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Examining the Effectiveness of ICT Integration in HR Recruitment Process: A Case Study of Madison Life Insurance Company in Lusaka

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Abstract

The integration of Information and Communication Technologies (ICTs) into Human Resource Management (HRM) has become essential for modern organizations aiming to improve efficiency, transparency, and competitiveness. This study examined the effectiveness of ICT integration in HR recruitment processes within selected Madison Life insurance company in Lusaka, Zambia. The research focused on three main objectives: identifying ICT tools used in recruitment, assessing how ICT influences employee engagement, and examining its role in enhancing strategic workforce planning. A case study exploratory design was employed, using a mixed-method approach. Data were collected through semi-structured questionnaires distributed to HR managers, recruitment officers, and employees. Quantitative data were analyzed using STATA software, applying descriptive statistics frequencies, percentages, and means and Chi-square tests to determine relationships between ICT use and HR outcomes. Findings revealed that online job portals, e-recruitment platforms, and HR analytics tools are the most commonly used ICT systems by Madison life insurance sector, though the adoption of AI-powered recruitment remains limited. ICT integration was found to significantly enhance recruitment efficiency and data management, but its influence on employee engagement was mixed over half of respondents expressed uncertainty about its benefits in this area. However, ICT tools were widely recognized for improving access to HR information, feedback mechanisms, and employee retention. Regarding strategic workforce planning, ICT was rated highly effective in areas such as analytics, budgeting, and succession management, though some respondents questioned its overall impact. The study concluded that while ICT integration offers clear operational benefits, further advancement and training are required to maximize its strategic potential. It recommends that organization expand the use of advanced ICT tools, including AI-based systems, provide continuous HR training, and implement cloud-based HR solutions for accessibility and efficiency. Regular evaluation of ICT effectiveness is also advised to ensure alignment with organizational goals and continuous improvement.

Keywords: Human Resource, ICT Integration, Recruitment Process, Madison Life Insurance Company in Lusaka, Employee Engagement and Workforce Planning

1. Introduction

1.1 Background of the Study

The integration of Information and Communication Technologies (ICTs) in Human Resource Management (HRM) has transformed the way the organizations manage their workforce, enhancing efficiency, transparency, and decision-making capabilities (Mutiarin, 2019). ICTs in HRM encompass tools and systems such as e-recruitment platforms, payroll management systems, employee self-service portals, and performance management software (AbdulKareem, 2024). These technologies facilitate data-driven approaches to HR functions, enabling the organizations to streamline processes, improve employee engagement, and optimize resource allocation (Thelma, 2024).

ICT integration in HRM involves the use of technology to automate and enhance HR operations. Key concepts include e-HRM (electronic Human Resource Management), HR analytics, cloud-based HR systems, and artificial intelligence (AI) in workforce management (Mushumba, 2024). These tools provide real-time data, reduce administrative burdens, and support strategic HR planning. Globally, the organizations have adopted ICT solutions to improve operational efficiency and meet the

dynamic demands of workforce management (Vahdat, 2022). In Zambia the insurance sector, known for its reliance on large datasets and compliance with regulatory frameworks, particularly benefits from ICT-enabled HR systems (Mbambiko, 2024).

Locally, in Zambia, the insurance industry is growing rapidly, with increasing demand for skilled human resources and efficient management practices (Twaambo, 2024). Despite this growth, many insurance companies face challenges in adopting ICTs in HRM, including limited infrastructure, high implementation costs, and resistance to change. In Lusaka, the epicenter of Zambia's financial and business activities, insurance companies are gradually recognizing the potential of ICTs in improving HR operations (Mbambiko, 2024).

The integration of ICTs in HRM has led to improved efficiency, data accuracy, and employee satisfaction in organizations that have embraced these technologies (Subulwa, 2022). For the insurance industry in Lusaka, this could mean enhanced compliance with regulatory requirements, better talent management, and increased competitiveness (Mwape, 2021). Failure to integrate ICTs in HRM could result in inefficiencies, high turnover rates, and missed opportunities for growth. Conversely, successful adoption could lead to a more agile and competitive insurance sector, capable of attracting and retaining top talent while meeting the demands of a rapidly changing market (Mutairin, 2019). This study aims to explore the extent of ICT integration in HRM within Madison life insurance Company in Lusaka, identifying challenges and opportunities to inform strategies for effective implementation.

1.2 Statement of the Problem

The integration of Information and Communication Technologies (ICTs) in Human Resource Management (HRM) is increasingly recognized as a critical driver of organizational efficiency, transparency, and competitiveness (Mbambiko, 2024). Despite the transformative potential of ICTs, the adoption of these technologies in Zambia's insurance sector remains limited, particularly in Lusaka, where the majority of insurance companies are headquartered. Many firms continue to rely on manual processes for key HR functions such as recruitment, performance evaluation, and employee records management, resulting in inefficiencies, errors, and delays. Recent statistics indicate that only 35% of Zambian companies in the financial and insurance sectors have adopted comprehensive ICT-based HR systems (Zambia National ICT Policy Report, 2023). This figure is significantly lower compared to neighboring countries like South Africa, where ICT adoption in HRM exceeds 75% (South African ICT Industry Report, 2022). Furthermore, a survey conducted in 2024 by the Insurance Association of Zambia revealed that 60% of insurance companies in Lusaka still rely on semi-automated HR processes, citing high implementation costs, lack of expertise, and resistance to change as major barriers. The existing gap is particularly evident in smaller insurance firms, which often lack the resources to invest in ICT infrastructure. This disparity not only hampers operational efficiency but also reduces the ability of these companies to attract and retain talent in an increasingly competitive market. Empirical studies from similar developing contexts show that firms that lag in ICT adoption face higher employee turnover rates and reduced productivity (Mubanga, 2022). The limited adoption of ICTs in HRM creates significant challenges, including inefficiencies in talent management, delays in payroll processing, and a lack of real-time data for decision-making. This problem is exacerbated by the growing need for compliance with regulatory requirements and the demand for agile HR practices to meet evolving workforce expectations. This study is necessary to address these challenges by examining the current state of ICT integration in HRM within Madison life insurance in Lusaka, identifying the specific barriers to adoption, and proposing actionable solutions. Understanding the phenomenon will not only help bridge the existing gap in research but also contribute to the development of strategic frameworks for effective ICT adoption in HRM (Dachner, 2021).

1.2.1 General Objective

To investigate the effect of integrating Information and Communication Technologies (ICTs) in Human Resource Management (HRM).

1.2.2 Specific Objectives

1. To establish the types of ICT tools integrated into HRM recruitment processes.
2. To assess how ICT integration in HRM influences employee engagement?
3. To examine how ICT integration in HRM in influence employee engagement?

1.3 Theoretical Framework

This study is anchored in the Technology Acceptance Model (TAM) and the Resource-Based View (RBV) to examine the effectiveness of ICT integration in HR recruitment within Madison life insurance Company in Lusaka. According to TAM, technology adoption depends on perceived usefulness and ease of use (Davis, 1989; Venkatesh & Bala, 2021). In recruitment, tools such as Applicant Tracking Systems (ATS), online job portals, and AI-based screening systems are effective when HR professionals perceive them as efficient and user-friendly. The RBV theory emphasizes that ICT serves as a strategic resource that enhances organizational competitiveness by improving operational and human capital efficiency (Barney, 1991; Wernerfelt, 2020). The framework identifies three dimensions of ICT integration. First, it examines the types of ICT tools used in HR recruitment, including ATS, HR analytics, and digital onboarding systems (Stone *et al*., 2023). Second, it explores the influence of ICT on employee engagement, where digital platforms enhance transparency, communication, and satisfaction (Johnson & Brown, 2022). Third, it focuses on ICT's role in strategic workforce planning, where predictive analytics and talent mapping support long-term HR goals (Nguyen & Phan, 2024). Together, these dimensions illustrate how ICT supports both operational efficiency and strategic alignment. Integrating TAM and RBV provides a dual perspective explaining how user acceptance and organizational capability interact to optimize HR recruitment outcomes in Madison life insurance Company in Lusaka (Chirwa & Banda, 2024).

2. Literature Review

2.1 Types of ICT tools integration in HRM

One of the most transformative ICT tools integrated into Human Resource Management (HRM) recruitment processes is the Applicant Tracking System (ATS). ATS

software automates and streamlines the entire recruitment workflow, providing a centralized platform for managing job vacancies, applications, and candidate information (Aceto, 2019). Traditionally, HR personnel had to shift through large volumes of paper-based or email applications, a process that was not only time-consuming but also prone to human error and inconsistencies. With the advent of ATS, this manual burden has been significantly reduced (Wang, 2020). These systems enable HR professionals to post job openings across multiple platforms simultaneously, collect and organize resumes, and filter applicants using customized criteria such as keywords, skills, qualifications, or years of experience. This ensures that only the most suitable candidates progress to the next stages of recruitment (Aboramadan, 2024).

Complementing the functionality of ATS are online job portals and career websites, which serve as essential channels for sourcing candidates. Platforms such as LinkedIn, Indeed, Glassdoor, and specialized job boards allow organizations to advertise job openings to a broad and diverse audience (Adjei, 2021). These portals often include filtering options that allow job seekers to narrow down searches based on location, job type, experience level, and salary expectations. For employers, these platforms offer access to a global talent pool and the ability to target specific demographics or professional groups (Vardarlier, 2020). Additionally, Madison life insurance company maintain dedicated career pages on their websites, which are customized with employer branding, company values, and detailed information about open positions. These pages not only serve as a direct application platform but also strengthen the organization's image in the eyes of prospective candidates (Alakbarov, 2023) [4].

E-recruitment platforms, also referred to as web-based recruitment systems, have become a foundational component of modern Human Resource Management (HRM), particularly in streamlining recruitment processes (Butt, 2020) [8]. These platforms leverage the internet and cloud technology to manage the entire hiring cycle from advertising vacancies to final selection and onboarding (Vahdat, 2022). They allow candidates to submit their resumes and applications online, eliminating the need for paper-based submissions and manual filing systems. This shift not only reduces administrative overhead for HR departments but also enhances accessibility for applicants, who can apply for jobs from anywhere at any time (Twaambo, 2024). Additionally, many e-recruitment platforms offer features such as virtual pre-screening tests, application tracking, and automatic filtering of candidates based on set criteria. These functionalities enable recruiters to handle large volumes of applications efficiently and with greater accuracy (Dachner, 2021).

In today's fast-paced business environment, the company is required to adapt quickly to changes in regulations, market conditions, and workforce needs. ICT systems provide the agility necessary to manage these changes efficiently. ICT systems are equipped with features that allow automatic updates to reflect regulatory changes (Fröhlich, 2019). Cloud-based HR systems can be updated remotely to accommodate new legal requirements, such as adjustments in minimum wage laws or changes in health and safety regulations, without requiring manual intervention. This ensures that the company remains compliant and avoids costly fines or reputational damage (Bwalya, 2019).

2.2 How ICT integration in HRM influences employee engagement

The integration of Information and Communication Technologies (ICTs) in the workplace has significantly transformed how employees and management communicate and collaborate, ultimately driving higher levels of employee engagement (Stofberg, 2021). Traditional communication methods such as face-to-face meetings, phone calls, and written memos, while effective in some contexts, often fail to meet the needs of a diverse and geographically dispersed workforce (Wang, 2020). As a company grow and become more dynamic, these traditional methods can become inefficient, leading to communication breakdowns, delays in decision-making, and missed opportunities for innovation. ICT tools address these challenges by offering more efficient, accessible, and real-time communication channels that enhance collaboration and foster stronger employee engagement (Lee, 2023).

Internal social networks are another powerful ICT tool that enhances communication and employee engagement (Ewing, 2019). Platforms such as Yammer or Facebook Workplace allow employees to interact in a less formal, social context, sharing personal milestones, achievements, or casual updates. These platforms help create a sense of community and belonging within an organization, making employees feel connected to the company culture. These social networks can also be used for organizational updates, celebrating company successes, or promoting company-wide initiatives, fostering transparency and engagement (Haraldsen, 2024) [18]. Employees can easily stay updated on news, events, and announcements, helping them feel more connected to the organization's mission and goals (Adjei, 2021).

By providing personalized career development opportunities and ongoing feedback, ICT integration fosters a culture of continuous learning within the organization (Matthew, 2021). Employees are encouraged to take an active role in their professional growth, whether through accessing online training resources, setting personal goals, or engaging in performance discussions with managers. This culture of continuous learning not only benefits the employees but also enhances the overall performance of the organization, as a skilled, motivated, and engaged workforce is more likely to contribute to the company's success (Shawa, 2019).

Human Resource Management (HRM) has experienced significant transformation in recent years, primarily due to the growing influence of digital technologies. The move toward digital HRM involves using technology to manage various HR functions, including recruitment, performance evaluation, and employee engagement. In a study by Sharma and Sengupta (2023), a qualitative research approach was used to explore these developments. They conducted interviews with 25 HR managers and applied thematic analysis to identify current trends and perceived advantages of digital HR practices. The findings revealed that the most frequently used digital HR tools are, in order: employee self-service platforms, chatbots, AI-powered applicant tracking systems (ATS), people analytics, digital onboarding solutions, digital adoption platforms, and cloud-based human capital management systems. The study also observed a clear positive relationship between the size of an organization and the number of digital HR tools it implements. The organization tend to adopt more digital tools. Lastly, the results highlighted several perceived

benefits of digitalizing HR functions, including improved operational efficiency, enhanced productivity through technology, better employee experiences, and more informed decision-making driven by data (Sharma, 2023).

2.3 How does ICT integration in HRM enhances strategic workforce planning

The integration of Information and Communication Technologies (ICTs) into Human Resource Management (HRM) plays a critical role in facilitating strategic workforce planning (Mutiarin, 2019). Strategic workforce planning involves ensuring that an organization has the right number of employees with the right skills at the right time to meet its long-term goals. By leveraging ICT tools, HR departments can streamline the planning process, enhance decision-making, and align workforce capabilities with organizational objectives. Below, we explore the key ways in which ICT integration supports and enhances strategic workforce planning (Paul, 2024).

One of the most significant contributions of ICT integration to strategic workforce planning is its ability to provide data-driven insights (Rahaman, 2024). In today's fast-paced business environment, decision-making based on intuition or historical patterns is increasingly being replaced by data-informed strategies. Information and Communication Technologies (ICT), particularly Human Resource Information Systems (HRIS) and advanced analytics platforms, have empowered HR departments to harness the power of big data. By collecting and analyzing large volumes of employee-related data, these tools offer a wealth of insights that can drive better decision-making in key areas such as recruitment, retention, talent development, and workforce optimization (Stankevičiūtė, 2024).

Succession planning is a vital aspect of strategic workforce management, ensuring that the organization is prepared for leadership transitions and that critical positions are filled without disruption (Martin, 2021). Effective succession planning involves identifying high-potential employees and developing them for future leadership roles, creating a seamless transition when the need arises. The integration of ICT tools plays a crucial role in enhancing the efficiency and effectiveness of succession planning. By leveraging data-driven insights, HR departments can track employee performance, identify leadership potential, and create personalized development plans that foster a pipeline of future leaders (Mbambiko, 2024).

One of the primary benefits of ICT integration in succession planning is the ability to collect and analyze vast amounts of employee data, which provides HR managers with a clearer understanding of who among the workforce is suited for leadership roles (Martin, 2021). Human Resource Information Systems (HRIS), performance management platforms, and analytics tools allow HR professionals to track various employee metrics, including skills, qualifications, performance reviews, career goals, and leadership potential. This data can be used to create detailed employee profiles, highlighting individuals who have demonstrated the necessary skills and qualities for advancement within the organization (Mwape, 2021).

2.4 Personal Critique of the Literature

The reviewed literature demonstrates a broad thematic relevance, with studies exploring the integration of Information and Communication Technologies (ICTs) in various Human Resource Management (HRM) functions. These include succession planning, workforce alignment, employee engagement, recruitment, performance evaluation, and internal communication. For instance, studies by Mutemwa (2023) and Shakir (2023) focus on how ICT tools support succession planning by tracking employee performance trends, training history, and leadership potential. Such tools allow human resource managers to identify employees ready for greater responsibilities based on data rather than subjective assessments. Similarly, Vardarlier (2020) and Wang (2020) examine how ICT supports workforce alignment with strategic business goals. Through tools like Human Resource Information Systems (HRIS) and workforce planning software, HR departments are able to forecast workforce needs, identify skills gaps, and develop long-term plans that align with organizational growth trajectories.

2.5 Literature gap

Limited Examination of Implementation Challenges: Most studies focus on the benefits of ICT integration, such as improved transparency, engagement, and performance management, but they lack in-depth analysis of the challenges an organization face during implementation. Issues like high costs, technical complexities, and resistance to change are underexplored. Future research could investigate these barriers, particularly in different organizational contexts, to provide a more balanced understanding. Inadequate Exploration of Ethical Concerns: The literature does not sufficiently address ethical issues related to ICT in HR, such as data privacy, employee surveillance, and biases in algorithmic decision-making. These are critical areas, given the increasing reliance on digital tools in managing sensitive employee information. Addressing these concerns would help an organization adopt ICT responsibly (Paramesha, 2024).

3. Research Methodology

3.1 Research Design

This study adopts a case study design, which involves an in-depth, contextual analysis of a specific instance within a real-life setting. In this case, the research focuses on a particular subject within its actual environment, allowing for detailed exploration and understanding. Aligned with this, the study employed a cross-sectional Case study design, using a quantitative methodology to collect primary data (Omodan, 2024). This design enabled the collection of data at a single point in time, thereby providing a snapshot of the variables under investigation. The quantitative approach facilitated the gathering of numerical data, which will be analyzed using statistical techniques to identify patterns, draw conclusions, and explore relationships among variables (Stofberg, 2021).

3.2 Target Population

By definition, a population is defined as a collection of objects, events, or individuals sharing common characteristics that the researcher is interested in studying (Willie, 2024). The target population for this study consisted members of Madison Insurance company in Lusaka.

3.3 Sampling Design

The study employed convenience sampling technique. Convenience sampling was employed due to its practicality

and feasibility in accessing participants for our study. Given limited resources and time constraints, convenience sampling allowed efficiently gather data from individuals who are readily available and accessible (Golzar, 2022).

3.4 Sample Size Determination
A sample of 100 employees drawn from Madison life insurance Company operating in Lusaka, representing the target population. (Omair, 2025).

3.5 Data Collection Method
The study utilized a structured questionnaire comprising closed-ended questions to collect primary data. Structured surveys are recognized for their reliability and consistency in collecting comparable quantitative data (Nguyen & Phan, 2024). Data gathering methods included standardized surveys, face-to-face interviews, and predominantly electronic questionnaires to capture information on the research variables. The use of online data collection tools enhances accessibility, accuracy, and data completeness, 2023; Chirwa & Banda, 2024).

3.6 Data Analysis
The data analysis was conducted using STATA, a statistical software widely used in social science research for processing both descriptive and inferential data (Mumba & Zulu, 2023). Descriptive statistics, such as frequencies, percentages, and means, were utilized to summarize and describe patterns in the data. For inferential analysis, the Chi-square test was applied to examine correlations between categorical variables and to test associations between ICT adoption and HR recruitment outcomes (Johnson & Brown, 2022; Nguyen & Phan, 2024). This combination of methods allowed the study to provide both a quantitative summary and an evidence-based explanation of relationships among research variables.

3.7 Triangulation
The study adopted triangulation as a research strategy to strengthen the validity and reliability of its findings. Triangulation enhances research credibility by combining multiple data sources, instruments, and analytical perspectives (Venkatesh & Bala, 2021). In this study, it was achieved through the use of quantitative data collected via structured questionnaires, ensuring that multiple aspects of ICT integration in HR recruitment were captured and validated (Stone *et al*., 2023). This method minimized potential biases and offered a comprehensive understanding of the research problem, increasing the robustness of the study's conclusions (Chirwa & Banda, 2024).

3.8 Limitations of the Study
Temporal Constraints: the temporal scope of the study was limited to a specific period, potentially overlooking long term variations in ICT utilization and recruitment efficiency. Future longitudinal studies could capture evolving technological impacts overtime (Wernerfelt, 2020; Nguyen & Phan 2024).

External Validity: The external validity of the findings may have been constrained by market shifts, technological advancements, and contextual factors within Madison Lie insurance sector. Consequently, extrapolating results to other regions should be done cautiously, considering differing institutional and infrastructural contexts (Chirwa & Banda 2024; Stone *et al*, 2023).

3.9 Ethical Consideration
The study adheres to ethical standards. Informed consent will be obtained, participation is voluntary, and respondents can withdraw anytime. Data will remain confidential and used solely for academic purposes (Johnson & Brown, 2022). Ethical compliance enhances the credibility and integrity of academic research, particularly when human participants are involved (Nguyen & Phan, 2024). Strict confidentiality protocols were maintained, and all participants were treated fairly and equally without discrimination. Participation was voluntary, and respondents could withdraw at any stage without facing negative consequences. The study posed no physical, emotional, or reputational risks to participants (Mumba & Zulu, 2023).

4. Findings and Results
4.1 Characteristics of Respondents
The survey findings revealed that out of 100 employees of Madison life insurance Company in Lusaka, 67% were male while 33% were female. This indicates that men constituted the majority of the study participants, suggesting a male-dominated workforce within the company. The survey findings show that 53% of respondents were aged between 20 and 40 years, while 47% were between 40 and 80 years. This indicates that the majority of participants were relatively young and likely to be more familiar with the integration used in human resource recruitment process. The results indicate that 76% of respondents were married, while 24% were single. This suggests that most employees at the company are in stable family relationships, which may influence their attitudes toward work motivation and productivity. Married individuals may value job stability and fair recruitment practices more strongly due to family responsibilities. The findings reveal that 39% of respondents held a Bachelor's degree, 37% had a Diploma, 18% possessed a Master's degree, while 6% had attained a PhD. This distribution shows that the company workforce is largely composed of individuals with tertiary-level qualifications, indicating a relatively well-educated employee base.

4.2 Types of ICT tools integrated into HRM recruitment processes

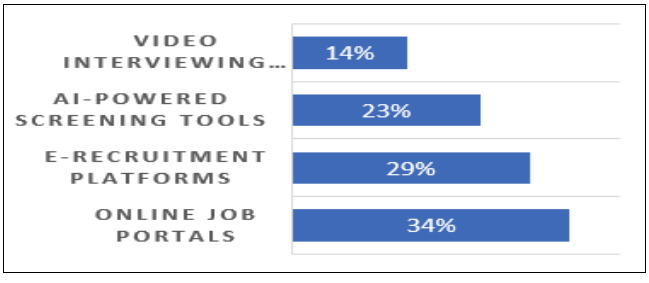

Fig 4.2.1: ICT tools your organization currently use for recruitment

The survey on ICT integration in HR recruitment revealed that Online Job Portals are the most widely used tool, with 34% of respondents reporting their use. E-Recruitment Platforms follow at 29%, while AI-Powered Screening Tools are used by 23% of the organizations. Video Interviewing Software is the least utilized, at 14%. These findings suggest that insurance companies in Lusaka tend to

adopt more traditional online recruitment methods over advanced AI or video-based solutions.

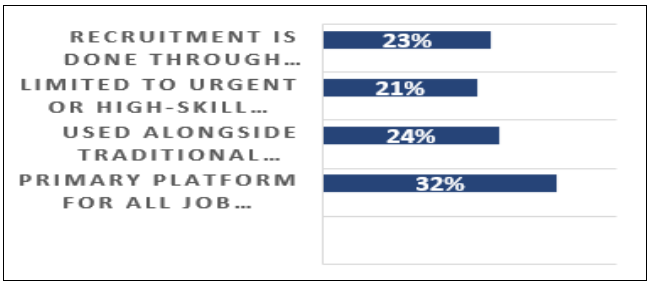

Fig 4.2.2: Your organization's approach to using online job portals

The survey indicates that 32% of respondents in the organization use online job portals as the primary platform for all job postings, while 24% use them alongside traditional advertising methods. About 21% limit their use to urgent or high-skill vacancies, and 23% rely solely on offline recruitment methods. This demonstrates a mixed approach to online recruitment, with a notable proportion still depending on traditional methods.

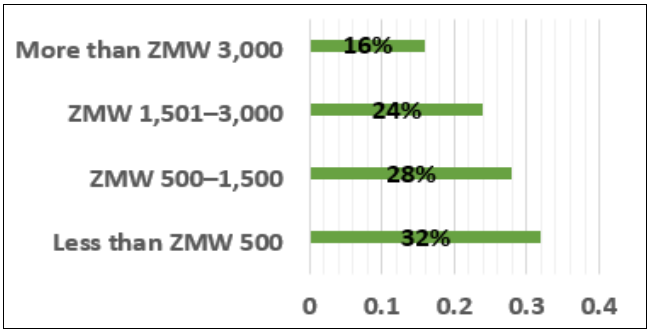

Fig 4.2.3: HR department's reliance on an Applicant Tracking System

The survey shows that 32% of HR department use an Applicant Tracking System (ATS) on every recruitment occasion, while 28% apply it only for specialized roles. About 24% use an ATS depending on departmental needs, and 16% never use one. This indicates that while ATS adoption is significant, its utilization is inconsistent within the organization.

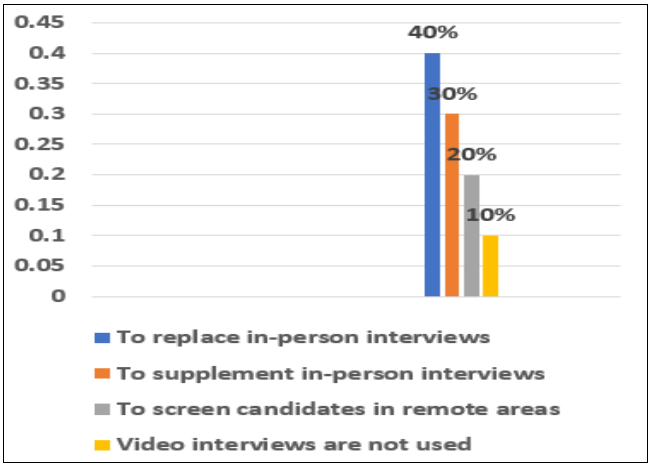

Fig 4.2.4: How e-recruitment platforms has influenced your organization's efficiency

The survey shows that 40% of organization use video interviews to replace in-person interviews, while 30% use them to supplement traditional interviews. About 20% employ video interviews to screen candidates in remote areas, and 10% do not use them at all.

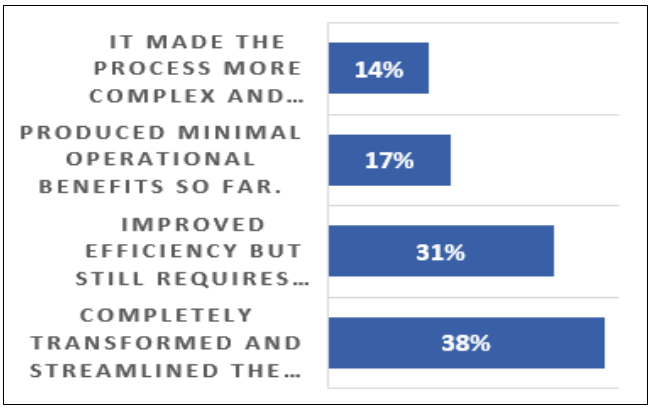

Fig 4.2.5: How e-recruitment platforms has influenced your organization's efficiency

The survey indicates that 38% of respondents reported that e-recruitment platforms completely transformed and streamlined recruitment, while 31% noted improved efficiency with some manual follow-up. Meanwhile, 17% observed minimal operational benefits, and 14% felt the process became more time-consuming, highlighting varying adoption impacts within the organization.

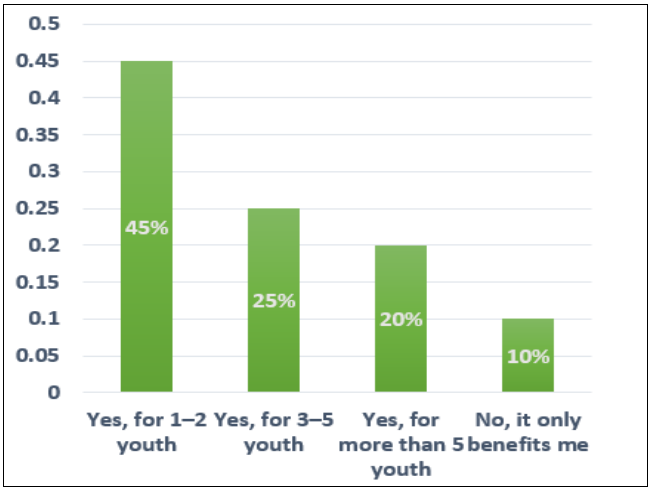

Fig 4.2.6: Adoption of AI or machine learning in your recruitment process

The survey reveals that 45% of the organization have fully integrated AI into their recruitment operations, while 25% use it partially for selected roles. About 20% are either piloting AI or considering its implementation, and 10% have not adopted it at all. These findings indicate a growing trend toward AI adoption in recruitment, with nearly half of the organization leveraging it to enhance efficiency and decision-making.

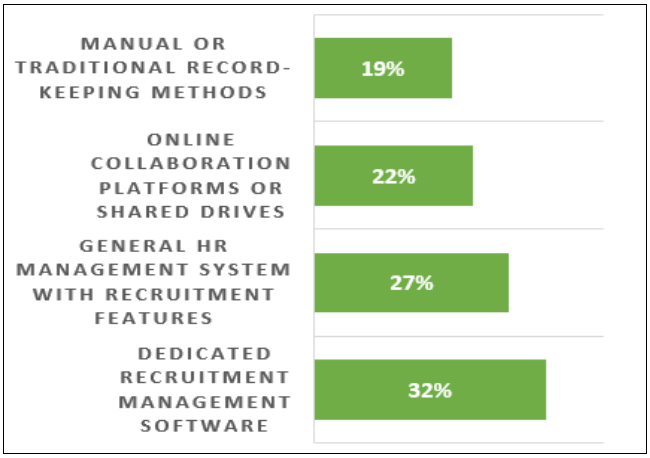

Fig 4.2.7: Type of system used by your to store recruitment information

The survey shows that 32% of the organization use dedicated recruitment management software to store and manage recruitment information. A further 27% rely on general HR management systems with recruitment features, while 22% use online collaboration platforms or shared drives. About 19% still depend on manual or traditional record-keeping methods. This indicates a gradual shift towards digital record management, though the organization continue to rely on less efficient methods.

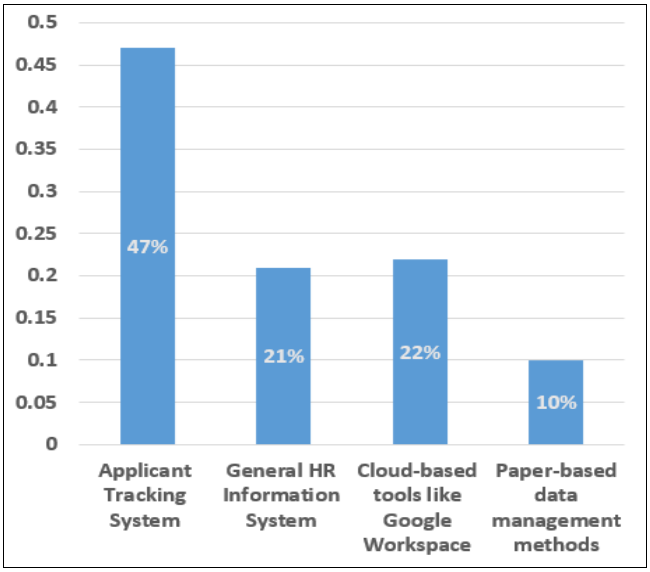

Fig 4.2.8: Which platform does your organization use to manage recruitment data

The survey reveals that 47% of the respondents in the organization primarily use an Applicant Tracking System (ATS) to manage recruitment data. About 22% rely on cloud-based tools like Google Workspace, while 21% use a general HR Information System. Only 10% still manage recruitment data through paper-based methods. These findings indicate a strong preference for digital and specialized systems in handling recruitment information.

4.3 Effects of ICT integration in HRM on employee engagement

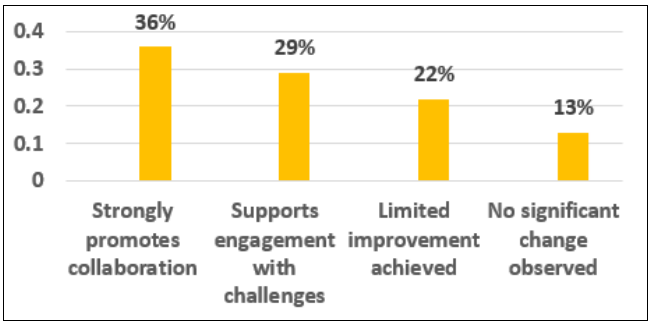

Fig 4.3.1: ICT Integration and Employee Engagement

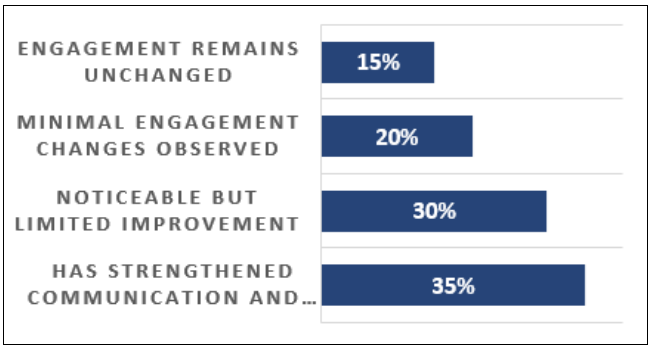

Fig 4.3.2: Impact of ICT on Employee Engagement with HR Services

The survey shows that 35% of organizations report that ICT integration in HRM has strengthened communication and motivation, while 30% note noticeable but limited improvements. About 20% observe minimal changes in employee engagement, and 15% report no change at all. These findings suggest that ICT adoption generally has a positive impact on HRM, though its effectiveness differs among organizations.

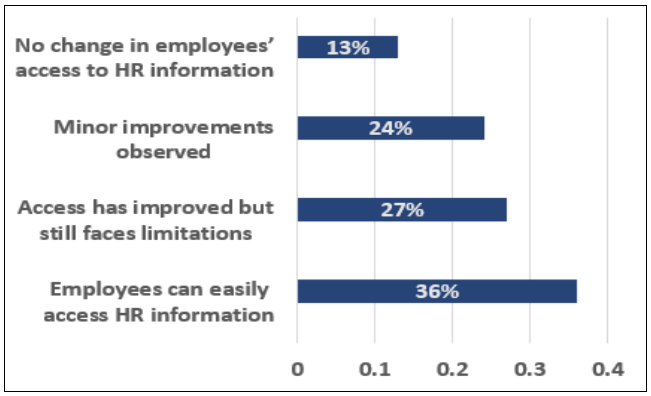

Fig 4.3.3: Association between ICT Integration and Employee Engagement in HRM

The survey indicates that 36% of organization's report that employees can easily access HR-related information due to ICT integration. About 27% note improvements but with

some limitations, while 24% observe only minor enhancements. Approximately 13% report no change in access. These results suggest that ICT has generally facilitated better access to HR information, though challenges still remains in the insurance sector.

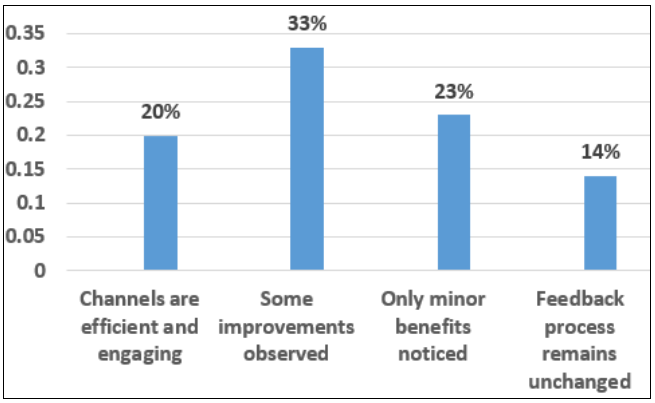

Fig 4.3.4: ICT integration in HRM on improving employee feedback

The survey reveals that 20% of the organization find ICT integration has made feedback and suggestion channels efficient and engaging. About 33% report some improvements, while 23% notice only minor benefits. Fourteen percent indicate that the feedback process remains unchanged. These findings suggest that ICT has a moderate impact on enhancing employee feedback mechanisms, with varying effectiveness the organization.

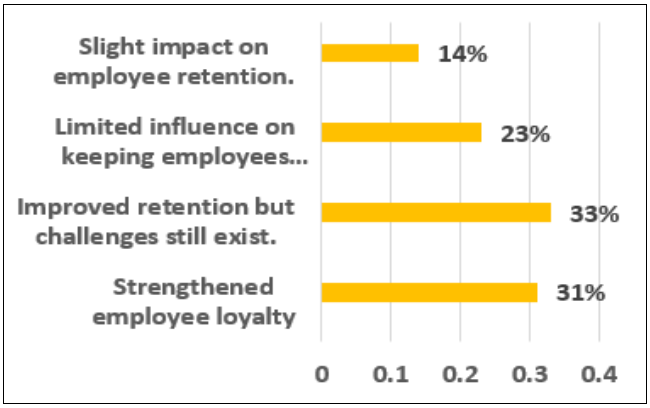

Fig 4.3.5: ICT Integration and Employee Retention

The study explored the effect of ICT integration in HRM on employee retention. Findings reveal that 31% of employees felt loyalty was strengthened, 33% noted improved retention despite challenges, 23% reported limited long-term influence, and 14% experienced only slight impact.

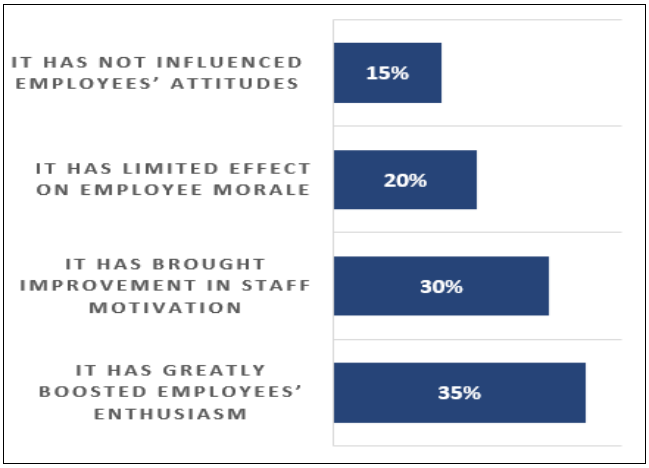

Fig 4.3.7: Overall Effect of ICT Integration in HRM

The study assessed the overall effect of ICT integration in HRM on employees. Findings show that 35% reported greatly boosted enthusiasm, 30% noted improved staff motivation, 20% observed limited impact on morale, and 15% felt it did not influence attitudes.

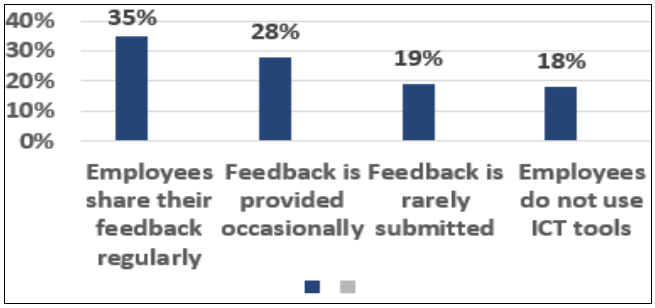

Fig 4.3.8: Frequency of Employee Feedback via ICT Platforms

The study examined how frequently employees provide feedback through ICT platforms. Findings reveal that 35% of employees share feedback regularly, 28% do so occasionally, 19% provide feedback rarely, and 18% do not use ICT tools for feedback.

4.4 Effectiveness of ICT Integration in Human Resource Management for Enhancing Strategic Workforce Planning

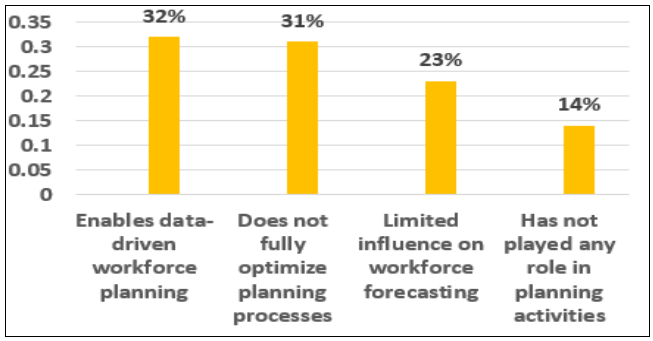

Fig 4.4.1: ICT Integration and Workforce Planning

The study assessed the effect of ICT integration on workforce planning. Findings show that 32% of respondents reported it enables data-driven planning, 31% felt it does not fully optimize processes, 23% observed limited influence on forecasting, and 14% indicated no role in planning activities.

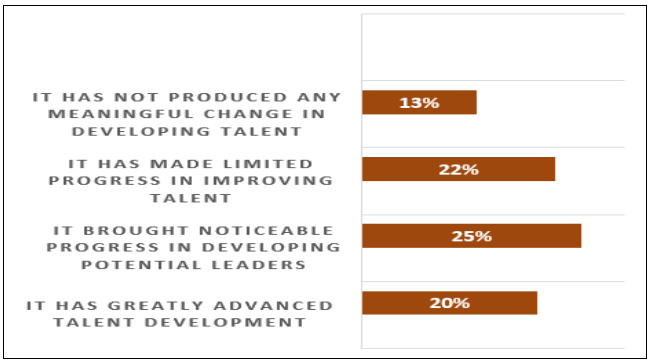

Fig 4.4.2: ICT Integration and Talent Management

The study evaluated the effectiveness of ICT integration in HRM for talent management. Findings reveal that 20% of respondents reported it greatly advanced talent development, 25% observed progress in developing potential leaders, 22% saw limited improvement, and 13% noted no meaningful change.

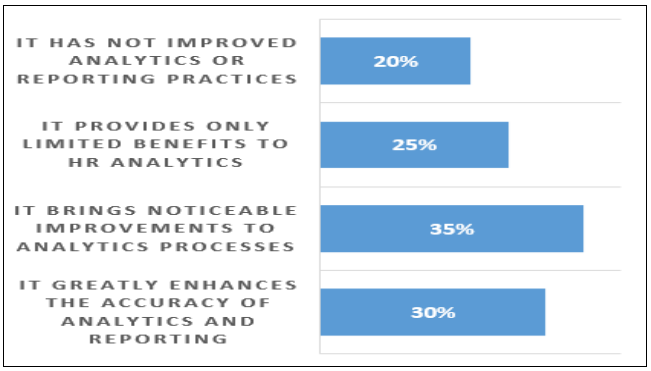

Fig 4.4.3: ICT Integration and HR Analytics

The study examined the influence of ICT integration in HRM on HR analytics and reporting. Findings indicate that 30% of respondents felt it greatly enhances accuracy, 35% observed noticeable improvements, 25% reported limited benefits, and 20% noted no improvement in analytics or reporting.

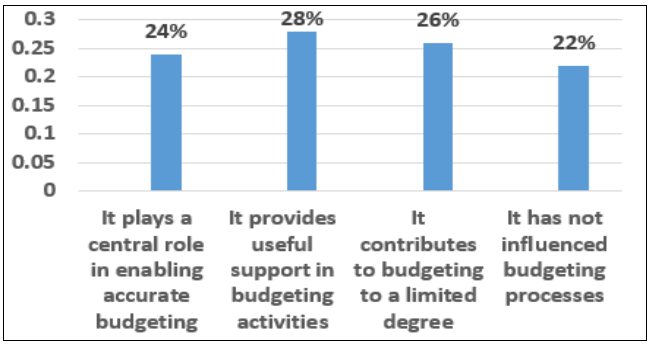

Fig 4.4.4: ICT Integration and Budgeting in HRM

The study investigated the impact of ICT integration in HRM on budgeting. Findings show that 24% of respondents reported it plays a central role in accurate budgeting, 28% said it provides useful support, 26% noted limited contribution, and 22% observed no influence on budgeting processes.

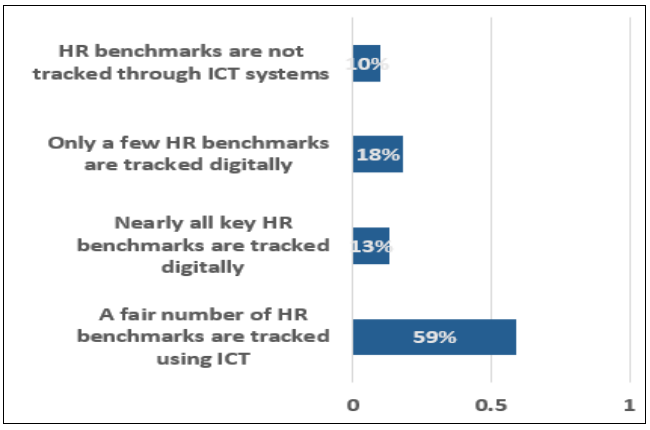

Fig 4.4.5: Tracking HR Benchmarks Using ICT-Enabled Systems

The study explored how HR benchmarks are tracked through ICT-enabled systems. Findings indicate that 59% of respondents track a fair number of benchmarks digitally, 13% track nearly all key benchmarks, 18% track only a few, and 10% do not use ICT for tracking.

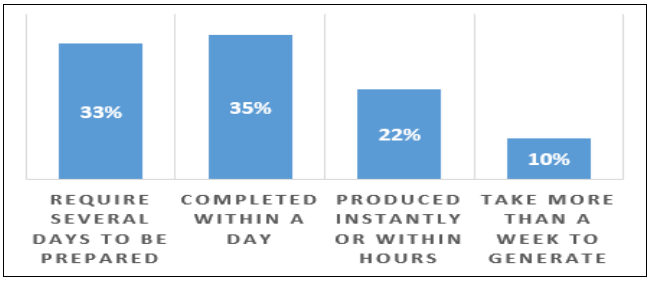

Fig 4.4.6: Time to Generate Workforce Planning Reports Using ICT

The study assessed the time required to generate workforce planning reports via ICT. Findings show that 35% of respondents reported reports are completed within a day, 33% take several days, 22% are produced instantly or within hours, and 10% require more than a week.

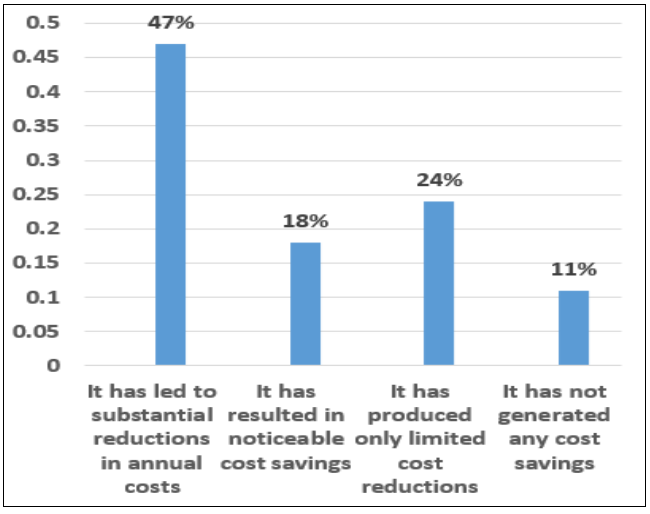

Fig 4.4.7: ICT-Enabled Workforce Planning and Cost Savings

The study examined the impact of ICT-enabled workforce planning on organisational cost savings. Findings indicate that 47% of respondents reported substantial annual cost reductions, 18% observed noticeable savings, 24% experienced only limited reductions, and 11% reported no cost savings.

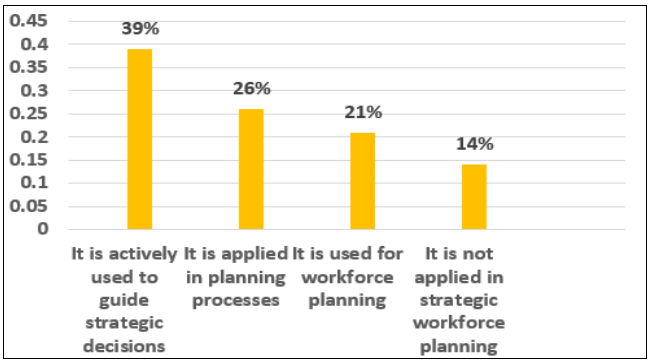

Fig 4.4.8: Utilization of HR Data for Strategic Workforce Planning

The study explored how HR data is used in strategic workforce planning. Findings reveal that 39% of respondents actively use data to guide strategic decisions, 26% apply it in planning processes, 21% use it for workforce planning, and 14% do not apply it strategically.

4.5 Discussion of Results

4.5.1 Types of ICT tools and systems integrated into HRM recruitment processes

The study identified clear patterns in the adoption of ICT tools in HR recruitment within Madison life insurance Company in Lusaka. All surveyed departments (100%) use online job portals such as LinkedIn and indeed, showing complete digital penetration in vacancy advertising. E-recruitment platforms and HR analytics tools follow closely at 89.7%, highlighting strong reliance on technology for managing applications and making data-driven decisions. However, adoption drops with video interviewing software (70.1%), applicant tracking systems (41.2%), and AI-powered screening tools (10.3%).

These patterns align with global trends of widespread use of online platforms and e-recruitment systems (Vahdat, 2022; Wang, 2020) but differ in the limited adoption of advanced tools like ATS and AI systems, which are common in developed economies (Aboramadan, 2024; Rahaman, 2024). Barriers such as high costs, limited ICT infrastructure, skill shortages, and concerns about data privacy restrict wider adoption.

The findings have significant implications. The Organization should advance from basic digitization toward integrated systems that combine ATS and AI for efficient recruitment. Policymakers could promote digital inclusion through training, subsidies, and public–private partnerships. Educational institutions should enhance HR curricula to include digital competencies, while technology vendors should design affordable, user-friendly solutions tailored to local needs.

4.5.2 The effects of ICT integration in HRM on employee engagement

The study's findings present a nuanced picture of how ICT integration affects employee engagement in Madison life insurance sector. While 100% of respondents acknowledged that ICT tools improved access to HR information and 60.8% rated feedback mechanisms as highly effective, only 39.2% agreed that ICT enhanced overall engagement. Similarly, 51.5% perceived ICT's impact on job satisfaction as low, despite recognizing its operational benefits. These results suggest a disconnect between ICT's functional improvements and its ability to foster deeper psychological connections with work.

The strong consensus around improved information access aligns with global research demonstrating how self-service portals empower employees (Laitala, 2023) [27]. Studies show that when workers can independently access pays lips, leave balances, and policy documents, it reduces administrative frustrations and creates a sense of autonomy (Ravada, 2019). However, the limited impact on broader engagement metrics reveals that basic informational access alone cannot compensate for other workplace factors. This mirrors findings from similar developing contexts where digital HR tools improved efficiency but failed to address underlying cultural or leadership challenges (Mutiarin, 2019).

The positive perception of digital feedback systems (rated very high by 60.8%) supports contemporary research on continuous performance management (Gonzalez, 2020). Real-time feedback platforms appear particularly effective in the Zambian context, potentially because they bridge communication gaps in organizations with hierarchical structures. Yet the fact that 20.6% still rated communication tools as ineffective suggests implementation inconsistencies. Some departments may use these systems more effectively than others, or employees might lack training to fully utilize feedback features.

The study's most striking finding that 51.5% saw minimal ICT impact on employee engagement- contrasts sharply with optimistic predictions in HR technology literature (Wang, 2020). This divergence likely stems from three contextual factors. First, many implemented systems focus on transactional HR functions rather than relational aspects that drive satisfaction. Second, the insurance sector's regulatory intensity may limit how creatively organization can deploy engagement-focused technologies. Third, the predominance of legacy systems in some firms could create user experience frustrations that outweigh functionality benefits.

4.5.3 The role of ICT Integration in enhancing strategic workforce planning

The study revealed significant variations in how Madison life insurance Company in Lusaka utilize ICT for strategic workforce planning. While 70.1% of respondents agreed that ICT improved HR analytics for decision-making, only 48.5% reported positive impacts on talent management and succession planning. This disparity suggests that the organization is more successful in applying technology to data collection and analysis than to long-term strategic applications. The findings indicate that 58.8% of companies still rely primarily on local or in-house systems for workforce planning, with only 30.9% using cloud-based HRM systems, potentially limiting their strategic capabilities.

These results both confirm and challenge existing literature on HR technology adoption. The strong showing in analytics adoption aligns with global trends emphasizing data-driven HR (Roul, 2024), demonstrating that Madison life insurers recognize the value of workforce metrics. However, the limited translation of these analytics into strategic planning

contrasts with studies from developed economies where predictive analytics routinely inform workforce decisions (Rahaman, 2024). This gap may stem from several local factors: the predominance of small to mid-sized firms with limited strategic HR capacity, regulatory constraints in the insurance sector that discourage long-term workforce experimentation, or simply the more recent adoption of these technologies in the Zambian context.

The moderate adoption of cloud-based systems (30.9%) presents another noteworthy finding. While cloud HRM platforms theoretically enable more sophisticated workforce planning through features like real-time data sharing and scenario modeling (Valcik, 2021), most surveyed organizations persist with localized systems. This likely reflects both cost considerations and data security concerns prevalent in financial services sectors. The preference for in-house solutions may provide greater control but potentially at the expense of advanced functionality available in specialized cloud platforms.

5. Conclusion and Recommendations

5.1 Conclusion

The study found that the organization has widely adopted ICT tools in HRM recruitment, with all respondents using online job portals and most using e-recruitment platforms and HR analytics. Tools like video interviews and applicant tracking systems were also common, though AI-powered screening was limited. While ICT tools were generally seen as improving recruitment efficiency and access to HR information, perceptions were mixed regarding their impact on employee engagement. However, ICT integration was viewed positively in strategic areas, with most respondents agreeing it enhanced HR analytics, workforce planning, and budgeting, supporting its role in strategic workforce planning despite varied experiences in employee-related outcomes. The study also reveals important areas for future research. Longitudinal studies could track whether engagement effects change as employees gain familiarity with systems. HR teams might start by conducting technology audits to identify gaps between current tools and organizational needs. They could then develop phased implementation plans that gradually introduce more advanced systems while building internal capacity to use them effectively.

5.2 Recommendations

- The organization should prioritize the adoption and integration of advanced ICT tools such as artificial intelligence-powered screening systems and fully automated recruitment solutions.
- The successful integration of ICT in human resource management requires continuous training and capacity building for HR personnel.

The Organization should adopt ICT tools that foster two-way communication between employees and management, ensuring that feedback flows freely across all levels

- A shift from traditional in-house HR systems to integrated, cloud-based platforms presents significant opportunities for an organization.
- To ensure that ICT investments in human resource management deliver the intended outcomes, the organization must establish mechanisms for continuous monitoring and evaluation.

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