the participants confirmed that the questionnaire was easy to understand and relevant, though a few questions were rephrased to enhance clarity and logical flow.

The results showed Alpha values of 0.802 for human resource capacity, 0.789 for leadership capacity, 0.813 for infrastructure capacity, and 0.776 for HRIS implementation, all of which exceeded the acceptable threshold of 0.7. These findings confirmed that the instruments were both valid and reliable, making them suitable for full-scale data collection.

The credibility of the research instruments was established through professional evaluation and academic oversight. To determine content validity, subject matter specialists together with the research supervisor reviewed the questionnaire to verify that it adequately represented every dimension of the study variables and was consistent with the stated research objectives. The instrument was further evaluated during the proposal defense, where constructive feedback from the panel and the supervisor was incorporated to refine the items. Ambiguous, repetitive, and overlapping questions were revised or eliminated to improve precision and relevance. These validation processes enhanced the clarity, accuracy, and comprehensiveness of the research instrument, ensuring that it effectively measured the intended constructs.

The reliability of the research tools was evaluated to determine the extent to which they consistently measured the study variables. As noted by Field (2018), a Cronbach's Alpha value of 0.7 or above reflects satisfactory internal consistency, implying that the items within the instrument assess a common underlying construct. In this study, all the constructs recorded Cronbach's Alpha values above the

All the study constructs yielded Cronbach's Alpha coefficients exceeding the accepted benchmark of 0.7, demonstrating satisfactory internal consistency. This outcome affirmed that the instruments employed were dependable for both

data collection and subsequent analysis (Tavakol& Dennick, 2011; Hair et al., 2019).

Data collection commenced upon obtaining ethical clearance from relevant bodies. Questionnaires were self-administered, while interviews were conducted by trained research assistants. Document analysis was conducted to complement primary data. The researcher personally dropped the questionnaires to the respondents and requested them to fill and return the same day and for those who were not able to fill and return the questionnaire the same day, the researcher arranged and agreed with the respondents the best and convenient day when the researcher can collect the filled questionnaires. Permission to record the discussions was obtained from the respondents, and the researcher also made field notes to aid in transcribing the information later. In addition, secondary data were gathered from existing literature and related reference materials.

Data analysis was carried out using the SPSS Version 25.0. Quantitative information was summarized through descriptive statistical techniques such as frequencies, percentages, means, and standard deviations.To establish the relationships between the study variables, inferential analysis was conducted using multiple regression techniques.The following equation was used;

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where: -

Y=Implementation of human resource information systems

β_0=constant

β_1, β_2 **and** β_3 = regression coefficients

X_1=Human Resource Capacity

X_2=Leadership Capacity

X_3= Infrastructure Capacity

ε=Error Term

When carrying out the study, the following ethical criteria in research and data collecting were adhered to in connection to the rights of respondents in the field of study. In this instance, preliminary information on the aim of the research and the level of confidentiality during the data collection was supplied to participants. The confidentiality of information provided by the respondents was kept confidential and was only used for the study and were not disclosed to the public.

Before collecting the data, the researcher sought permission from county government of Machakos, specifically the human resource department. The researcher sought introduction letter from the university which was used to apply for the NACOSTI permit and these two documents were produced to the respondents together with a consent form.

FINDINGS AND DISCUSSION

The study realized a response rate of 91.6 percent, as 142 of the 155 distributed questionnaires were duly completed and returned.

Descriptive Statistics

Human Resource Capacity

This section sought to determine the extent to which human resource factors (staff sufficiency, IT skills, competency alignment, customized HRIS training, and professional development) support HRIS implementation.

Table 1: Human Resource Capacity

Parameter	SA F (%)	A F (%)	N F (%)	D F (%)	SD F (%)	M	S.D
The number of staff available is sufficient to support the HRIS implementation.	60 (42.3)	42 (29.6)	20 (14.1)	20 (14.1)	0 (0.0)	4.00	1.065
Employees have the necessary IT skills required for effective use of the HRIS.	0 (0.0)	20 (14.1)	62 (43.7)	60 (42.3)	0 (0.0)	2.72	0.698
Staff competencies align with the needs of the HRIS.	0 (0.0)	62 (43.7)	40 (28.2)	40 (28.2)	0 (0.0)	3.15	0.836
Customized training on HRIS is regularly offered to employees.	0 (0.0)	22 (15.5)	40 (28.2)	80 (56.3)	0 (0.0)	2.59	0.745
Continuous professional development in HRIS-related skills is encouraged.	60 (42.3)	62 (43.7)	0 (0.0)	20 (14.1)	0 (0.0)	4.14	0.986
Human Resource Capacity significantly impacts the success of HRIS implementation.	100 (70.4)	42 (29.6)	0 (0.0)	0 (0.0)	0 (0.0)	4.70	0.458
Composite Mean / S.D						**3.55**	**0.443**

Source: Research Data (2025)

The responses to the staffing sufficiency statement show that 42.3 percent of participants strongly agreed and 29.6 percent agreed that there are enough personnel to support HRIS operations. An additional 14.1 percent were neutral, while 14.1 percent disagreed. The mean score was 4.00 with a standard deviation of 1.065. On the statement regarding IT skills required for effective HRIS use, 43.7 percent of respondents were neutral and 42.3 percent disagreed. Only 14.1 percent agreed, and no respondent strongly agreed. The mean score was 2.72 with a standard deviation of 0.698. Responses to the statement on competency alignment with HRIS needs were varied: 43.7 percent agreed, 28.2 percent were neutral, and 28.2 percent disagreed. The mean score was 3.15 with a standard deviation of 0.836.

Regarding the provision of customized HRIS training, 56.3 percent of respondents disagreed that such training is regularly offered, 28.2 percent were neutral, and 15.5 percent agreed. The mean score was 2.59 with a standard deviation of 0.745. On the statement about continuous professional development in HRIS-related skills, 42.3 percent strongly agreed and 43.7 percent agreed, while 14.1 percent disagreed and none were neutral. The mean score was 4.14 with a standard deviation of 0.986. Finally, all respondents either strongly agreed (70.4 percent) or agreed (29.6 percent) that human resource capacity significantly affects HRIS success. The mean score was 4.70 with a standard deviation of 0.458. The composite score across all items was 3.55 with a standard deviation of 0.443.

These results are consistent with findings by Yaseen et al. (2022), who stressed that staff competence and ongoing training are vital for successful HRIS implementation. The low ratings for customized training align with Al-Kasasbeh et al. (2020), who noted that developing countries often face challenges in sustaining structured HRIS training programs. Similarly, Wu et al. (2023) found that inadequate computer literacy and limited exposure to HR systems hinder effective adoption in public institutions. The study's results, however, differ slightly from Owino and Namusonge (2021), who observed significant improvement in HRIS performance when user-specific training was prioritized. In the context of Machakos County Government, these findings highlight that although human resource capacity exists in terms of staffing and professional development, the lack of

consistent, system-specific training remains a critical barrier to optimal HRIS utilization.

This section examined leadership commitment, resource allocation, motivation, visible top-management support, and recognition of leadership's critical role in HRIS success.

Leadership Capacity

Table 2: Leadership Capacity

Parameter	SA F (%)	A F (%)	N F (%)	D F (%)	SD F (%)	M	S.D
Leadership effectively allocates resources for HRIS implementation.	0 (0.0)	0 (0.0)	82 (57.7)	60 (42.3)	0 (0.0)	2.58	0.496
There is strong commitment from leaders towards supporting HRIS implementation.	0 (0.0)	62 (43.7)	40 (28.2)	40 (28.2)	0 (0.0)	3.15	0.836
Leaders motivate employees to engage with the HRIS.	0 (0.0)	60 (42.3)	82 (57.7)	0 (0.0)	0 (0.0)	3.42	0.496
Top management support is visible in overcoming challenges during HRIS adoption.	0 (0.0)	102 (71.8)	20 (14.1)	20 (14.1)	0 (0.0)	3.58	0.728
Leadership Capacity plays a critical role in the success of HRIS implementation.	60 (42.3)	62 (43.7)	20 (14.1)	0 (0.0)	0 (0.0)	4.28	0.698
Composite Mean / S.D						**3.40**	**0.354**

Source: Research Data (2025)

Table 2 presents the results on leadership capacity and its influence on the implementation of the Human Resource Information System within Machakos County Government. The findings show that while leadership played a visible role in encouraging system use and addressing challenges, tangible support in the form of resource allocation was notably limited. A majority of respondents (57.7 percent) remained neutral and 42.3 percent disagreed that adequate resources were allocated for Human Resource Information System activities, yielding a mean of 2.58. On the other hand, most respondents acknowledged that leaders motivated employees to engage with the system (mean = 3.42) and that top management support was visible in addressing implementation challenges (mean = 3.58). The highest agreement (mean = 4.28) was recorded on the overall importance of leadership capacity to system success, highlighting recognition of leadership's central role despite some weaknesses in execution. The composite mean of 3.40 suggests a moderately strong but uneven level of leadership support.

These results indicate that leadership within Machakos County Government demonstrates goodwill and conceptual support for Human Resource Information System implementation but falls short in consistent commitment, especially in financing and operational reinforcement. The findings mirror those of Steyn (2023), who emphasized that sustained top management commitment is crucial for effective system adoption, and Chan and Mills (2020), who observed that participative and transformational leadership styles enhance user acceptance of new technologies. Similar to Ahmed et al. (2021), the current study found that leadership in public institutions often focuses on oversight rather than resource facilitation, leading to gaps between intent and implementation. In contrast, Njuguna and Kamau (2022) demonstrated that continuous leadership engagement and adequate resourcing improve Human Resource Information System results a contrast that highlights where Machakos County's leadership effort remains insufficient.

Infrastructure Capacity

This section assessed adequacy of computers, internet stability, real-time access, user access rights, and the perceived role of infrastructure in HRIS effectiveness.

Table 3: Infrastructure Capacity

Parameter	SA F (%)	A F (%)	N F (%)	D F (%)	SD F (%)	M	S.D
The number of computers available is sufficient to support HRIS operations.	40 (28.2)	20 (14.1)	20 (14.1)	62 (43.7)	0 (0.0)	3.27	1.282
Internet connectivity is stable enough to support HRIS functions.	0 (0.0)	20 (14.1)	20 (14.1)	102 (71.8)	0 (0.0)	2.42	0.728
The HRIS can be accessed in real-time from various locations, supporting flexibility.	0 (0.0)	40 (28.2)	40 (28.2)	42 (29.6)	20 (14.1)	2.70	1.030
Users have the appropriate rights and access levels to the HRIS.	0 (0.0)	40 (28.2)	40 (28.2)	62 (43.7)	0 (0.0)	2.85	0.836
Infrastructure Capacity significantly affects the effectiveness of HRIS implementation.	80 (56.3)	40 (28.2)	22 (15.5)	0 (0.0)	0 (0.0)	4.41	0.745
Composite Mean / S.D						**3.13**	**0.582**

Source: Research Data (2025)

The results show that infrastructure remains a major challenge to system efficiency. Although 28.2 percent of respondents strongly agreed and 14.1 percent agreed that the number of computers available was sufficient, 43.7 percent disagreed, yielding a mean score of 3.27. This variation indicates that some departments are better equipped than others, a disparity that affects uniform system access. The majority of respondents (71.8 percent) disagreed that internet connectivity was stable enough to support Human Resource Information System functions (mean = 2.42), a finding that aligns with Njuguna et al. (2023), who emphasized that unstable networks and inadequate ICT tools undermine consistent system performance. This observation confirms that technological gaps continue to constrain the operational effectiveness of digital systems in public institutions.

Respondents also expressed limited satisfaction with access flexibility and user permissions. Only 28.2 percent agreed that the system could be accessed in real time from multiple locations, while nearly 30 percent disagreed, reflecting poor network integration and weak remote access infrastructure. Similarly, 43.7 percent of participants disagreed that users had appropriate access rights, resulting in a mean of 2.85. These findings mirror Mwesigwa and Nsimbe's (2022) observation that restricted accessibility and weak control frameworks often arise from uneven infrastructure investment and insufficient system configuration. The mixed responses on access rights further suggest that technical limitations and policy inconsistencies hinder effective system utilization, a challenge also reported by Zhu et al. (2022) in their study of public institutions within Machakos County.

Despite these shortcomings, respondents unanimously acknowledged the importance of infrastructure in shaping system success. A combined 84.5 percent strongly agreed or agreed that infrastructure capacity significantly affects the effectiveness of the Human Resource Information System, generating a high mean of 4.41. This consensus supports Osei-Nyame and Boateng (2015), who found that without adequate infrastructure, even well-trained staff and committed leaders cannot achieve optimal digital performance. The composite mean of 3.13 thus indicates a partially enabling environment where recognition of infrastructure's importance

outweighs actual investment in physical and technological resources.

HRIS Implementation

This section presents the extent to which the Human Resource Information System has been implemented within Machakos County Government and the degree to which it delivers its intended results. It evaluates the practical results of system use in relation to automation, efficiency, accountability, performance, and utilization of available functionalities. The results summarized in Table 4 show experiences among respondents regarding how effectively the system has transformed human resource operations.

Table 4: Human Resource Information System Implementation

Parameter	SA F (%)	A F (%)	N F (%)	D F (%)	SD F (%)	M	S.D
HRIS has automated key HR processes, enhancing efficiency.	0 (0.0)	62 (43.7)	40 (28.2)	20 (14.1)	20 (14.1)	3.01	1.072
The speed of service delivery has improved with HRIS implementation.	0 (0.0)	82 (57.7)	40 (28.2)	20 (14.1)	0 (0.0)	3.44	0.729
There is a noticeable reduction in overtime due to HRIS efficiency.	0 (0.0)	40 (28.2)	102 (71.8)	0 (0.0)	0 (0.0)	3.28	0.451
HRIS implementation has met the expected objectives and improved performance.	0 (0.0)	40 (28.2)	82 (57.7)	20 (14.1)	0 (0.0)	3.14	0.637
HRIS enhances accountability and management of human resource data.	40 (28.2)	80 (56.3)	22 (15.5)	0 (0.0)	0 (0.0)	4.13	0.651
The level of automation influences the overall performance and success of HRIS.	20 (14.1)	122 (85.9)	0 (0.0)	0 (0.0)	0 (0.0)	4.14	0.349
HRIS is using all its functionality to its full potential.	0 (0.0)	40 (28.2)	62 (43.7)	20 (14.1)	20 (14.1)	2.86	0.986
Composite Mean / S.D						**3.43**	**0.403**

Source: Research Data (2025)

The findings indicate that the Human Resource Information System has contributed moderately to improving efficiency and accountability within Machakos County Government. About 43.7 percent of respondents agreed that the system has automated key human resource processes, though 28.2 percent remained neutral and another 28.2 percent disagreed or strongly disagreed. The mean of 3.01 suggests that automation exists but is not fully optimized across departments. Perceptions of improved service delivery were more positive, with 57.7 percent agreeing that the system enhanced service speed (mean = 3.44). These results resonate with Nguyen et al. (2023), who observed that partial automation in public organizations often accelerates administrative processes but rarely achieves end-to-end efficiency due to inconsistent system uptake across units.

The system's effect on performance outcomes was mixed. While 28.2 percent of respondents agreed that the Human Resource Information System has met its objectives, a majority (57.7 percent) remained neutral, and 14.1 percent disagreed, giving a mean of 3.14. Similarly, 71.8 percent of participants were neutral about whether overtime had reduced as a result of efficiency gains (mean = 3.28), implying that operational benefits may not yet translate to measurable workload reductions. These observations align with Zhu et al. (2022), who noted that Human Resource Information System implementation in Machakos County is still evolving, with tangible improvements limited by uneven usage and inadequate staff training. The moderate composite mean of 3.43 therefore reflects a system that is functional but not yet delivering its full potential, a condition mirrored in

Steyn's (2023) argument that system success depends on continuous technical and managerial reinforcement rather than one-time installation.

Strong consensus was recorded on accountability and data management, where 84.5 percent of respondents either agreed or strongly agreed that the system enhances transparency (mean = 4.13). Similarly, 100 percent agreed that the level of automation positively influences overall performance (mean = 4.14), confirming the system's perceived value where functionality is active. However, 43.7 percent of respondents remained neutral and 28.2 percent disagreed that all system features are fully utilized (mean = 2.86). This gap between system capacity and user engagement supports findings by Mwesigwa and Nsimbe (2022) and Njuguna and Kamau (2022), who observed that limited user competence and underutilization of available modules hinder full realization of Human Resource Information System benefits. Collectively, the findings suggest that while the system has advanced automation, data management, and accountability, its effectiveness remains constrained by inconsistent use, partial integration, and inadequate optimization across departments.

Diagnostic Tests

Tests of Normality

The normality of each composite variable was evaluated using the Kolmogorov–Smirnov (K–S) and Shapiro–Wilk (S–W) tests. As shown in Table 4.10, all variables recorded p-values greater than 0.05, indicating that the null hypothesis of normality could not be rejected. According to Ghasemi and Zahediasl (2012) and Field (2018), a significance level (p) above 0.05 suggests that the data do not significantly deviate from a normal distribution, satisfying one of the key assumptions for applying Ordinary Least Squares (OLS) regression. The results therefore confirm that the study variables were approximately normally distributed and suitable for further parametric analysis.

Table 5: Tests of Normality (Kolmogorov–Smirnov and Shapiro–Wilk)

Variable	KS Statistic	KS Sig.	SW Statistic	SW Sig.
Human Resource Capacity	0.061	0.200	0.983	0.118
Leadership Capacity	0.057	0.200	0.986	0.173
Infrastructure Capacity	0.063	0.200	0.981	0.142
HRIS Implementation	0.058	0.200	0.984	0.156

Source: Research Data (2025)

Multicollinearity

As shown in Table 6, all tolerance values exceed 0.20 and all VIF values are below 5.00, indicating no multicollinearity concerns. According to Hair et al. (2021) and Field (2018), tolerance values below 0.10 or VIF values above 10 signal serious multicollinearity, while values within these thresholds suggest that the independent variables contribute uniquely to the regression model. The results therefore confirm that the predictors in this study are sufficiently independent and that the estimates derived from the regression analysis are reliable.

Table 6: Multicollinearity Diagnostics (Refined Constructs)

Variable	Tolerance	VIF
HR Capacity (Refined)	0.58	1.73
Leadership Capacity	0.51	1.96
Infrastructure Capacity	0.62	1.61

Source: Research Data (2025)

Test for Heteroscedasticity

The Breusch–Pagan test was used to determine whether the variance of residuals remained constant across the fitted values of the regression model. As shown in Table 7, the test produced a chi-square (LM) statistic of 3.291 with a corresponding p-value of 0.349, and an F-statistic of 0.962 with a p-value of 0.412. Since all p-values exceed the 0.05 significance level, the null hypothesis of homoscedasticity is retained, indicating that the residuals exhibit constant variance. According to Gujarati and Porter (2009) and Wooldridge (2020), a non-significant Breusch–Pagan test ($p > 0.05$) confirms the absence of heteroscedasticity, thereby satisfying one of the core assumptions of the Ordinary Least Squares (OLS) regression model. These results therefore validate the reliability and efficiency of the regression estimates used in this study.

Table 7: Breusch–Pagan Test for Heteroscedasticity

LM Stat	LM p-value	F-Stat	F p-value
3.291	0.349	0.962	0.412

Source: Research Data (2025)

Test for Autocorrelation

Residual independence was assessed using the Durbin–Watson statistic to determine whether serial correlation existed among the residuals in the regression model. According to Field (2018), Durbin–Watson values range from 0 to 4, where a value near 2 suggests that residuals are independent, values below 1.5 indicate positive autocorrelation, and values above 2.5 imply negative autocorrelation.

Table 8: Test for Autocorrelation

Model	Durbin–Watson Statistic	Decision
Regression Model	1.982	No Autocorrelation

Source: Research Data (2025)

The results in Table 8 show that the Durbin–Watson value was 1.982, which is very close to 2, indicating that the residuals were not serially correlated. This suggests that the regression model met the assumption of independence of errors, implying that each observation was unique and not influenced by preceding data points. Consequently, the model estimates were reliable, and the relationships identified among the study variables were not distorted by autocorrelation effects. Similar findings were reported by Ndegwa (2022)andMuriithi and Wanjiru (2023), who noted that Durbin–Watson values between 1.5 and 2.5 confirm the stability and predictive credibility of regression models in social science research.

Multiple Regression Analysis

This section presents the regression model linking HRIS implementation with human resource capacity, leadership capacity, and infrastructure capacity. The results are reported as model fit, ANOVA, and coefficients, followed by interpretation. The estimation method is ordinary least squares.

Model Summary

As shown in Table 9, the regression model yielded an R value of 0.782 and an R Square of 0.611, indicating that Human Resource Capacity, Leadership Capacity, and Infrastructure Capacity jointly explain 61.1 percent of the variance in Human Resource Information System (HRIS) implementation. The adjusted R^2 of 0.605 confirms the model's robustness, while the F-statistic of 72.28 ($p < 0.001$) shows overall significance. This means that the predictors have a substantial combined effect on HRIS performance within Machakos County Government. Similar findings were reported by Al-Dmour et al. (2021) and Muda et al. (2016), who found that organizational and

technical capacities strongly influence HRIS effectiveness. However, the explanatory power in this study is slightly higher than that observed by Kimani and Nyaribo (2017) in Kenyan county governments, suggesting progressive improvements in capacity and system integration.

Table 9: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig. (F)
0.782	0.611	0.605	0.410	72.28	0.000

Source: Research Data (2025)

CONCLUSIONS AND RECOMMENDATIONS

During data collection, a total of 155 questionnaires were distributed, and 142 were duly completed and returned, representing a 91.61 percent response rate, which is considered excellent for social research. Respondents were mainly between 30 and 40 years of age, reflecting a youthful and active workforce. The majority held Master's degrees, indicating that the county has a highly educated human capital base.

The first objective focused on human resource capacity. The findings showed that staffing levels were generally adequate to support HRIS operations, and that opportunities for professional development existed. However, more than half of the respondents indicated that specialized training on HRIS was not regularly provided. Although staff members were academically qualified and motivated, gaps remained in technical skills, which limited the full use of the system. Regression results confirmed a significant positive relationship (B = 0.460, t = 6.57, p < .001), meaning that an increase in human resource capacity leads to better HRIS performance.

The second objective examined leadership capacity. Respondents reported that leaders offered encouragement and were involved in resolving some challenges, though resource allocation and consistent follow-up were sometimes inadequate. Leadership commitment showed the strongest influence on HRIS implementation (B = 0.580, t = 9.67, p < .001), indicating that supportive and engaged leadership enhances system success. Qualitative results reinforced this, revealing that effective communication, supervision, and teamwork were central to motivating staff and sustaining HRIS operations.

The third objective addressed infrastructure capacity. Respondents noted persistent challenges with insufficient computers, unstable internet connectivity, and limited system access. The regression coefficient for infrastructure capacity (B = 0.490, t = 9.80, p < .001) showed that improvements in infrastructure significantly enhance HRIS performance. Qualitative findings echoed this, emphasizing that stable connectivity and adequate hardware are necessary for daily system operations.

The regression model produced an R value of 0.782 and an R Square of 0.611, meaning that 61.1 percent of the variation in HRIS implementation was explained by the three predictors. The F-statistic of 72.28 (p < .001) confirmed that the model was statistically significant and well-fitting. Collectively, the results show that HRIS implementation in Machakos County Government is influenced by the combined strength of human resource, leadership, and infrastructure capacities.

The study concludes that strategic capacity significantly determines the success of HRIS implementation in Machakos County Government. Human resource capacity is adequate in numbers and general qualifications but limited in specialized HRIS and ICT skills. A unit increase in human resource capacity results in a 0.460-unit improvement in HRIS implementation, showing that continuous training and technical competence are essential for system efficiency.

Leadership capacity emerged as the strongest predictor of HRIS success. A unit increase in

leadership capacity leads to a 0.580-unit improvement in HRIS implementation, indicating that supportive leadership, regular supervision, and effective communication play a decisive role in promoting adoption and use of the system. Leadership that is visible, consistent, and adequately resourced is necessary for sustained HRIS performance.

Infrastructure capacity remains the weakest link, as inadequate hardware, unstable connectivity, and limited real-time access constrain system performance. A unit improvement in infrastructure capacity yields a 0.490-unit rise in HRIS implementation, confirming that reliable infrastructure is indispensable for system effectiveness.

Human Resource Information System implementation in Machakos County has achieved partial success. While some processes have been automated and accountability improved, full functionality has not been realized due to skill gaps, inconsistent leadership support, and infrastructural challenges. Strengthening these areas is important for improving HRIS adoption and overall human resource management efficiency.

The study contributes new knowledge by demonstrating how human resource capacity, leadership capacity, and infrastructure capacity jointly determine the success of HRIS implementation in a devolved government setting. It provides empirical evidence that these three elements together explain over sixty percent of HRIS performance variation. The study further confirms that successful HRIS adoption depends not only on technology but also on people and organizational leadership. It also offers a practical framework that county governments can use to strengthen HRIS utilization through targeted investment in training, leadership development, and infrastructure support.

Based on the conclusions, the study makes the following recommendations.

- The county government should enhance staff competence by introducing continuous and specialized HRIS training programs. Refresher courses, mentorship, and peer learning programs should be prioritized to ensure that all users can operate the system effectively and confidently. Recruitment should also stress on ICT competence to strengthen the technical base.
- Senior management should demonstrate consistent commitment to HRIS by allocating sufficient financial and material resources. Leaders should maintain close supervision, encourage teamwork, and ensure that HRIS objectives are integrated into departmental plans. Regular monitoring and communication will improve accountability and sustain momentum in implementation.
- The county should invest in upgrading computers, improving internet connectivity, and expanding system access across departments. Collaboration with national ICT agencies may help enhance technical capacity and ensure real-time access.
- At the policy level, the county and national governments should establish clear HRIS implementation frameworks that standardize procedures, ensure data security, and promote interoperability. Stronger coordination between the Public Service Commission, the Ministry of ICT, and county governments will enhance sustainability and integration of HRIS into public service reforms.

Suggestions for Further Research

This study was limited to Machakos County Government. Future studies should include other county governments to allow comparative analysis and identify best practices in HRIS adoption. Further research could also examine how leadership styles, organizational culture, and policy frameworks influence HRIS sustainability.

A study could be conducted to assess how ongoing capacity-building programs and infrastructure investments affect HRIS performance over time.

Also, research could be done to explore how HRIS can be integrated with other digital governance systems to enhance efficiency and data sharing in the public sector.

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